D3Q27 NSE,
a supplementary material for
Lattice Boltzmann Method Analysis Tool (LBMAT)

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Contents

1 Global definitions

In $\mathbb{R}^3$, the position and velocity vectors are given by $\boldsymbol{x} = (x_1, x_2, x_3)^T$ and $\boldsymbol{v} = (v_1, v_2, v_3)^T$, respectively.

1.1 Discrete velocity vectors

Discrete velocity vectors and the lattice speed of sound are defined by

$$\{\boldsymbol{c}_i\}_{i=1}^{27} = \left(\begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix}, \begin{pmatrix} -1 \\ 0 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ -1 \\ 0 \end{pmatrix}, \begin{pmatrix} 0 \\ 0 \\ -1 \end{pmatrix}, \begin{pmatrix} 0 \\ 1 \\ 1 \end{pmatrix}, \begin{pmatrix} 0 \\ 1 \\ -1 \end{pmatrix}, \right.$$

$$\begin{pmatrix} 0 \\ -1 \\ 1 \end{pmatrix}, \begin{pmatrix} 0 \\ -1 \\ -1 \end{pmatrix}, \begin{pmatrix} 1 \\ 1 \\ 0 \end{pmatrix}, \begin{pmatrix} 1 \\ -1 \\ 0 \end{pmatrix}, \begin{pmatrix} -1 \\ 1 \\ 0 \end{pmatrix}, \begin{pmatrix} -1 \\ -1 \\ 0 \end{pmatrix}, \begin{pmatrix} 1 \\ 0 \\ 1 \end{pmatrix}, \begin{pmatrix} 1 \\ 0 \\ -1 \end{pmatrix}, \begin{pmatrix} -1 \\ 0 \\ 1 \end{pmatrix},$$

$$\begin{pmatrix} -1 \\ 0 \\ -1 \end{pmatrix}, \begin{pmatrix} 1 \\ 1 \\ 1 \end{pmatrix}, \begin{pmatrix} 1 \\ 1 \\ -1 \end{pmatrix}, \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix}, \begin{pmatrix} 1 \\ -1 \\ -1 \end{pmatrix}, \begin{pmatrix} -1 \\ 1 \\ 1 \end{pmatrix}, \begin{pmatrix} -1 \\ 1 \\ -1 \end{pmatrix}, \begin{pmatrix} -1 \\ -1 \\ 1 \end{pmatrix}, \left. \begin{pmatrix} -1 \\ -1 \\ -1 \end{pmatrix} \right),$$

$$c_s = \frac{1}{\sqrt{3}},$$

respectively [1].

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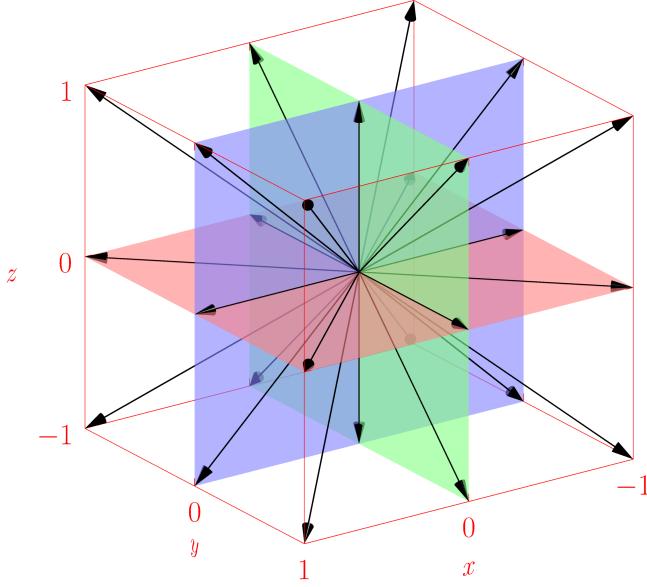
1.2 Raw and central moments

The raw and central moments are defined by

$$m_{\boldsymbol{\alpha}} := \sum_{i=1}^{27} f_i \boldsymbol{c}_i^{\boldsymbol{\alpha}},$$

and

$$k_{\boldsymbol{\alpha}} := \sum_{i=1}^{27} f_i (\boldsymbol{c}_i - \boldsymbol{v})^{\boldsymbol{\alpha}},$$

respectively, where $\boldsymbol{\alpha} = (\alpha_1, \alpha_2, \alpha_3) \in \mathbb{Z}^3$ denotes a multi-index (as a row vector) and $\boldsymbol{c}_i^{\boldsymbol{\alpha}} := \prod_{j=1}^{3} [\boldsymbol{c}_i]_j^{\alpha_j}$.

1.3 Transformation matrix M

Matrix $\mathbf{M}$, that defines macroscopic quantities (moments) $\boldsymbol{\mu}$ by

$$\boldsymbol{\mu} = \mathbf{M} \boldsymbol{f},$$

with $\boldsymbol{f} = (f_1, f_2, \ldots, f_{27})^T$, is selected such that

$$\begin{aligned}
\boldsymbol{\mu} = \Big(&m_{(0,0,0)}, m_{(1,0,0)}, m_{(0,1,0)}, m_{(0,0,1)}, m_{(1,1,0)}, m_{(1,0,1)}, m_{(0,1,1)}, m_{(1,1,1)}, m_{(2,0,0)}, \\
&m_{(0,2,0)}, m_{(0,0,2)}, m_{(2,1,0)}, m_{(2,0,1)}, m_{(2,1,1)}, m_{(1,2,0)}, m_{(0,2,1)}, m_{(1,2,1)}, m_{(1,0,2)}, \\
&m_{(0,1,2)}, m_{(1,1,2)}, m_{(2,2,0)}, m_{(2,0,2)}, m_{(0,2,2)}, m_{(2,2,1)}, m_{(2,1,2)}, m_{(1,2,2)}, m_{(2,2,2)} \Big)^T,
\end{aligned}$$

i.e., $\mathbf{M}$ is given by

$$\mathbf{M} = \begin{pmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
0 & 1 & 0 & 0 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
0 & 0 & 1 & 0 & 0 & -1 & 0 & 1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\
0 & 0 & 0 & 1 & 0 & 0 & -1 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\
0 & 1 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
0 & 0 & 0 & 1 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1
\end{pmatrix}.$$

1.4 Equilibrium

The corresponding equilibrium raw moments are defined using the continuous Maxwell–Boltzmann distribution function [1]

$$f^{(eq)}(\boldsymbol{\xi}) = \frac{\rho}{(2\pi c_s^2)^{\frac{3}{2}}} \exp\left(-\frac{||\boldsymbol{\xi} - \boldsymbol{v}||^2}{2c_s^2}\right)$$

as

$$m_{\boldsymbol{\alpha}}^{(eq)} = \int\limits_{\mathbb{R}^3} \boldsymbol{\xi}^{\boldsymbol{\alpha}} f^{(eq)}(\boldsymbol{\xi}) \mathrm{d}\boldsymbol{\xi},$$

where $\alpha_i \in \{0, 1, 2\}$, $i = 1, 2, 3$. Hence, the equilibrium moments $\boldsymbol{\mu}^{(eq)}$ satisfy

$$\boldsymbol{\mu}^{(eq)} = \begin{pmatrix} \rho \\ \rho v_1 \\ \rho v_2 \\ \rho v_3 \\ \rho v_1 v_2 \\ \rho v_1 v_3 \\ \rho v_2 v_3 \\ \rho v_1 v_2 v_3 \\ \rho \left(v_1^2 + c_s^2 \right) \\ \rho \left(v_2^2 + c_s^2 \right) \\ \rho \left(v_3^2 + c_s^2 \right) \\ \rho \left(v_1^2 v_2 + v_2 c_s^2 \right) \\ \rho \left(v_1^2 v_3 + v_3 c_s^2 \right) \\ \rho \left(v_1^2 v_2 v_3 + v_2 v_3 c_s^2 \right) \\ \rho \left(v_1 v_2^2 + v_1 c_s^2 \right) \\ \rho \left(v_2^2 v_3 + v_3 c_s^2 \right) \\ \rho \left(v_1 v_2^2 v_3 + v_1 v_3 c_s^2 \right) \\ \rho \left(v_1 v_3^2 + v_1 c_s^2 \right) \\ \rho \left(v_2 v_3^2 + v_2 c_s^2 \right) \\ \rho \left(v_1 v_2 v_3^2 + v_1 v_2 c_s^2 \right) \\ \rho \left(v_1^2 v_2^2 + v_2^2 c_s^2 + v_1^2 c_s^2 + c_s^4 \right) \\ \rho \left(v_1^2 v_3^2 + v_3^2 c_s^2 + v_1^2 c_s^2 + c_s^4 \right) \\ \rho \left(v_2^2 v_3^2 + v_3^2 c_s^2 + v_2^2 c_s^2 + c_s^4 \right) \\ \rho \left(v_1^2 v_2^2 v_3 + v_2^2 v_3 c_s^2 + v_1^2 v_3 c_s^2 + v_3 c_s^4 \right) \\ \rho \left(v_1^2 v_2 v_3^2 + v_2 v_3^2 c_s^2 + v_1^2 v_2 c_s^2 + v_2 c_s^4 \right) \\ \rho \left(v_1 v_2^2 v_3^2 + v_1 v_3^2 c_s^2 + v_1 v_2^2 c_s^2 + v_1 c_s^4 \right) \\ \rho \left(v_1^2 v_2^2 v_3^2 + v_2^2 v_3^2 c_s^2 + v_1^2 v_3^2 c_s^2 + v_3^2 c_s^4 + v_1^2 v_2^2 c_s^2 + v_2^2 c_s^4 + v_1^2 c_s^4 + c_s^6 \right) \end{pmatrix}.$$

2 Spatial EPDEs

2.1 SRT

2.1.1 Definitions

Collision operator $\boldsymbol{C}$:

$$\boldsymbol{C}\left(\boldsymbol{f} \right) = \omega \left(\mathbf{M}^{-1} \boldsymbol{\mu}^{(eq)} - \boldsymbol{f} \right),$$

$\omega \in (0, 2)$.

2.1.2 Conservation of mass: ρ

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$\frac{\partial \rho}{\partial t} + \frac{\delta_l v_1}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{\delta_l \rho}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{\delta_l v_2}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{\delta_l \rho}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{v_3 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_3} + \frac{\delta_l \rho}{\delta_t} \frac{\partial v_3}{\partial x_3} + \left(-1 + v_1^2 + 3cs^2 \right) \frac{\delta_l^3 v_1}{12 \delta_t} \frac{\partial^3 \rho}{\partial x_1^3} +$

$\left(-1 + 3v_1^2 + cs^2 \right) \frac{\delta_l^3 \rho}{12 \delta_t} \frac{\partial^3 v_1}{\partial x_1^3} - \frac{cs^2 \delta_l^3 \rho}{6 \delta_t} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} - \frac{cs^2 \delta_l^3 \rho}{6 \delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + \left(-1 + v_2^2 + 3cs^2 \right) \frac{\delta_l^3 v_2}{12 \delta_t} \frac{\partial^3 \rho}{\partial x_2^3} +$

$\left(-1 + 3v_2^2 + cs^2 \right) \frac{\delta_l^3 \rho}{12 \delta_t} \frac{\partial^3 v_2}{\partial x_2^3} - \frac{cs^2 \delta_l^3 \rho}{6 \delta_t} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} - \frac{cs^2 \delta_l^3 \rho}{6 \delta_t} \frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2 \delta_l^3 \rho}{6 \delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2 \delta_l^3 \rho}{6 \delta_t} \frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$

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$$(-1 + v_3^2 + 3cs^2)\frac{v_3\delta_l^3}{12\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + (-1 + 3v_3^2 + cs^2)\frac{\delta_l^3\rho}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$(24cs^2 v_1^2 + cs^2\omega + 6v_1^4 + 2cs^4 + 3\omega v_1^2 - 12cs^2\omega v_1^2 - 3\omega v_1^4 - cs^4\omega - 6v_1^2 - 2cs^2)\frac{\delta_l^4}{24\omega\delta_t}\frac{\partial^4\rho}{\partial x_1^4} +$$

$$(-4 - 3cs^2\omega + 2\omega - 5\omega v_1^2 + 10v_1^2 + 6cs^2)\frac{\delta_l^4\rho v_1}{12\omega\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + (2 + 3cs^2\omega - \omega + \omega v_1^2 - 2v_1^2 - 6cs^2)\frac{\delta_l^4\rho v_1}{12\omega\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} +$$

$$(-2 + \omega)\frac{cs^4\delta_l^4}{6\omega\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} + (2 + 3cs^2\omega - \omega + \omega v_2^2 - 2v_2^2 - 6cs^2)\frac{\delta_l^4\rho v_2}{12\omega\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} +$$

$$(cs^2\omega + 24cs^2 v_2^2 + 2cs^4 + 6v_2^4 - 12cs^2\omega v_2^2 + 3\omega v_2^2 - cs^4\omega - 3\omega v_2^4 - 6v_2^2 - 2cs^2)\frac{\delta_l^4}{24\omega\delta_t}\frac{\partial^4\rho}{\partial x_2^4} +$$

$$(-4 - 3cs^2\omega + 2\omega - 5\omega v_2^2 + 10v_2^2 + 6cs^2)\frac{\delta_l^4\rho v_2}{12\omega\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} + (2 + 3cs^2\omega - \omega + \omega v_1^2 - 2v_1^2 - 6cs^2)\frac{\delta_l^4\rho v_1}{12\omega\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$$

$$(2 + 3cs^2\omega - \omega + \omega v_2^2 - 2v_2^2 - 6cs^2)\frac{\delta_l^4\rho v_2}{12\omega\delta_t}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} + (-2 + \omega)\frac{cs^4\delta_l^4}{6\omega\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} + (-2 + \omega)\frac{cs^4\delta_l^4}{6\omega\delta_t}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} +$$

$$(2 - 2v_3^2 + 3cs^2\omega - \omega + \omega v_3^2 - 6cs^2)\frac{v_3\delta_l^4\rho}{12\omega\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + (2 - 2v_3^2 + 3cs^2\omega - \omega + \omega v_3^2 - 6cs^2)\frac{v_3\delta_l^4\rho}{12\omega\delta_t}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} +$$

$$(-6v_3^2 + cs^2\omega + 2cs^4 - 3\omega v_3^4 + 3\omega v_3^2 - 12cs^2\omega v_3^2 - cs^4\omega + 24cs^2 v_3^2 + 6v_3^4 - 2cs^2)\frac{\delta_l^4}{24\omega\delta_t}\frac{\partial^4\rho}{\partial x_3^4} +$$

$$(-4 + 10v_3^2 - 3cs^2\omega + 2\omega - 5\omega v_3^2 + 6cs^2)\frac{v_3\delta_l^4\rho}{12\omega\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0.$$

2.1.3 Conservation of momentum: ρv_1

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$$v_1\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_1}{\partial t} + (cs^2 + v_1^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{2\delta_l\rho v_1}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l v_1 v_2}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{\delta_l\rho v_2}{\delta_t}\frac{\partial v_1}{\partial x_2} + \frac{\delta_l\rho v_1}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{v_3\delta_l v_1}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{v_3\delta_l\rho}{\delta_t}\frac{\partial v_1}{\partial x_3} +$$

$$\frac{\delta_l\rho v_1}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 + \omega - 3\omega v_1^2 + 4cs^2 + 6v_1^2 - 2\omega cs^2)\frac{\delta_l^2}{\omega\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} + (2 - \omega)\frac{3\delta_l^2\rho v_1}{\omega\delta_t}\left(\frac{\partial v_1}{\partial x_1}\right)^2 + (-2 + \omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} +$$

$$(-2 + \omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_1}{\partial x_2} + (-2 + \omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_1} + (-2 + \omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_3} +$$

$$(-2 + \omega - \omega v_1^2 + 6cs^2 + 2v_1^2 - 3\omega cs^2)\frac{\delta_l^2 v_1}{2\omega\delta_t}\frac{\partial^2\rho}{\partial x_1^2} + (-2 + \omega - 3\omega v_1^2 + 2cs^2 + 6v_1^2 - \omega cs^2)\frac{\delta_l^2\rho}{2\omega\delta_t}\frac{\partial^2 v_1}{\partial x_1^2} +$$

$$(-2 + \omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_2}{\partial x_1\partial x_2} + (-2 + \omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_1}{\partial x_2^2} + (-2 + \omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_3}{\partial x_1\partial x_3} + (-2 + \omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_1}{\partial x_3^2} + C_1\frac{\delta_l^3}{12\omega^2\delta_t}\frac{\partial^3\rho}{\partial x_1^3} +$$

$$(-24 + 5\omega^2 cs^2 + 24\omega - 60\omega v_1^2 + 36cs^2 - 4\omega^2 + 11\omega^2 v_1^2 + 60v_1^2 - 36\omega cs^2)\frac{\delta_l^3\rho v_1}{6\omega^2\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} +$$

$$(12 - 11\omega^2 cs^2 - 12\omega + 12\omega v_1^2 - 36cs^2 + 3\omega^2 - 3\omega^2 v_1^2 - 12v_1^2 + 36\omega cs^2)\frac{\delta_l^3\rho v_1}{12\omega^2\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} +$$

$$(-12 + 12\omega - \omega^2)\frac{\delta_l^3 cs^4}{6\omega^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2^2} - \frac{\delta_l^3\rho v_1 cs^2}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + (-1 + 3cs^2 + v_2^2)\frac{\delta_l^3 v_1 v_2}{12\delta_t}\frac{\partial^3\rho}{\partial x_2^3} +$$

$$(6 - 3\omega^2 cs^2 - 6\omega + 6\omega v_2^2 - 18cs^2 - \omega^2 v_2^2 + \omega^2 - 6v_2^2 + 18\omega cs^2)\frac{\delta_l^3\rho v_2}{6\omega^2\delta_t}\frac{\partial^3 v_1}{\partial x_2^3} + (-1 + cs^2 + 3v_2^2)\frac{\delta_l^3\rho v_1}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} +$$

$$(12 - 11\omega^2 cs^2 - 12\omega + 12\omega v_1^2 - 36cs^2 + 3\omega^2 - 3\omega^2 v_1^2 - 12v_1^2 + 36\omega cs^2)\frac{\delta_l^3\rho v_1}{12\omega^2\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} - \frac{\delta_l^3\rho v_1 cs^2}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} +$$

$$(-12 + 12\omega - \omega^2)\frac{\delta_l^3 cs^4}{6\omega^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} - \frac{\delta_l^3\rho v_1 cs^2}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} - \frac{\delta_l^3\rho v_1 cs^2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + (-1 + v_3^2 + 3cs^2)\frac{v_3\delta_l^3 v_1}{12\delta_t}\frac{\partial^3\rho}{\partial x_3^3} +$$

$$(6 - 6v_3^2 - 3\omega^2 cs^2 - 6\omega - \omega^2 v_3^2 - 18cs^2 + 6\omega v_3^2 + \omega^2 + 18\omega cs^2)\frac{v_3\delta_l^3\rho}{6\omega^2\delta_t}\frac{\partial^3 v_1}{\partial x_3^3} + (-1 + 3v_3^2 + cs^2)\frac{\delta_l^3\rho v_1}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$C_2\frac{\delta_l^4 v_1}{12\omega^3\delta_t}\frac{\partial^4\rho}{\partial x_1^4} + C_3\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_4\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C_5\frac{\delta_l^4 v_1 cs^2}{12\omega^3\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} +$$

$$(-24 + 8\omega^2 cs^2 + 36\omega - \omega^3 cs^2 - 108\omega v_1^2 + 12cs^2 - 12\omega^2 + 36\omega^2 v_1^2 + 72v_1^2 - 18\omega cs^2)\frac{\delta_l^4\rho cs^2}{12\omega^3\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} +$$

$$C_6\frac{\delta_l^4 v_2 cs^2}{12\omega^3\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + (2 - \omega + \omega v_2^2 - 6cs^2 - 2v_2^2 + 3\omega cs^2)\frac{\delta_l^4\rho v_1 v_2}{12\omega\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} +$$

$$(-12 + 2\omega^2 cs^2 + 18\omega - \omega^3 cs^2 - 54\omega v_2^2 + 18\omega^2 v_2^2 - 6\omega^2 + 36v_2^2)\frac{\delta_l^4\rho cs^2}{12\omega^3\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} +$$

$$(-12\omega v_2^2 cs^2 - \omega cs^4 + 6v_2^4 + 3\omega v_2^2 - 2cs^2 + 24v_2^2 cs^2 + 2cs^4 - 3\omega v_2^4 - 6v_2^2 + \omega cs^2)\frac{\delta_l^4 v_1}{24\omega\delta_t}\frac{\partial^4\rho}{\partial x_2^4} + C_7\frac{\delta_l^4\rho}{24\omega^3\delta_t}\frac{\partial^4 v_1}{\partial x_2^4} +$$

$$(-4 + 2\omega - 5\omega v_2^2 + 6cs^2 + 10v_2^2 - 3\omega cs^2)\frac{\delta_l^4\rho v_1 v_2}{12\omega\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} + C_8\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$$

$$(-36 + 54\omega - \omega^3 - 16\omega^2)\frac{\delta_l^4\rho cs^4}{12\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + (2 - \omega + \omega v_2^2 - 6cs^2 - 2v_2^2 + 3\omega cs^2)\frac{\delta_l^4\rho v_1 v_2}{12\omega\delta_t}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3} + C_9\frac{\delta_l^4 v_1 cs^2}{12\omega^3\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_3}$$

$$+ \left(-24 + 8\omega^2 cs^2 + 36\omega - \omega^3 cs^2 - 108\omega v_1^2 + 12cs^2 - 12\omega^2 + 36\omega^2 v_1^2 + 72v_1^2 - 18\omega cs^2\right)\frac{\delta_l^4 \rho cs^2}{12\omega^3 \delta_t}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} \ +$$

$$C_{10}\frac{\delta_l^4 \rho}{2\omega^3 \delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} \ + \ C_{11}\frac{\delta_l^4 \rho}{2\omega^3 \delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} \ + \ C_{12}\frac{\delta_l^4 \rho}{12\omega^3 \delta_t}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} \ + \ C_{13}\frac{v_3 \delta_l^4 \rho}{\omega^3 \delta_t}\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} \ + \ C_{14}\frac{\delta_l^4}{12\omega^3 \delta_t}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} \ +$$

$$C_{15}\frac{\delta_l^4 \rho}{4\omega^3 \delta_t}\frac{\partial^4 v_1}{\partial x_2^2 \partial x_3^2} \ + \ C_{16}\frac{\delta_l^4 \rho v_2}{2\omega^3 \delta_t}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} \ + \ C_{17}\frac{\delta_l^4 \rho}{4\omega^3 \delta_t}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} \ + \ C_{18}\frac{v_3 \delta_l^4 cs^2}{12\omega^3 \delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} \ +$$

$$\left(2 - 2v_3^2 - \omega - 6cs^2 + \omega v_3^2 + 3\omega cs^2\right)\frac{v_3 \delta_l^4 \rho v_1}{12\omega \delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} \ +$$

$$\left(-12 + 36v_3^2 + 2\omega^2 cs^2 + 18\omega - \omega^3 cs^2 + 18\omega^2 v_3^2 - 54\omega v_3^2 - 6\omega^2\right)\frac{\delta_l^4 \rho cs^2}{12\omega^3 \delta_t}\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} \ +$$

$$\left(2 - 2v_3^2 - \omega - 6cs^2 + \omega v_3^2 + 3\omega cs^2\right)\frac{v_3 \delta_l^4 \rho v_1}{12\omega \delta_t}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} \ +$$

$$\left(-6v_3^2 - \omega cs^4 + 24v_3^2 cs^2 - 3\omega v_3^4 - 2cs^2 + 3\omega v_3^2 + 2cs^4 + 6v_3^4 - 12\omega v_3^2 cs^2 + \omega cs^2\right)\frac{\delta_l^4 v_1}{24\omega \delta_t}\frac{\partial^4 \rho}{\partial x_3^4} \ + \ C_{19}\frac{\delta_l^4 \rho}{24\omega^3 \delta_t}\frac{\partial^4 v_1}{\partial x_3^4} \ +$$

$$\left(-4 + 10v_3^2 + 2\omega + 6cs^2 - 5\omega v_3^2 - 3\omega cs^2\right)\frac{v_3 \delta_l^4 \rho v_1}{12\omega \delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 36v_1^4 - \omega^2 cs^2 - 12\omega cs^4 + 36\omega v_1^2 - 144\omega v_1^2 cs^2 - 12cs^2 + 7\omega^2 v_1^4 - 36\omega v_1^4 + 12cs^4 - 7\omega^2 v_1^2 + 24\omega^2 v_1^2 cs^2 - 36v_1^2 + \omega^2 cs^4 + 144v_1^2 cs^2 + 12\omega cs^2$

$C_2 = 12 + 144v_1^4 - 34\omega^3 v_1^2 cs^2 - 78\omega^2 cs^2 - 9\omega^3 v_1^4 - 216\omega cs^4 - 18\omega + 6\omega^3 cs^2 + 234\omega v_1^2 - 1008\omega v_1^2 cs^2 - 132cs^2 + 90\omega^2 v_1^4 - \omega^3 - 5\omega^3 cs^4 - 216\omega v_1^4 + 8\omega^2 + 144cs^4 - 98\omega^2 v_1^2 + 404\omega^2 v_1^2 cs^2 - 156v_1^2 + 82\omega^2 cs^4 + 672v_1^2 cs^2 + 10\omega^3 v_1^2 + 198\omega cs^2$

$C_3 = 12 + 504v_1^4 - 18\omega^3 v_1^2 cs^2 - 22\omega^2 cs^2 - 29\omega^3 v_1^4 - 36\omega cs^4 - 18\omega + 2\omega^3 cs^2 + 378\omega v_1^2 - 648\omega v_1^2 cs^2 - 36cs^2 + 310\omega^2 v_1^4 - \omega^3 - \omega^3 cs^4 - 756\omega v_1^4 + 8\omega^2 + 24cs^4 - 154\omega^2 v_1^2 + 252\omega^2 v_1^2 cs^2 - 252v_1^2 + 14\omega^2 cs^4 + 432v_1^2 cs^2 + 14\omega^3 v_1^2 + 54\omega cs^2$

$C_4 = -36v_1^4 + 12\omega^3 v_1^2 cs^2 - 12\omega^2 cs^2 + 4\omega^3 v_1^4 - 54\omega cs^4 - 54\omega v_1^2 + 54\omega v_1^2 cs^2 - 24cs^2 - 26\omega^2 v_1^4 - \omega^3 cs^4 + 54\omega v_1^4 + 36cs^4 + 26\omega^2 v_1^2 - 42\omega^2 v_1^2 cs^2 + 36v_1^2 + 20\omega^2 cs^4 - 36v_1^2 cs^2 - 4\omega^3 v_1^2 + 36\omega cs^2$

$C_5 = 24 - 46\omega^2 cs^2 - 36\omega + 5\omega^3 cs^2 + 36\omega v_1^2 - 72cs^2 - \omega^3 + 14\omega^2 - 14\omega^2 v_1^2 - 24v_1^2 + \omega^3 v_1^2 + 108\omega cs^2$

$C_6 = 24 - 42\omega^2 cs^2 - 36\omega + 3\omega^3 cs^2 + 36\omega v_2^2 - 72cs^2 - \omega^3 - 14\omega^2 v_2^2 + 14\omega^2 + \omega^3 v_2^2 - 24v_2^2 + 108\omega cs^2$

$C_7 = 3\omega^3 v_2^4 - 14\omega^2 cs^2 + 216\omega v_2^2 cs^2 - 72\omega cs^4 - 72v_2^4 + \omega^3 cs^2 - 42\omega^2 v_2^4 + 6\omega^3 v_2^2 cs^2 - 108\omega v_2^2 - 24cs^2 + 42\omega^2 v_2^2 - 3\omega^3 cs^4 - 144v_2^2 cs^2 + 48cs^4 + 108\omega v_2^4 + 30\omega^2 cs^4 - 3\omega^3 v_2^2 - 84\omega^2 v_2^2 cs^2 + 72v_2^2 + 36\omega cs^2$

$C_8 = -36v_1^4 + 12\omega^3 v_1^2 cs^2 - 12\omega^2 cs^2 + 4\omega^3 v_1^4 - 54\omega cs^4 - 54\omega v_1^2 + 54\omega v_1^2 cs^2 - 24cs^2 - 26\omega^2 v_1^4 - \omega^3 cs^4 + 54\omega v_1^4 + 36cs^4 + 26\omega^2 v_1^2 - 42\omega^2 v_1^2 cs^2 + 36v_1^2 + 20\omega^2 cs^4 - 36v_1^2 cs^2 - 4\omega^3 v_1^2 + 36\omega cs^2$

$C_9 = 24 - 46\omega^2 cs^2 - 36\omega + 5\omega^3 cs^2 + 36\omega v_1^2 - 72cs^2 - \omega^3 + 14\omega^2 - 14\omega^2 v_1^2 - 24v_1^2 + \omega^3 v_1^2 + 108\omega cs^2$

$C_{10} = -\omega^3 v_1^2 v_2 cs^2 - \omega^3 v_3^2 v_2 cs^2 + \omega^3 v_1 v_2^2 cs^2 - 14\omega^2 v_3^2 v_1 cs^2 + 14\omega^2 v_3^2 v_1^2 v_2 + 36\omega v_3^2 v_1 v_2^2 - 14\omega^2 v_1 v_2^2 cs^2 - 24v_3^2 v_1 v_2^2 - \omega^3 v_3^2 v_1^2 v_2 + \omega^3 v_3^2 v_1 cs^2 + 14\omega^2 v_1^2 v_2 cs^2 + 14\omega^2 v_3^2 v_2 cs^2 + 24v_1^2 v_2 cs^2 + 24v_3^2 v_2 cs^2 - 14\omega^2 v_3^2 v_1 v_2 + 36\omega v_3^2 v_1 cs^2 - 24v_1 v_2^2 cs^2 - 36\omega v_3^2 v_1^2 v_2 + \omega^3 v_3^2 v_1 v_2^2 + 36\omega v_1 v_2^2 cs^2 + 24v_3^2 v_1^2 v_2 - 24v_3^2 v_1 cs^2 - 36\omega v_3^2 v_2 cs^2 - 36\omega v_1^2 v_2 cs^2$

$C_{11} = \omega^3 v_3^2 v_2^2 - 14\omega^2 v_3^2 cs^2 + 36\omega v_2^2 cs^2 - 72\omega v_1 v_2 cs^2 + 48v_3^2 v_1 v_2 + 48v_1 v_2 cs^2 - 72\omega v_3^2 v_1 v_2 - 24v_3^2 cs^2 + \omega^3 v_2^2 cs^2 + 36\omega v_3^2 v_2^2 + \omega^3 v_3^2 cs^2 - 24v_2^2 cs^2 + 28\omega^2 v_1 v_2 cs^2 - 14\omega^2 v_3^2 v_2^2 - 2\omega^3 v_3^2 v_1 v_2 - 24v_3^2 v_2^2 - 2\omega^3 v_1 v_2 cs^2 + 28\omega^2 v_3^2 v_1 v_2 - 14\omega^2 v_2^2 cs^2 + 36\omega v_3^2 cs^2$

$C_{12} = -6\omega^3 v_1^2 cs^2 + 84\omega^2 v_3^2 cs^2 - 6\omega^3 v_3^2 v_1^2 + 54\omega cs^4 + 432\omega v_1 v_2 cs^2 - 288v_3^2 v_1 v_2 - 288v_1 v_2 cs^2 + 432\omega v_3^2 v_1 v_2 + 144v_3^2 cs^2 - 216\omega v_3^2 v_1^2 - 216\omega v_1^2 cs^2 + 84\omega^2 v_3^2 v_1^2 - \omega^3 cs^4 - 6\omega^3 v_3^2 cs^2 - 168\omega^2 v_1 v_2 cs^2 - 36cs^4 + 84\omega^2 v_1^2 cs^2 + 12\omega^3 v_3^2 v_1 v_2 + 12\omega^3 v_1 v_2 cs^2 - 16\omega^2 cs^4 - 168\omega^2 v_3^2 v_1 v_2 + 144v_1^2 cs^2 + 144v_3^2 v_1^2 - 216\omega v_3^2 cs^2$

$C_{13} = 14\omega^2 v_2 cs^2 + 36\omega v_1 v_2^2 + 24v_1^2 v_2 - 24v_1 cs^2 - 14\omega^2 v_1 cs^2 + 14\omega^2 v_1^2 v_2 + \omega^3 v_1 v_2^2 + 24v_2 cs^2 - 36\omega v_1^2 v_2 + 36\omega v_1 cs^2 - 24v_1 v_2^2 - \omega^3 v_2 cs^2 - 36\omega v_2 cs^2 - 14\omega^2 v_1 v_2 - \omega^3 v_1^2 v_2 + \omega^3 v_1 cs^2$

$C_{14} = 108\omega v_3 v_1^2 v_2^2 - 42\omega^2 v_3 v_1^2 cs^2 + 2\omega^3 v_3 v_1 cs^4 - 3\omega^3 v_1 v_2^2 cs^2 + 42\omega^2 v_3^2 v_1 cs^2 + 3\omega^3 v_3 v_2^2 cs^2 - 108\omega v_3^2 v_1 v_2 + 42\omega^2 v_1 v_2^2 cs^2 + 72v_3^2 v_1 v_2^2 - 3\omega^3 v_3 v_1 cs^2 - 42\omega^2 v_3 v_2^2 cs^2 - 72v_3 v_1^2 v_2 + 3\omega^3 v_3 v_1^2 cs^2 + 108\omega v_3 v_1^2 cs^2 - 42\omega^2 v_3 v_1^2 v_2 - 4\omega^2 v_1 cs^4 + 42\omega^2 v_3^2 v_1 v_2 - 108\omega v_3^2 v_1 cs^2 + 72v_1 v_2^2 cs^2 - 72v_3 v_2^2 cs^2 + 108\omega v_3 v_2^2 cs^2 - 3\omega^3 v_3^2 v_1 v_2 - 108\omega v_1 v_2^2 cs^2 + 72v_3^2 v_1 cs^2 + 3\omega^3 v_3 v_1^2 v_2 - 72v_3 v_1^2 cs^2$

$C_{15} = 2\omega^3 v_3 v_1 v_2^2 - \omega^3 v_3^2 v_2^2 - 48v_3 v_1 cs^2 + 14\omega^2 v_3^2 cs^2 - 36\omega v_2^2 cs^2 + 12\omega cs^4 + 24v_3^2 cs^2 - \omega^3 v_2^2 cs^2 + 72\omega v_3 v_1 cs^2 - 28\omega^2 v_3 v_1 v_2^2 - 36\omega v_3^2 v_2^2 - 48v_3 v_1 v_2^2 + 2\omega^3 v_3 v_1 cs^2 - \omega^3 v_3^2 cs^2 + 24v_2^2 cs^2 - 8cs^4 + 14\omega^2 v_3^2 v_2^2 + 24v_3^2 v_2^2 - 4\omega^2 cs^4 + 14\omega^2 v_2^2 cs^2 - 36\omega v_3^2 cs^2 + 72\omega v_3 v_1 v_2^2 - 28\omega^2 v_3 v_1 cs^2$

$C_{16} = -24v_3 v_1^2 + 36\omega v_3 cs^2 - 36\omega v_3^2 v_1 + 24v_1 cs^2 + 14\omega^2 v_1 cs^2 - \omega^3 v_3^2 v_1 + \omega^3 v_3 cs^2 - 14\omega^2 v_3 v_1^2 - 36\omega v_1 cs^2 + 24v_3 v_1 - 24v_3 cs^2 + 36\omega v_3 v_1^2 + \omega^3 v_3 v_1^2 - 14\omega^2 v_3 cs^2 + 14\omega^2 v_3^2 v_1 - \omega^3 v_1 cs^2$

$C_{17} = -2\omega^3 v_3 v_1 v_2^2 + 48 v_3 v_1 cs^2 + \omega^3 v_1^2 cs^2 + 36\omega v_2^2 cs^2 - 14\omega^2 v_1^2 v_2^2 - 24 v_1^2 v_2^2 + \omega^3 v_2^2 cs^2 + 36\omega v_1^2 cs^2 - 72\omega v_3 v_1 cs^2 + 28\omega^2 v_3 v_1 v_2^2 + 48 v_3 v_1 v_2^2 + \omega^3 v_1^2 v_2^2 - 2\omega^3 v_3 v_1 cs^2 - 24 v_2^2 cs^2 - 14\omega^2 v_1^2 cs^2 - 24 v_1^2 cs^2 - 14\omega^2 v_2^2 cs^2 + 36\omega v_1^2 v_2^2 - 72\omega v_3 v_1 v_2^2 + 28\omega^2 v_3 v_1 cs^2$

$C_{18} = 24 - 24 v_3^2 - 42\omega^2 cs^2 + \omega^3 v_3^2 - 36\omega + 3\omega^3 cs^2 - 14\omega^2 v_3^2 - 72 cs^2 - \omega^3 + 36\omega v_3^2 + 14\omega^2 + 108\omega cs^2$

$C_{19} = 72 v_3^2 - 14\omega^2 cs^2 - 84\omega^2 v_3^2 cs^2 - 72\omega cs^4 - 3\omega^3 v_3^2 + \omega^3 cs^2 - 144 v_3^2 cs^2 + 108\omega v_3^4 + 42\omega^2 v_3^2 - 24 cs^2 - 108\omega v_3^2 - 3\omega^3 cs^4 + 6\omega^3 v_3^2 cs^2 + 48 cs^4 - 42\omega^2 v_3^4 + 30\omega^2 cs^4 - 72 v_3^4 + 3\omega^3 v_3^4 + 216\omega v_3^2 cs^2 + 36\omega cs^2$

2.1.4 Conservation of momentum: ρv_2

📎 attached text file: `output_d3q27_nse_srt_symbolic_pde_02.txt`

$v_2 \frac{\partial \rho}{\partial t} + \rho \frac{\partial v_2}{\partial t} + \frac{\delta_l v_1 v_2}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{\delta_l \rho v_2}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{\delta_l \rho v_1}{\delta_t} \frac{\partial v_2}{\partial x_1} + (cs^2 + v_2^2) \frac{\delta_l}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{2\delta_l \rho v_2}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{v_3 \delta_l v_2}{\delta_t} \frac{\partial \rho}{\partial x_3} + \frac{v_3 \delta_l \rho}{\delta_t} \frac{\partial v_2}{\partial x_3} +$

$\frac{\delta_l \rho v_2}{\delta_t} \frac{\partial v_3}{\partial x_3} + (-2 + \omega) \frac{\delta_l^2 cs^2}{2\omega \delta_t} \frac{\partial \rho}{\partial x_1} \frac{\partial v_2}{\partial x_1} + (-2 + \omega) \frac{\delta_l^2 cs^2}{2\omega \delta_t} \frac{\partial \rho}{\partial x_1} \frac{\partial v_1}{\partial x_2} + (-2 - 2\omega cs^2 + \omega - 3\omega v_2^2 + 4 cs^2 + 6 v_2^2) \frac{\delta_l^2}{\omega \delta_t} \frac{\partial \rho}{\partial x_2} \frac{\partial v_2}{\partial x_2} +$

$(2 - \omega) \frac{3\delta_l^2 \rho v_2}{\omega \delta_t} \left(\frac{\partial v_2}{\partial x_2} \right)^2 + (-2 + \omega) \frac{\delta_l^2 cs^2}{2\omega \delta_t} \frac{\partial \rho}{\partial x_3} \frac{\partial v_3}{\partial x_2} + (-2 + \omega) \frac{\delta_l^2 cs^2}{2\omega \delta_t} \frac{\partial \rho}{\partial x_3} \frac{\partial v_2}{\partial x_3} + (-2 + \omega) \frac{\delta_l^2 \rho cs^2}{2\omega \delta_t} \frac{\partial^2 v_2}{\partial x_1^2} +$

$(-2 + \omega) \frac{\delta_l^2 \rho cs^2}{2\omega \delta_t} \frac{\partial^2 v_1}{\partial x_1 \partial x_2} + (-2 - 3\omega cs^2 + \omega - \omega v_2^2 + 6 cs^2 + 2 v_2^2) \frac{\delta_l^2 v_2}{2\omega \delta_t} \frac{\partial^2 \rho}{\partial x_2^2} +$

$(-2 - \omega cs^2 + \omega - 3\omega v_2^2 + 2 cs^2 + 6 v_2^2) \frac{\delta_l^2 \rho}{2\omega \delta_t} \frac{\partial^2 v_2}{\partial x_2^2} + (-2 + \omega) \frac{\delta_l^2 \rho cs^2}{2\omega \delta_t} \frac{\partial^2 v_3}{\partial x_2 \partial x_3} + (-2 + \omega) \frac{\delta_l^2 \rho cs^2}{2\omega \delta_t} \frac{\partial^2 v_2}{\partial x_3^2} +$

$(-1 + 3 cs^2 + v_1^2) \frac{\delta_l^3 v_1 v_2}{12 \delta_t} \frac{\partial^3 \rho}{\partial x_1^3} + (-1 + cs^2 + 3 v_1^2) \frac{\delta_l^3 \rho v_2}{12 \delta_t} \frac{\partial^3 v_1}{\partial x_1^3} +$

$(6 + 18\omega cs^2 - 6\omega + 6\omega v_1^2 + \omega^2 - \omega^2 v_1^2 - 18 cs^2 - 6 v_1^2 - 3\omega^2 cs^2) \frac{\delta_l^3 \rho v_1}{6\omega^2 \delta_t} \frac{\partial^3 v_2}{\partial x_1^3} + (-12 + 12\omega - \omega^2) \frac{\delta_l^3 cs^4}{6\omega^2 \delta_t} \frac{\partial^3 \rho}{\partial x_1^2 \partial x_2} -$

$\frac{\delta_l^3 \rho v_2 cs^2}{6\delta_t} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} + (12 + 36\omega cs^2 - 12\omega + 12\omega v_2^2 - 3\omega^2 v_2^2 + 3\omega^2 - 36 cs^2 - 11\omega^2 cs^2 - 12 v_2^2) \frac{\delta_l^3 \rho v_2}{12\omega^2 \delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} +$

$C_1 \frac{\delta_l^3}{12\omega^2 \delta_t} \frac{\partial^3 \rho}{\partial x_2^3} + (-24 - 36\omega cs^2 + 24\omega - 60\omega v_2^2 + 11\omega^2 v_2^2 - 4\omega^2 + 36 cs^2 + 5\omega^2 cs^2 + 60 v_2^2) \frac{\delta_l^3 \rho v_2}{6\omega^2 \delta_t} \frac{\partial^3 v_2}{\partial x_2^3} -$

$\frac{\delta_l^3 \rho v_2 cs^2}{6\delta_t} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} + (12 + 36\omega cs^2 - 12\omega + 12\omega v_2^2 - 3\omega^2 v_2^2 + 3\omega^2 - 36 cs^2 - 11\omega^2 cs^2 - 12 v_2^2) \frac{\delta_l^3 \rho v_2}{12\omega^2 \delta_t} \frac{\partial^3 v_3}{\partial x_2 \partial x_3^2} -$

$\frac{\delta_l^3 \rho v_2 cs^2}{6\delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} + (-12 + 12\omega - \omega^2) \frac{\delta_l^3 cs^4}{6\omega^2 \delta_t} \frac{\partial^3 \rho}{\partial x_2 \partial x_3^2} - \frac{\delta_l^3 \rho v_2 cs^2}{6\delta_t} \frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} + (-1 + v_3^2 + 3 cs^2) \frac{v_3 \delta_l^3 v_2}{12\delta_t} \frac{\partial^3 \rho}{\partial x_3^3} +$

$(6 - 6 v_3^2 + 18\omega cs^2 - 6\omega - \omega^2 v_3^2 + 6\omega v_3^2 + \omega^2 - 18 cs^2 - 3\omega^2 cs^2) \frac{v_3 \delta_l^3 \rho}{6\omega^2 \delta_t} \frac{\partial^3 v_2}{\partial x_3^3} + (-1 + 3 v_3^2 + cs^2) \frac{\delta_l^3 \rho v_2}{12\delta_t} \frac{\partial^3 v_3}{\partial x_3^3} +$

$(24 v_1^2 cs^2 + 6 v_1^4 + \omega cs^2 + 3\omega v_1^2 + 2 cs^4 - 3\omega v_1^4 - 12\omega v_1^2 cs^2 - 2 cs^2 - 6 v_1^2 - \omega cs^4) \frac{\delta_l^4 v_2}{24\omega \delta_t} \frac{\partial^4 \rho}{\partial x_1^4} +$

$(-4 - 3\omega cs^2 + 2\omega - 5\omega v_1^2 + 6 cs^2 + 10 v_1^2) \frac{\delta_l^4 \rho v_1 v_2}{12\omega \delta_t} \frac{\partial^4 v_1}{\partial x_1^4} + C_2 \frac{\delta_l^4 \rho}{24\omega^3 \delta_t} \frac{\partial^4 v_2}{\partial x_1^4} + C_3 \frac{\delta_l^4 v_1 cs^2}{12\omega^3 \delta_t} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} +$

$(-12 + 18\omega - 54\omega v_1^2 - \omega^3 cs^2 - 6\omega^2 + 18\omega^2 v_1^2 + 36 v_1^2 + 2\omega^2 cs^2) \frac{\delta_l^4 \rho cs^2}{12\omega^3 \delta_t} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} +$

$(2 + 3\omega cs^2 - \omega + \omega v_1^2 - 6 cs^2 - 2 v_1^2) \frac{\delta_l^4 \rho v_1 v_2}{12\omega \delta_t} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + C_4 \frac{\delta_l^4 v_2 cs^2}{12\omega^3 \delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$

$(-24 - 18\omega cs^2 + 36\omega - 108\omega v_2^2 - \omega^3 cs^2 + 36\omega^2 v_2^2 - 12\omega^2 + 12 cs^2 + 8\omega^2 cs^2 + 72 v_2^2) \frac{\delta_l^4 \rho cs^2}{12\omega^3 \delta_t} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} +$

$C_5 \frac{\delta_l^4 \rho}{12\omega^3 \delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} + C_6 \frac{\delta_l^4 v_2}{12\omega^3 \delta_t} \frac{\partial^4 \rho}{\partial x_2^4} + C_7 \frac{\delta_l^4 \rho}{12\omega^3 \delta_t} \frac{\partial^4 v_2}{\partial x_2^4} + (2 + 3\omega cs^2 - \omega + \omega v_1^2 - 6 cs^2 - 2 v_1^2) \frac{\delta_l^4 \rho v_1 v_2}{12\omega \delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_3} +$

$(-36 + 54\omega - \omega^3 - 16\omega^2) \frac{\delta_l^4 \rho cs^4}{12\omega^3 \delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + C_8 \frac{\delta_l^4 \rho}{12\omega^3 \delta_t} \frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} + C_9 \frac{\delta_l^4}{12\omega^3 \delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2} + C_{10} \frac{\delta_l^4 \rho}{4\omega^3 \delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2} +$

$C_{11} \frac{\delta_l^4 \rho}{4\omega^3 \delta_t} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_3^2} + C_{12} \frac{v_3 \delta_l^4 \rho}{2\omega^3 \delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + C_{13} \frac{\delta_l^4}{2\omega^3 \delta_t} \frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} + C_{14} \frac{\delta_l^4 \rho}{12\omega^3 \delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + C_{15} \frac{\delta_l^4 \rho v_2}{\omega^3 \delta_t} \frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} +$

$C_{16} \frac{\delta_l^4 \rho}{2\omega^3 \delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} + C_{17} \frac{\delta_l^4 v_2 cs^2}{12\omega^3 \delta_t} \frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$

$(-24 - 18\omega cs^2 + 36\omega - 108\omega v_2^2 - \omega^3 cs^2 + 36\omega^2 v_2^2 - 12\omega^2 + 12 cs^2 + 8\omega^2 cs^2 + 72 v_2^2) \frac{\delta_l^4 \rho cs^2}{12\omega^3 \delta_t} \frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} +$

$(2 - 2 v_3^2 + 3\omega cs^2 - \omega + \omega v_3^2 - 6 cs^2) \frac{v_3 \delta_l^4 \rho v_2}{12\omega \delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + C_{18} \frac{v_3 \delta_l^4 cs^2}{12\omega^3 \delta_t} \frac{\partial^4 \rho}{\partial x_2 \partial x_3^3} +$

$(2 - 2 v_3^2 + 3\omega cs^2 - \omega + \omega v_3^2 - 6 cs^2) \frac{v_3 \delta_l^4 \rho v_2}{12\omega \delta_t} \frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$

$(-12 + 36 v_3^2 + 18\omega + 18\omega^2 v_3^2 - \omega^3 cs^2 - 54\omega v_3^2 - 6\omega^2 + 2\omega^2 cs^2) \frac{\delta_l^4 \rho cs^2}{12\omega^3 \delta_t} \frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} +$

$(-6v_3^2 - 12\omega v_3^2 cs^2 + \omega cs^2 - 3\omega v_3^4 + 2cs^4 + 3\omega v_3^2 + 24v_3^2 cs^2 - 2cs^2 + 6v_3^4 - \omega cs^4)\frac{\delta_l^4 v_2}{24\omega\delta_t}\frac{\partial^4\rho}{\partial x_3^4} + C_{19}\frac{\delta_l^4\rho}{24\omega^3\delta_t}\frac{\partial^4 v_2}{\partial x_3^4} +$

$(-4 + 10v_3^2 - 3\omega cs^2 + 2\omega - 5\omega v_3^2 + 6cs^2)\frac{v_3\delta_l^4\rho v_2}{12\omega\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$

where:

$C_1 = \omega^2 cs^4 + 24\omega^2 v_2^2 cs^2 + 12\omega cs^2 + 36v_2^4 + 144v_2^2 cs^2 + 7\omega^2 v_2^4 + 12cs^4 + 36\omega v_2^2 - 7\omega^2 v_2^2 - 12cs^2 - 36\omega v_2^4 - \omega^2 cs^2 - 12\omega cs^4 - 144\omega v_2^2 cs^2 - 36v_2^2$

$C_2 = 30\omega^2 cs^4 - 144v_1^2 cs^2 - 72v_1^4 + 3\omega^3 v_1^4 + 36\omega cs^2 - 108\omega v_1^2 - 3\omega^3 cs^4 - 84\omega^2 v_1^2 cs^2 + 48cs^4 - 42\omega^2 v_1^4 + \omega^3 cs^2 + 108\omega v_1^4 + 216\omega v_1^2 cs^2 + 42\omega^2 v_1^2 - 24cs^2 + 72v_1^2 - 14\omega^2 cs^2 + 6\omega^3 v_1^2 cs^2 - 72\omega cs^4 - 3\omega^3 v_1^2$

$C_3 = 24 + 108\omega cs^2 - 36\omega + 36\omega v_1^2 - \omega^3 + 3\omega^3 cs^2 + 14\omega^2 - 14\omega^2 v_1^2 - 72cs^2 - 24v_1^2 - 42\omega^2 cs^2 + \omega^3 v_1^2$

$C_4 = 24 + 108\omega cs^2 - 36\omega + 36\omega v_2^2 - \omega^3 + 5\omega^3 cs^2 - 14\omega^2 v_2^2 + 14\omega^2 - 72cs^2 - 46\omega^2 cs^2 + \omega^3 v_2^2 - 24v_2^2$

$C_5 = 20\omega^2 cs^4 + 4\omega^3 v_2^4 - 42\omega^2 v_2^2 cs^2 + 36\omega cs^2 - 36v_2^4 - 36v_2^2 cs^2 - \omega^3 cs^4 - 26\omega^2 v_2^4 + 36cs^4 - 54\omega v_2^2 + 26\omega^2 v_2^2 + 12\omega^3 v_2^2 cs^2 - 24cs^2 + 54\omega v_2^4 - 12\omega^2 cs^2 - 4\omega^3 v_2^2 - 54\omega cs^4 + 54\omega v_2^2 cs^2 + 36v_2^2$

$C_6 = 12 + 82\omega^2 cs^4 - 9\omega^3 v_2^4 + 404\omega^2 v_2^2 cs^2 + 198\omega cs^2 + 144v_2^4 - 18\omega + 672v_2^2 cs^2 - 5\omega^3 cs^4 + 90\omega^2 v_2^4 + 144cs^4 + 234\omega v_2^2 - \omega^3 + 6\omega^3 cs^2 - 98\omega^2 v_2^2 - 34\omega^3 v_2^2 cs^2 + 8\omega^2 - 132cs^2 - 216\omega v_2^4 - 78\omega^2 cs^2 + 10\omega^3 v_2^2 - 216\omega cs^4 - 1008\omega v_2^2 cs^2 - 156v_2^2$

$C_7 = 12 + 14\omega^2 cs^4 - 29\omega^3 v_2^4 + 252\omega^2 v_2^2 cs^2 + 54\omega cs^2 + 504v_2^4 - 18\omega + 432v_2^2 cs^2 - \omega^3 cs^4 + 310\omega^2 v_2^4 + 24cs^4 + 378\omega v_2^2 - \omega^3 + 2\omega^3 cs^2 - 154\omega^2 v_2^2 - 18\omega^3 v_2^2 cs^2 + 8\omega^2 - 36cs^2 - 756\omega v_2^4 - 22\omega^2 cs^2 + 14\omega^3 v_2^2 - 36\omega cs^4 - 648\omega v_2^2 cs^2 - 252v_2^2$

$C_8 = 20\omega^2 cs^4 + 4\omega^3 v_2^4 - 42\omega^2 v_2^2 cs^2 + 36\omega cs^2 - 36v_2^4 - 36v_2^2 cs^2 - \omega^3 cs^4 - 26\omega^2 v_2^4 + 36cs^4 - 54\omega v_2^2 + 26\omega^2 v_2^2 + 12\omega^3 v_2^2 cs^2 - 24cs^2 + 54\omega v_2^4 - 12\omega^2 cs^2 - 4\omega^3 v_2^2 - 54\omega cs^4 + 54\omega v_2^2 cs^2 + 36v_2^2$

$C_9 = -72v_3^2 v_1 cs^2 - 4\omega^2 v_2 cs^4 + 108\omega v_1 v_2^2 cs^2 - 108\omega v_3^2 v_2 cs^2 + 42\omega^2 v_3^2 v_1^2 v_2 + 108\omega v_3^2 v_1 v_2^2 - 108\omega v_1^2 v_2 cs^2 + 72v_1^2 v_2 cs^2 - 72v_3^2 v_1 v_2^2 + 72v_3^2 v_2 cs^2 - 3\omega^3 v_3^2 v_1^2 v_2 - 72v_1 v_2^2 cs^2 + 108\omega v_3^2 v_1 cs^2 - 42\omega^2 v_1 v_2^2 cs^2 + 3\omega^3 v_3^2 v_1 cs^2 - 42\omega^2 v_3^2 v_1 v_2^2 + 42\omega^2 v_1^2 v_2 cs^2 + 2\omega^3 v_2 cs^4 - 108\omega v_3^2 v_1^2 v_2 + 42\omega^2 v_3^2 v_2 cs^2 - 3\omega^3 v_1^2 v_2 cs^2 + 3\omega^3 v_3^2 v_1 v_2^2 - 3\omega^3 v_3^2 v_2 cs^2 + 72v_3^2 v_1^2 v_2 + 3\omega^3 v_1 v_2^2 cs^2 - 42\omega^2 v_3^2 v_1 cs^2$

$C_{10} = \omega^3 v_3^2 v_2 - 2\omega^3 v_1 v_2 cs^2 + 36\omega v_3^2 cs^2 - 14\omega^2 v_2^2 cs^2 + 48v_3^2 v_1 v_2 - 72\omega v_3^2 v_1 v_2 - 24v_2^2 cs^2 + \omega^3 v_3^2 cs^2 + 28\omega^2 v_1 v_2 cs^2 + 36v_3^2 v_2^2 + 48v_1 v_2 cs^2 + \omega^3 v_2^2 cs^2 - 24v_3^2 cs^2 - 14\omega^2 v_3^2 v_2^2 - 2\omega^3 v_3^2 v_1 v_2 - 24v_3^2 v_2^2 + 28\omega^2 v_3^2 v_1 v_2 + 36\omega v_2^2 cs^2 - 14\omega^2 v_3^2 cs^2 - 72\omega v_1 v_2 cs^2$

$C_{11} = -4\omega^2 cs^4 + 2\omega^3 v_1 v_2 cs^2 + 24v_1^2 cs^2 - 36\omega v_3^2 cs^2 - \omega^3 v_3^2 v_1^2 - 48v_3^2 v_1 v_2 + 72\omega v_3^2 v_1 v_2 - \omega^3 v_3^2 cs^2 - 36\omega v_3^2 v_1^2 + 14\omega^2 v_1^2 cs^2 - 8cs^4 - 28\omega^2 v_1 v_2 cs^2 - 48v_1 v_2 cs^2 + 14\omega^2 v_3^2 v_1^2 + 24v_3^2 cs^2 - 36\omega v_1^2 cs^2 + 2\omega^3 v_3^2 v_1 v_2 - 28\omega^2 v_3^2 v_1 v_2 - \omega^3 v_1^2 cs^2 + 24v_3^2 v_1^2 + 12\omega cs^4 + 14\omega^2 v_3^2 cs^2 + 72\omega v_1 v_2 cs^2$

$C_{12} = -36\omega v_2 cs^2 + 36\omega v_1 v_2^2 + \omega^3 v_1 cs^2 + 24v_1^2 v_2 + 36\omega v_1 cs^2 + 14\omega^2 v_1^2 v_2 + \omega^3 v_1 v_2^2 - \omega^3 v_2 cs^2 - 36\omega v_1^2 v_2 - 14\omega^2 v_1 cs^2 - 24v_1 v_2^2 + 24v_2 cs^2 + 14\omega^2 v_2 cs^2 - 14\omega^2 v_1 v_2^2 - 24v_1 cs^2 - \omega^3 v_1^2 v_2$

$C_{13} = 36\omega v_3 v_2^2 cs^2 + 36\omega v_3 v_1^2 v_2^2 + 24v_3^2 v_1 cs^2 - 36\omega v_1 v_2^2 cs^2 - 24v_3 v_1^2 cs^2 - 36\omega v_3^2 v_1 v_2 + 36\omega v_3 v_1^2 cs^2 + 24v_3^2 v_1 v_2 + 24v_1 v_2^2 cs^2 - 24v_3 v_1^2 v_2^2 - 36\omega v_3^2 v_1 cs^2 - 24v_3 v_2^2 cs^2 - 14\omega^2 v_3 v_1^2 v_2^2 + 14\omega^2 v_1 v_2^2 cs^2 - 14\omega^2 v_3 v_2^2 cs^2 - \omega^3 v_3^2 v_1 cs^2 + 14\omega^2 v_3^2 v_1 v_2 + \omega^3 v_3 v_1^2 cs^2 - \omega^3 v_3^2 v_1 v_2 - 14\omega^2 v_3 v_1^2 cs^2 - \omega^3 v_1 v_2^2 cs^2 + \omega^3 v_3 v_1^2 v_2^2 + \omega^3 v_3 v_2^2 cs^2 + 14\omega^2 v_3^2 v_1 cs^2$

$C_{14} = 12\omega^3 v_3 v_1 v_2^2 - 16\omega^2 cs^4 - 6\omega^3 v_3^2 v_2^2 - 216\omega v_3^2 cs^2 + 84\omega^2 v_2^2 cs^2 - 168\omega^2 v_3 v_1 cs^2 + 144v_2^2 cs^2 - \omega^3 cs^4 - 6\omega^3 v_3^2 cs^2 + 12\omega^3 v_3 v_1 cs^2 - 36cs^4 - 168\omega^2 v_3 v_1 v_2^2 - 216\omega v_3^2 v_2^2 - 288v_3 v_1 v_2^2 - 6\omega^3 v_2^2 cs^2 + 144v_3^2 cs^2 + 432\omega v_3 v_1 cs^2 + 84\omega^2 v_3^2 v_2^2 + 144v_3^2 v_2^2 - 288v_3 v_1 cs^2 + 54\omega cs^4 - 216\omega v_2^2 cs^2 + 84\omega^2 v_3^2 cs^2 + 432\omega v_3 v_1 v_2^2$

$C_{15} = -24v_3 v_1^2 - 14\omega^2 v_3 cs^2 - 36\omega v_3^2 v_1 - \omega^3 v_1 cs^2 - 36\omega v_1 cs^2 - \omega^3 v_3^2 v_1 - 14\omega^2 v_3 v_1^2 - 24v_3 cs^2 + 14\omega^2 v_1 cs^2 + 24v_3^2 v_1 + 36\omega v_3 v_1^2 + \omega^3 v_3 cs^2 + \omega^3 v_3 v_1^2 + 36\omega v_3 cs^2 + 14\omega^2 v_3^2 v_1 + 24v_1 cs^2$

$C_{16} = -2\omega^3 v_3 v_1 v_2^2 - 24v_1^2 cs^2 - 14\omega^2 v_2^2 cs^2 + 28\omega^2 v_3 v_1 cs^2 - 14\omega^2 v_1^2 v_2^2 - 24v_1^2 v_2^2 - 24v_2^2 cs^2 - 2\omega^3 v_3 v_1 cs^2 - 14\omega^2 v_1^2 cs^2 + 28\omega^2 v_3 v_1 v_2^2 + 48v_3 v_1 v_2^2 + \omega^3 v_1^2 v_2^2 + \omega^3 v_2^2 cs^2 - 72\omega v_3 v_1 cs^2 + 36\omega v_1^2 cs^2 + \omega^3 v_1^2 cs^2 + 48v_3 v_1 cs^2 + 36\omega v_2^2 cs^2 + 36\omega v_1^2 v_2^2 - 72\omega v_3 v_1 v_2^2$

$C_{17} = 24 + 108\omega cs^2 - 36\omega + 36\omega v_2^2 - \omega^3 + 5\omega^3 cs^2 - 14\omega^2 v_2^2 + 14\omega^2 - 72cs^2 - 46\omega^2 cs^2 + \omega^3 v_2^2 - 24v_2^2$

$C_{18} = 24 - 24v_3^2 + \omega^3 v_3^2 + 108\omega cs^2 - 36\omega - 14\omega^2 v_3^2 - \omega^3 + 3\omega^3 cs^2 + 36\omega v_3^2 + 14\omega^2 - 72cs^2 - 42\omega^2 cs^2$

$C_{19} = 30\omega^2 cs^4 + 72v_3^2 + 216\omega v_3^2 cs^2 - 3\omega^3 v_3^2 + 36\omega cs^2 - 3\omega^3 cs^4 + 6\omega^3 v_3^2 cs^2 + 108\omega v_3^4 + 48cs^4 + 42\omega^2 v_3^2 + \omega^3 cs^2 - 108\omega v_3^2 - 144v_3^2 cs^2 - 24cs^2 - 42\omega^2 v_3^4 - 14\omega^2 cs^2 - 72v_3^4 + 3\omega^3 v_3^4 - 72\omega cs^4 - 84\omega^2 v_3^2 cs^2$

2.1.5 Conservation of momentum: ρv_3

📎 attached text file: `output_d3q27_nse_srt_symbolic_pde_03.txt`

$v_3\frac{\partial \rho}{\partial t} + \rho\frac{\partial v_3}{\partial t} + \frac{v_3\delta_l v_1}{\delta_t}\frac{\partial \rho}{\partial x_1} + \frac{v_3\delta_l \rho}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l \rho v_1}{\delta_t}\frac{\partial v_3}{\partial x_1} + \frac{v_3\delta_l v_2}{\delta_t}\frac{\partial \rho}{\partial x_2} + \frac{v_3\delta_l \rho}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l \rho v_2}{\delta_t}\frac{\partial v_3}{\partial x_2} + (v_3^2+cs^2)\frac{\delta_l}{\delta_t}\frac{\partial \rho}{\partial x_3} +$

$\frac{2v_3\delta_l \rho}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2+\omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial \rho}{\partial x_1}\frac{\partial v_3}{\partial x_1} + (-2+\omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial \rho}{\partial x_1}\frac{\partial v_1}{\partial x_3} + (-2+\omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial \rho}{\partial x_2}\frac{\partial v_3}{\partial x_2} + (-2+\omega)\frac{\delta_l^2 cs^2}{2\omega\delta_t}\frac{\partial \rho}{\partial x_2}\frac{\partial v_2}{\partial x_3} +$

$(-2-2\omega cs^2+6v_3^2+\omega+4cs^2-3\omega v_3^2)\frac{\delta_l^2}{\omega\delta_t}\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_3} + (2-\omega)\frac{3v_3\delta_l^2\rho}{\omega\delta_t}\left(\frac{\partial v_3}{\partial x_3}\right)^2 + (-2+\omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_3}{\partial x_1^2} +$

$(-2+\omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_3}{\partial x_2^2} + (-2+\omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_1}{\partial x_1\partial x_3} + (-2+\omega)\frac{\delta_l^2\rho cs^2}{2\omega\delta_t}\frac{\partial^2 v_2}{\partial x_2\partial x_3} +$

$(-2-3\omega cs^2+2v_3^2+\omega+6cs^2-\omega v_3^2)\frac{v_3\delta_l^2}{2\omega\delta_t}\frac{\partial^2 \rho}{\partial x_3^2} + (-2-\omega cs^2+6v_3^2+\omega+2cs^2-3\omega v_3^2)\frac{\delta_l^2\rho}{2\omega\delta_t}\frac{\partial^2 v_3}{\partial x_3^2} +$

$(-1+3cs^2+v_1^2)\frac{v_3\delta_l^3 v_1}{12\delta_t}\frac{\partial^3 \rho}{\partial x_1^3} + (-1+cs^2+3v_1^2)\frac{v_3\delta_l^3\rho}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} +$

$(6+18\omega cs^2-6\omega+6\omega v_1^2-18cs^2+\omega^2-\omega^2 v_1^2-6v_1^2-3\omega^2 cs^2)\frac{\delta_l^3\rho v_1}{6\omega^2\delta_t}\frac{\partial^3 v_3}{\partial x_1^3} - \frac{v_3\delta_l^3\rho cs^2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} - \frac{v_3\delta_l^3\rho cs^2}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} +$

$(-1+3cs^2+v_2^2)\frac{v_3\delta_l^3 v_2}{12\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} + (-1+cs^2+3v_2^2)\frac{v_3\delta_l^3\rho}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} +$

$(6+18\omega cs^2-6\omega+6\omega v_2^2-18cs^2-\omega^2 v_2^2+\omega^2-3\omega^2 cs^2-6v_2^2)\frac{\delta_l^3\rho v_2}{6\omega^2\delta_t}\frac{\partial^3 v_3}{\partial x_2^3} + (-12+12\omega-\omega^2)\frac{\delta_l^3 cs^4}{6\omega^2\delta_t}\frac{\partial^3 \rho}{\partial x_1^2\partial x_3} -$

$\frac{v_3\delta_l^3\rho cs^2}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} + (-12+12\omega-\omega^2)\frac{\delta_l^3 cs^4}{6\omega^2\delta_t}\frac{\partial^3 \rho}{\partial x_2^2\partial x_3} - \frac{v_3\delta_l^3\rho cs^2}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} +$

$(12+36\omega cs^2-12v_3^2-12\omega-3\omega^2 v_3^2-36cs^2+12\omega v_3^2+3\omega^2-11\omega^2 cs^2)\frac{v_3\delta_l^3\rho}{12\omega^2\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} +$

$(12+36\omega cs^2-12v_3^2-12\omega-3\omega^2 v_3^2-36cs^2+12\omega v_3^2+3\omega^2-11\omega^2 cs^2)\frac{v_3\delta_l^3\rho}{12\omega^2\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C_1\frac{\delta_l^3}{12\omega^2\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} +$

$(-24-36\omega cs^2+60v_3^2+24\omega+11\omega^2 v_3^2+36cs^2-60\omega v_3^2-4\omega^2+5\omega^2 cs^2)\frac{v_3\delta_l^3\rho}{6\omega^2\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$

$(\omega cs^2+6v_1^4+24v_1^2 cs^2+3\omega v_1^2+2cs^4-2cs^2-3\omega v_1^4-12\omega v_1^2 cs^2-6v_1^2-\omega cs^4)\frac{v_3\delta_l^4}{24\omega\delta_t}\frac{\partial^4 \rho}{\partial x_1^4} +$

$(-4-3\omega cs^2+2\omega-5\omega v_1^2+6cs^2+10v_1^2)\frac{v_3\delta_l^4\rho v_1}{12\omega\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_2\frac{\delta_l^4\rho}{24\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_1^4} +$

$(2+3\omega cs^2-\omega+\omega v_1^2-6cs^2-2v_1^2)\frac{v_3\delta_l^4\rho v_1}{12\omega\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + (-2+\omega)\frac{v_3\delta_l^4 cs^4}{6\omega\delta_t}\frac{\partial^4 \rho}{\partial x_1^2\partial x_2^2} + (-2+3\omega-\omega^2)\frac{\delta_l^4\rho cs^4}{\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2^2} +$

$(2+3\omega cs^2-\omega+\omega v_2^2-6cs^2-2v_2^2)\frac{v_3\delta_l^4\rho v_2}{12\omega\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^2} +$

$(\omega cs^2+6v_2^4+2cs^4+24v_2^2 cs^2+3\omega v_2^2-2cs^2-3\omega v_2^4-\omega cs^4-12\omega v_2^2 cs^2-6v_2^2)\frac{v_3\delta_l^4}{24\omega\delta_t}\frac{\partial^4 \rho}{\partial x_2^4} +$

$(-4-3\omega cs^2+2\omega-5\omega v_2^2+6cs^2+10v_2^2)\frac{v_3\delta_l^4\rho v_2}{12\omega\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} + C_3\frac{\delta_l^4\rho}{24\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_2^4} + C_4\frac{\delta_l^4 v_1 cs^2}{12\omega^3\delta_t}\frac{\partial^4 \rho}{\partial x_1^3\partial x_3} +$

$(-12+18\omega-54\omega v_1^2-6\omega^2+18\omega^2 v_1^2-\omega^3 cs^2+36v_1^2+2\omega^2 cs^2)\frac{\delta_l^4\rho cs^2}{12\omega^3\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} +$

$(2+3\omega cs^2-\omega+\omega v_1^2-6cs^2-2v_1^2)\frac{v_3\delta_l^4\rho v_1}{12\omega\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} + C_5\frac{\delta_l^4}{2\omega^3\delta_t}\frac{\partial^4 \rho}{\partial x_1^2\partial x_2\partial x_3} + C_6\frac{\delta_l^4\rho}{2\omega^3\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} +$

$C_7\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} + C_8\frac{v_3\delta_l^4\rho}{\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} + C_9\frac{\delta_l^4}{2\omega^3\delta_t}\frac{\partial^4 \rho}{\partial x_1\partial x_2^2\partial x_3} + C_{10}\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} + C_{11}\frac{\delta_l^4\rho v_2}{\omega^3\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3} +$

$C_{12}\frac{\delta_l^4\rho}{2\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + C_{13}\frac{\delta_l^4 v_2 cs^2}{12\omega^3\delta_t}\frac{\partial^4 \rho}{\partial x_2^3\partial x_3} +$

$(-12+18\omega-54\omega v_2^2+18\omega^2 v_2^2-6\omega^2-\omega^3 cs^2+2\omega^2 cs^2+36v_2^2)\frac{\delta_l^4\rho cs^2}{12\omega^3\delta_t}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} +$

$(2+3\omega cs^2-\omega+\omega v_2^2-6cs^2-2v_2^2)\frac{v_3\delta_l^4\rho v_2}{12\omega\delta_t}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} + C_{14}\frac{v_3\delta_l^4 cs^2}{12\omega^3\delta_t}\frac{\partial^4 \rho}{\partial x_1^2\partial x_3^2} +$

$(-24-18\omega cs^2+72v_3^2+36\omega+36\omega^2 v_3^2+12cs^2-108\omega v_3^2-12\omega^2-\omega^3 cs^2+8\omega^2 cs^2)\frac{\delta_l^4\rho cs^2}{12\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} +$

$C_{15}\frac{v_3\delta_l^4 cs^2}{12\omega^3\delta_t}\frac{\partial^4 \rho}{\partial x_2^2\partial x_3^2} +$

$(-24-18\omega cs^2+72v_3^2+36\omega+36\omega^2 v_3^2+12cs^2-108\omega v_3^2-12\omega^2-\omega^3 cs^2+8\omega^2 cs^2)\frac{\delta_l^4\rho cs^2}{12\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} +$

$C_{16}\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + C_{17}\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} + C_{18}\frac{v_3\delta_l^4}{12\omega^3\delta_t}\frac{\partial^4 \rho}{\partial x_3^4} + C_{19}\frac{\delta_l^4\rho}{12\omega^3\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$

where:

$C_1 = 12\omega cs^2 - 36v_3^2 - 144\omega v_3^2 cs^2 + \omega^2 cs^4 + 12cs^4 - 36\omega v_3^4 - 7\omega^2 v_3^2 - 12cs^2 + 36\omega v_3^2 + 144v_3^2 cs^2 + 7\omega^2 v_3^4 - 12\omega cs^4 + 36v_3^4 + 24\omega^2 v_3^2 cs^2 - \omega^2 cs^2$

$C_2 = 36\omega cs^2 - 72v_1^4 + 3\omega^3 v_1^4 - 144v_1^2 cs^2 + 30\omega^2 cs^4 - 108\omega v_1^2 - 84\omega^2 v_1^2 cs^2 + 48cs^4 - 3\omega^3 cs^4 - 42\omega^2 v_1^4 - 24cs^2 + 108\omega v_1^4 + 216\omega v_1^2 cs^2 + 42\omega^2 v_1^2 + \omega^3 cs^2 + 72v_1^2 - 72\omega cs^4 - 14\omega^2 cs^2 + 6\omega^3 v_1^2 cs^2 - 3\omega^3 v_1^2$

$C_3 = 36\omega cs^2 + 3\omega^3 v_2^4 - 84\omega^2 v_2^2 cs^2 + 30\omega^2 cs^4 - 72v_2^4 + 48cs^4 - 42\omega^2 v_2^4 - 144v_2^2 cs^2 - 3\omega^3 cs^4 - 108\omega v_2^2 - 24cs^2 + 42\omega^2 v_2^2 + 6\omega^3 v_2^2 cs^2 + \omega^3 cs^2 + 108\omega v_2^4 - 72\omega cs^4 - 3\omega^3 v_2^2 + 216\omega v_2^2 cs^2 - 14\omega^2 cs^2 + 72v_2^2$

$C_4 = 24 + 108\omega cs^2 - 36\omega + 36\omega v_1^2 - 72cs^2 - \omega^3 + 14\omega^2 - 14\omega^2 v_1^2 + 3\omega^3 cs^2 - 24v_1^2 - 42\omega^2 cs^2 + \omega^3 v_1^2$

$C_5 = -36\omega v_1^2 v_2 cs^2 - 36\omega v_3^2 v_2 cs^2 - 24v_3^2 v_1 cs^2 + 36\omega v_1 v_2^2 cs^2 + 14\omega^2 v_3^2 v_1^2 v_2 + 36\omega v_3^2 v_1 v_2 - 24v_3^2 v_1 v_2 - 24v_1 v_2^2 cs^2 + 36\omega v_3^2 v_1 cs^2 - \omega^3 v_3^2 v_1^2 v_2 + 24v_3^2 v_2 cs^2 + 24v_1^2 v_2 cs^2 + 14\omega^2 v_3^2 v_2 cs^2 + 14\omega^2 v_1^2 v_2 cs^2 + \omega^3 v_3^2 v_1 cs^2 - 14\omega^2 v_3^2 v_1 v_2 - 36\omega v_3^2 v_1^2 v_2 - 14\omega^2 v_1 v_2 cs^2 - 14\omega^2 v_3^2 v_1 cs^2 + \omega^3 v_3^2 v_1 v_2 + \omega^3 v_1 v_2^2 cs^2 + 24v_3^2 v_1^2 v_2 - \omega^3 v_3^2 v_2 cs^2 - \omega^3 v_1^2 v_2 cs^2$

$C_6 = \omega^3 v_3^2 v_2^2 + 36\omega v_3^2 cs^2 - 14\omega^2 v_2^2 cs^2 - 2\omega^3 v_1 v_2 cs^2 + 48v_3^2 v_1 v_2 - 72\omega v_3^2 v_1 v_2 + 28\omega^2 v_1 v_2 cs^2 - 24v_2^2 cs^2 + \omega^3 v_3^2 cs^2 + 36\omega v_3^2 v_2^2 + \omega^3 v_2^2 cs^2 - 24v_3^2 cs^2 - 14\omega^2 v_3^2 v_2^2 + 48v_1 v_2 cs^2 - 2\omega^3 v_3^2 v_1 v_2 - 72\omega v_1 v_2 cs^2 - 24v_3^2 v_2^2 + 28\omega^2 v_3^2 v_1 v_2 + 36\omega v_2^2 cs^2 - 14\omega^2 v_3^2 cs^2$

$C_7 = -216\omega v_3^2 cs^2 - 6\omega^3 v_3^2 v_1^2 + 144v_1^2 cs^2 - 16\omega^2 cs^4 + 12\omega^3 v_1 v_2 cs^2 - 288v_3^2 v_1 v_2 + 432\omega v_3^2 v_1 v_2 + 84\omega^2 v_1^2 cs^2 - 36cs^4 - 168\omega^2 v_1 v_2 cs^2 - 216\omega v_3^2 v_1^2 - \omega^3 cs^4 - 6\omega^3 v_3^2 cs^2 + 84\omega^2 v_3^2 v_1^2 - 216\omega v_1^2 cs^2 + 144v_3^2 cs^2 - 288v_1 v_2 cs^2 + 12\omega^3 v_3^2 v_1 v_2 + 432\omega v_1 v_2 cs^2 - 168\omega^2 v_3^2 v_1 v_2 + 54\omega cs^4 + 84\omega^2 v_3^2 cs^2 + 144v_3^2 v_1^2 - 6\omega^3 v_1^2 cs^2$

$C_8 = \omega^3 v_1 cs^2 + 36\omega v_1 v_2^2 + 24v_1^2 v_2 - 36\omega v_2 cs^2 - \omega^3 v_2 cs^2 + 14\omega^2 v_1^2 v_2 + \omega^3 v_1 v_2^2 + 36\omega v_1 cs^2 - 36\omega v_1^2 v_2 + 24v_2 cs^2 - 24v_1 v_2^2 - 14\omega^2 v_1 cs^2 - 24v_1 cs^2 - 14\omega^2 v_1 v_2^2 + 14\omega^2 v_2 cs^2 - \omega^3 v_1^2 v_2$

$C_9 = -24v_3 v_1^2 cs^2 + 36\omega v_3 v_1^2 v_2^2 + 24v_3^2 v_1 cs^2 - 36\omega v_1 v_2^2 cs^2 + 36\omega v_3 v_2^2 cs^2 - 36\omega v_3^2 v_1 v_2 - 24v_3 v_2^2 cs^2 + 24v_3^2 v_1 v_2 + 24v_1 v_2^2 cs^2 - 36\omega v_3^2 v_1 cs^2 - 24v_3 v_1^2 v_2 + 36\omega v_3^2 v_1 cs^2 - 14\omega^2 v_3 v_1^2 v_2 + \omega^3 v_3 v_1^2 cs^2 - 14\omega^2 v_3 v_2^2 cs^2 - \omega^3 v_3^2 v_1 cs^2 + 14\omega^2 v_3^2 v_1 v_2 + 14\omega^2 v_1 v_2^2 cs^2 + \omega^3 v_3 v_2^2 cs^2 + 14\omega^2 v_3^2 v_1 cs^2 - \omega^3 v_3^2 v_1 v_2 - \omega^3 v_1 v_2^2 cs^2 + \omega^3 v_3 v_1^2 v_2 - 14\omega^2 v_3 v_1^2 cs^2$

$C_{10} = -168\omega^2 v_3 v_1 cs^2 + 12\omega^3 v_3 v_1 v_2^2 - 6\omega^3 v_3^2 v_2^2 - 216\omega v_3^2 cs^2 + 84\omega^2 v_2^2 cs^2 - 16\omega^2 cs^4 - 36cs^4 + 144v_2^2 cs^2 - \omega^3 cs^4 - 6\omega^3 v_3^2 cs^2 + 12\omega^3 v_3 v_1 cs^2 - 168\omega^2 v_3 v_1 v_2^2 - 216\omega v_3^2 v_2^2 - 288v_3 v_1 v_2^2 + 432\omega v_3 v_1 cs^2 - 6\omega^3 v_2^2 cs^2 + 144v_3^2 cs^2 + 84\omega^2 v_3^2 v_2^2 + 144v_3^2 v_2^2 + 54\omega cs^4 - 216\omega v_2^2 cs^2 + 84\omega^2 v_3^2 cs^2 - 288v_3 v_1 cs^2 + 432\omega v_3 v_1 v_2^2$

$C_{11} = -\omega^3 v_1 cs^2 - 24v_3 v_1^2 - 36\omega v_3^2 v_1 - 14\omega^2 v_3 cs^2 - 24v_3 cs^2 - \omega^3 v_3^2 v_1 - 14\omega^2 v_3 v_1^2 - 36\omega v_1 cs^2 + \omega^3 v_3 cs^2 + 24v_3^2 v_1 + 14\omega^2 v_1 cs^2 + 36\omega v_3 v_1^2 + 24v_1 cs^2 + \omega^3 v_3 v_1^2 + 14\omega^2 v_3^2 v_1 + 36\omega v_3 cs^2$

$C_{12} = 28\omega^2 v_3 v_1 cs^2 - 2\omega^3 v_3 v_1 v_2^2 - 14\omega^2 v_2^2 cs^2 - 24v_1^2 cs^2 - 14\omega^2 v_1^2 v_2^2 - 24v_1^2 v_2^2 - 14\omega^2 v_1^2 cs^2 - 24v_2^2 cs^2 - 2\omega^3 v_3 v_1 cs^2 + 28\omega^2 v_3 v_1 v_2^2 + 48v_3 v_1 v_2^2 + \omega^3 v_1^2 v_2^2 - 72\omega v_3 v_1 cs^2 + 36\omega v_1^2 cs^2 + \omega^3 v_2^2 cs^2 + 36\omega v_2^2 cs^2 + \omega^3 v_1^2 cs^2 + 48v_3 v_1 cs^2 + 36\omega v_1^2 v_2^2 - 72\omega v_3 v_1 v_2^2$

$C_{13} = 24 + 108\omega cs^2 - 36\omega + 36\omega v_2^2 - 72cs^2 - \omega^3 - 14\omega^2 v_2^2 + 14\omega^2 + 3\omega^3 cs^2 + \omega^3 v_2^2 - 42\omega^2 cs^2 - 24v_2^2$

$C_{14} = 24 + 108\omega cs^2 - 24v_3^2 + \omega^3 v_3^2 - 36\omega - 14\omega^2 v_3^2 - 72cs^2 - \omega^3 + 36\omega v_3^2 + 14\omega^2 + 5\omega^3 cs^2 - 46\omega^2 cs^2$

$C_{15} = 24 + 108\omega cs^2 - 24v_3^2 + \omega^3 v_3^2 - 36\omega - 14\omega^2 v_3^2 - 72cs^2 - \omega^3 + 36\omega v_3^2 + 14\omega^2 + 5\omega^3 cs^2 - 46\omega^2 cs^2$

$C_{16} = 36\omega cs^2 + 36v_3^2 + 54\omega v_3^2 cs^2 - 4\omega^3 v_3^2 + 20\omega^2 cs^4 + 36cs^4 + 54\omega v_3^4 - \omega^3 cs^4 + 26\omega^2 v_3^2 + 12\omega^3 v_3^2 cs^2 - 24cs^2 - 54\omega v_3^2 - 36v_3^2 cs^2 - 26\omega^2 v_3^4 - 54\omega cs^4 - 36v_3^4 - 42\omega^2 v_3^2 cs^2 - 12\omega^2 cs^2 + 4\omega^3 v_3^4$

$C_{17} = 36\omega cs^2 + 36v_3^2 + 54\omega v_3^2 cs^2 - 4\omega^3 v_3^2 + 20\omega^2 cs^4 + 36cs^4 + 54\omega v_3^4 - \omega^3 cs^4 + 26\omega^2 v_3^2 + 12\omega^3 v_3^2 cs^2 - 24cs^2 - 54\omega v_3^2 - 36v_3^2 cs^2 - 26\omega^2 v_3^4 - 54\omega cs^4 - 36v_3^4 - 42\omega^2 v_3^2 cs^2 - 12\omega^2 cs^2 + 4\omega^3 v_3^4$

$C_{18} = 12 + 198\omega cs^2 - 156v_3^2 - 1008\omega v_3^2 cs^2 + 10\omega^3 v_3^2 + 82\omega^2 cs^4 - 18\omega + 144cs^4 - 216\omega v_3^4 - 5\omega^3 cs^4 - 98\omega^2 v_3^2 - 34\omega^3 v_3^2 cs^2 - 132cs^2 - \omega^3 + 234\omega v_3^2 + 672v_3^2 cs^2 + 8\omega^2 + 90\omega^2 v_3^4 + 6\omega^3 cs^2 - 216\omega cs^4 + 144v_3^4 + 404\omega^2 v_3^2 cs^2 - 78\omega^2 cs^2 - 9\omega^3 v_3^4$

$C_{19} = 12 + 54\omega cs^2 - 252v_3^2 - 648\omega v_3^2 cs^2 + 14\omega^3 v_3^2 + 14\omega^2 cs^4 - 18\omega + 24cs^4 - 756\omega v_3^4 - \omega^3 cs^4 - 154\omega^2 v_3^2 - 18\omega^3 v_3^2 cs^2 - 36cs^2 - \omega^3 + 378\omega v_3^2 + 432v_3^2 cs^2 + 8\omega^2 + 310\omega^2 v_3^4 + 2\omega^3 cs^2 - 36\omega cs^4 + 504v_3^4 + 252\omega^2 v_3^2 cs^2 - 22\omega^2 cs^2 - 29\omega^3 v_3^4$

2.2   MRT

2.2.1   Definitions

Collision operator $\boldsymbol{C}$:

$$C\left(\boldsymbol{f}\right) = \mathbf{M}^{-1}\mathbf{S}\left(\boldsymbol{\mu}^{(eq)} - \mathbf{M}\boldsymbol{f}\right),$$

where

$$\mathbf{S} = \operatorname{diag}(\omega_1, \omega_2, \omega_3, \cdots, \omega_{27}),$$

$$\omega_1, \omega_2, \cdots, \omega_{27} \in (0, 2).$$

2.2.2 Conservation of mass: ρ

📎 attached text file: `output_d3q27_nse_mrt1_symbolic_pde_00.txt`

$\frac{\partial \rho}{\partial t} + \frac{v_1 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{\rho \delta_l}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{v_2 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{\rho \delta_l}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{v_3 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_3} + \frac{\rho \delta_l}{\delta_t} \frac{\partial v_3}{\partial x_3} + (-1 + 3cs^2 + v_1^2) \frac{v_1 \delta_l^3}{12\delta_t} \frac{\partial^3 \rho}{\partial x_1^3} +$

$(-1 + cs^2 + 3v_1^2) \frac{\rho \delta_l^3}{12\delta_t} \frac{\partial^3 v_1}{\partial x_1^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + v_2^2 + 3cs^2) \frac{v_2 \delta_l^3}{12\delta_t} \frac{\partial^3 \rho}{\partial x_2^3} +$

$(-1 + 3v_2^2 + cs^2) \frac{\rho \delta_l^3}{12\delta_t} \frac{\partial^3 v_2}{\partial x_2^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$

$(-1 + 3cs^2 + v_3^2) \frac{v_3 \delta_l^3}{12\delta_t} \frac{\partial^3 \rho}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2) \frac{\rho \delta_l^3}{12\delta_t} \frac{\partial^3 v_3}{\partial x_3^3} +$

$(-12cs^2 v_1^2 \omega_9 + cs^2 \omega_9 + 6v_1^4 + 2cs^4 - 3v_1^4 \omega_9 - 2cs^2 - cs^4 \omega_9 + 3v_1^2 \omega_9 + 24cs^2 v_1^2 - 6v_1^2) \frac{\delta_l^4}{24\delta_t \omega_9} \frac{\partial^4 \rho}{\partial x_1^4} +$

$(-4 - 3cs^2 \omega_9 + 6cs^2 - 5v_1^2 \omega_9 + 10v_1^2 + 2\omega_9) \frac{v_1 \rho \delta_l^4}{12\delta_t \omega_9} \frac{\partial^4 v_1}{\partial x_1^4} +$

$(3cs^2 \omega_{12} - 3cs^2 \omega_9 + v_1^2 \omega_{12} - v_1^2 \omega_9 + \omega_9 - \omega_{12}) \frac{v_2 v_1 \delta_l^4}{4\delta_t \omega_9 \omega_{12}} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} +$

$(cs^2 \omega_{12} - cs^2 \omega_9 + 3v_1^2 \omega_{12} - 3v_1^2 \omega_9 + \omega_9 - \omega_{12}) \frac{v_2 \rho \delta_l^4}{4\delta_t \omega_9 \omega_{12}} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + (-\omega_5 \omega_{12} + 3\omega_5 \omega_9 + 3cs^2 \omega_5 \omega_9 \omega_{12} + v_1^2 \omega_5 \omega_{12} -$

$3v_1^2 \omega_5 \omega_9 + v_1^2 \omega_5 \omega_9 \omega_{12} - 3cs^2 \omega_5 \omega_9 + 3cs^2 \omega_5 \omega_{12} - 6cs^2 \omega_9 \omega_{12} - \omega_5 \omega_9 \omega_{12}) \frac{v_1 \rho \delta_l^4}{12\delta_t \omega_5 \omega_9 \omega_{12}} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} +$

$(-2 + \omega_5) \frac{cs^4 \delta_l^4}{6\delta_t \omega_5} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} + (\omega_5 - \omega_{12}) \frac{cs^2 v_1 \rho \delta_l^4}{2\delta_t \omega_5 \omega_{12}} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + (\omega_5 - \omega_{15}) \frac{v_2 cs^2 \rho \delta_l^4}{2\delta_t \omega_5 \omega_{15}} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} +$

$(v_2^2 \omega_{15} + 3cs^2 \omega_{15} + \omega_{10} - \omega_{10} v_2^2 - 3\omega_{10} cs^2 - \omega_{15}) \frac{v_2 v_1 \delta_l^4}{4\delta_t \omega_{10} \omega_{15}} \frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} + (-\omega_{10} \omega_5 \omega_{15} - 6\omega_{10} cs^2 \omega_{15} - \omega_5 \omega_{15} +$

$3\omega_{10} \omega_5 - 3\omega_{10} cs^2 \omega_5 - 3\omega_{10} v_2^2 \omega_5 + \omega_{10} v_2^2 \omega_5 \omega_{15} + 3\omega_{10} cs^2 \omega_5 \omega_{15} + v_2^2 \omega_5 \omega_{15} + 3cs^2 \omega_5 \omega_{15}) \frac{v_2 \rho \delta_l^4}{12\delta_t \omega_{10} \omega_5 \omega_{15}} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$

$(3v_2^2 \omega_{15} + cs^2 \omega_{15} + \omega_{10} - 3\omega_{10} v_2^2 - \omega_{10} cs^2 - \omega_{15}) \frac{v_1 \rho \delta_l^4}{4\delta_t \omega_{10} \omega_{15}} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} +$

$(6v_2^4 + 2cs^4 + 3\omega_{10} v_2^2 + \omega_{10} cs^2 + 24v_2^2 cs^2 - 6v_2^2 - 2cs^2 - 3\omega_{10} v_2^4 - 12\omega_{10} v_2^2 cs^2 - \omega_{10} cs^4) \frac{\delta_l^4}{24\delta_t \omega_{10}} \frac{\partial^4 \rho}{\partial x_2^4} +$

$(-4 + 2\omega_{10} - 5\omega_{10} v_2^2 - 3\omega_{10} cs^2 + 10v_2^2 + 6cs^2) \frac{v_2 \rho \delta_l^4}{12\delta_t \omega_{10}} \frac{\partial^4 v_2}{\partial x_2^4} +$

$(-3cs^2 \omega_9 + \omega_{13} v_1^2 - \omega_{13} + 3\omega_{13} cs^2 - v_1^2 \omega_9 + \omega_9) \frac{v_3 v_1 \delta_l^4}{4\delta_t \omega_{13} \omega_9} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_3} +$

$(-cs^2 \omega_9 + 3\omega_{13} v_1^2 - \omega_{13} + \omega_{13} cs^2 - 3v_1^2 \omega_9 + \omega_9) \frac{v_3 \rho \delta_l^4}{4\delta_t \omega_{13} \omega_9} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} + (\omega_6 \omega_{13} v_1^2 + 3\omega_6 \omega_{13} cs^2 \omega_9 - 3\omega_6 cs^2 \omega_9 +$

$3\omega_6 \omega_{13} cs^2 - 6\omega_{13} cs^2 \omega_9 - \omega_6 \omega_{13} + \omega_6 \omega_{13} v_1^2 \omega_9 + 3\omega_6 \omega_9 - 3\omega_6 v_1^2 \omega_9 - \omega_6 \omega_{13} \omega_9) \frac{v_1 \rho \delta_l^4}{12\omega_6 \delta_t \omega_{13} \omega_9} \frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$

$(-\omega_8 + \omega_5) \frac{cs^2 v_3 \rho \delta_l^4}{2\delta_t \omega_8 \omega_5} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} + (\omega_6 - \omega_8) \frac{v_2 cs^2 \rho \delta_l^4}{2\omega_6 \delta_t \omega_8} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + (-\omega_8 + \omega_5) \frac{cs^2 v_3 \rho \delta_l^4}{2\delta_t \omega_8 \omega_5} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} +$

$(\omega_7 - \omega_8) \frac{cs^2 v_1 \rho \delta_l^4}{2\delta_t \omega_7 \omega_8} \frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} + (-\omega_{16} + \omega_{10} - \omega_{10} v_2^2 - 3\omega_{10} cs^2 + 3\omega_{16} cs^2 + \omega_{16} v_2^2) \frac{v_2 v_3 \delta_l^4}{4\delta_t \omega_{16} \omega_{10}} \frac{\partial^4 \rho}{\partial x_2^3 \partial x_3} +$

$(-\omega_{16} + \omega_{10} - 3\omega_{10} v_2^2 - \omega_{10} cs^2 + \omega_{16} cs^2 + 3\omega_{16} v_2^2) \frac{v_3 \rho \delta_l^4}{4\delta_t \omega_{16} \omega_{10}} \frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} + (-3\omega_{10} \omega_7 cs^2 - 3\omega_{10} \omega_7 v_2^2 - \omega_{16} \omega_7 -$

$\omega_{16} \omega_{10} \omega_7 - 6\omega_{16} \omega_{10} cs^2 + 3\omega_{10} \omega_7 + \omega_{16} \omega_{10} \omega_7 v_2^2 + 3\omega_{16} \omega_{10} \omega_7 cs^2 + 3\omega_{16} \omega_7 cs^2 + \omega_{16} \omega_7 v_2^2) \frac{v_2 \rho \delta_l^4}{12\delta_t \omega_{16} \omega_{10} \omega_7} \frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$

$(-2 + \omega_6) \frac{cs^4 \delta_l^4}{6\omega_6 \delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + (\omega_6 - \omega_{13}) \frac{cs^2 v_1 \rho \delta_l^4}{2\omega_6 \delta_t \omega_{13}} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} + (\omega_6 - \omega_{18}) \frac{cs^2 v_3 \rho \delta_l^4}{2\omega_6 \delta_t \omega_{18}} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + (\omega_6 - \omega_8) \frac{v_2 cs^2 \rho \delta_l^4}{2\omega_6 \delta_t \omega_8} \frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} +$

$(\omega_7 - \omega_8) \frac{cs^2 v_1 \rho \delta_l^4}{2\delta_t \omega_7 \omega_8} \frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} + (-2 + \omega_7) \frac{cs^4 \delta_l^4}{6\delta_t \omega_7} \frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} + (-\omega_{16} + \omega_7) \frac{v_2 cs^2 \rho \delta_l^4}{2\delta_t \omega_{16} \omega_7} \frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + (-\omega_{19} + \omega_7) \frac{cs^2 v_3 \rho \delta_l^4}{2\omega_{19} \delta_t \omega_7} \frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2}$

$+ (-\omega_{11} v_3^2 + v_3^2 \omega_{18} + 3cs^2 \omega_{18} + \omega_{11} - 3cs^2 \omega_{11} - \omega_{18}) \frac{v_3 v_1 \delta_l^4}{4\delta_t \omega_{11} \omega_{18}} \frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} + (3\omega_6 \omega_{11} - 3\omega_6 \omega_{11} v_3^2 - 6cs^2 \omega_{11} \omega_{18} +$

$\omega_6 v_3^2 \omega_{18} + 3\omega_6 cs^2 \omega_{11} \omega_{18} + 3\omega_6 cs^2 \omega_{18} - \omega_6 \omega_{18} - \omega_6 \omega_{11} \omega_{18} - 3\omega_6 cs^2 \omega_{11} + \omega_6 \omega_{11} v_3^2 \omega_{18}) \frac{v_3 \rho \delta_l^4}{12\omega_6 \delta_t \omega_{11} \omega_{18}} \frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} +$

$(-3\omega_{11} v_3^2 + 3v_3^2 \omega_{18} + cs^2 \omega_{18} + \omega_{11} - cs^2 \omega_{11} - \omega_{18}) \frac{v_1 \rho \delta_l^4}{4\delta_t \omega_{11} \omega_{18}} \frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} +$

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$$(-\omega_{11}v_3^2 - \omega_{19} + \omega_{11} + 3\omega_{19}cs^2 - 3cs^2\omega_{11} + \omega_{19}v_3^2)\frac{v_2v_3\delta_l^4}{4\omega_{19}\delta_t\omega_{11}}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} + (-\omega_{19}\omega_7 - \omega_{19}\omega_7\omega_{11} + \omega_{19}\omega_7\omega_{11}v_3^2 +$$

$$\omega_{19}\omega_7 v_3^2 - 3\omega_7 cs^2\omega_{11} + 3\omega_7\omega_{11} + 3\omega_{19}\omega_7 cs^2 - 6\omega_{19}cs^2\omega_{11} - 3\omega_7\omega_{11}v_3^2 + 3\omega_{19}\omega_7 cs^2\omega_{11})\frac{v_3\rho\delta_l^4}{12\omega_{19}\delta_t\omega_7\omega_{11}}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} +$$

$$(-3\omega_{11}v_3^2 - \omega_{19} + \omega_{11} + \omega_{19}cs^2 - cs^2\omega_{11} + 3\omega_{19}v_3^2)\frac{v_2\rho\delta_l^4}{4\omega_{19}\delta_t\omega_{11}}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} +$$

$$(3\omega_{11}v_3^2 + 2cs^4 + 6v_3^4 - cs^4\omega_{11} - 2cs^2 + 24cs^2v_3^2 - 6v_3^2 - 3\omega_{11}v_3^4 + cs^2\omega_{11} - 12cs^2\omega_{11}v_3^2)\frac{\delta_l^4}{24\delta_t\omega_{11}}\frac{\partial^4\rho}{\partial x_3^4} +$$

$$(-4 - 5\omega_{11}v_3^2 + 2\omega_{11} + 6cs^2 + 10v_3^2 - 3cs^2\omega_{11})\frac{v_3\rho\delta_l^4}{12\delta_t\omega_{11}}\frac{\partial^4 v_3}{\partial x_3^4} = 0.$$

2.2.3 Conservation of momentum: ρv_1

attached text file: `output_d3q27_nse_mrt1_symbolic_pde_01.txt`

$$v_1\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_1}{\partial t} + (cs^2 + v_1^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{2v_1\rho\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_2v_1\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{v_2\rho\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_2} + \frac{v_1\rho\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{v_3v_1\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{v_3\rho\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_3} +$$

$$\frac{v_1\rho\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 - 2cs^2\omega_9 + 4cs^2 - 3v_1^2\omega_9 + 6v_1^2 + \omega_9)\frac{\delta_l^2}{\delta_t\omega_9}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} + (2 - \omega_9)\frac{3v_1\rho\delta_l^2}{\delta_t\omega_9}\left(\frac{\partial v_1}{\partial x_1}\right)^2 +$$

$$(-2 + \omega_5)\frac{cs^2\delta_l^2}{2\delta_t\omega_5}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} + (-2 + \omega_5)\frac{cs^2\delta_l^2}{2\delta_t\omega_5}\frac{\partial\rho}{\partial x_2}\frac{\partial v_1}{\partial x_2} + (-2 + \omega_6)\frac{cs^2\delta_l^2}{2\omega_6\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_1} + (-2 + \omega_6)\frac{cs^2\delta_l^2}{2\omega_6\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_3} +$$

$$(-2 - 3cs^2\omega_9 + 6cs^2 - v_1^2\omega_9 + 2v_1^2 + \omega_9)\frac{v_1\delta_l^2}{2\delta_t\omega_9}\frac{\partial^2\rho}{\partial x_1^2} + (-2 - cs^2\omega_9 + 2cs^2 - 3v_1^2\omega_9 + 6v_1^2 + \omega_9)\frac{\rho\delta_l^2}{2\delta_t\omega_9}\frac{\partial^2 v_1}{\partial x_1^2} +$$

$$(-2 + \omega_5)\frac{cs^2\rho\delta_l^2}{2\delta_t\omega_5}\frac{\partial^2 v_2}{\partial x_1\partial x_2} + (-2 + \omega_5)\frac{cs^2\rho\delta_l^2}{2\delta_t\omega_5}\frac{\partial^2 v_1}{\partial x_2^2} + (-2 + \omega_6)\frac{cs^2\rho\delta_l^2}{2\omega_6\delta_t}\frac{\partial^2 v_3}{\partial x_1\partial x_3} + (-2 + \omega_6)\frac{cs^2\rho\delta_l^2}{2\omega_6\delta_t}\frac{\partial^2 v_1}{\partial x_3^2} + C_1\frac{\delta_l^3}{12\delta_t\omega_9^2}\frac{\partial^3\rho}{\partial x_1^3}$$

$$+ (-24 - 4\omega_9^2 + 11v_1^2\omega_9^2 - 36cs^2\omega_9 + 36cs^2 - 60v_1^2\omega_9 + 5cs^2\omega_9^2 + 60v_1^2 + 24\omega_9)\frac{v_1\rho\delta_l^3}{6\delta_t\omega_9^2}\frac{\partial^3 v_1}{\partial x_1^3} + C_2\frac{v_2v_1\delta_l^3}{\delta_t\omega_5\omega_9^2\omega_{12}}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} +$$

$$C_3\frac{v_2\rho\delta_l^3}{\delta_t\omega_5\omega_9^2\omega_{12}}\frac{\partial^3 v_1}{\partial x_1^2\partial x_2} + C_4\frac{v_1\rho\delta_l^3}{12\delta_t\omega_5^2\omega_9^2\omega_{12}}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} + (-12 + 12\omega_5 - \omega_5^2)\frac{cs^4\delta_l^3}{6\delta_t\omega_5^2}\frac{\partial^3\rho}{\partial x_1\partial x_2^2} +$$

$$(-12\omega_5\omega_{12} + 12\omega_5\omega_9 - 12\omega_9\omega_{12} - \omega_5^2\omega_9\omega_{12} + 12\omega_5^2 + 12\omega_5\omega_9\omega_{12} - 12\omega_5^2\omega_9)\frac{cs^2v_1\rho\delta_l^3}{6\delta_t\omega_5^2\omega_9\omega_{12}}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} +$$

$$(\omega_5\omega_{15} + 2\omega_5 - \omega_5^2 - 2\omega_{15})\frac{v_2cs^2\rho\delta_l^3}{\delta_t\omega_5^2\omega_{15}}\frac{\partial^3 v_2}{\partial x_1\partial x_2^2} + C_5\frac{v_2v_1\delta_l^3}{12\delta_t\omega_{10}\omega_5\omega_{15}}\frac{\partial^3\rho}{\partial x_2^3} + C_6\frac{v_2\rho\delta_l^3}{6\delta_t\omega_5^2\omega_{15}}\frac{\partial^3 v_1}{\partial x_2^3} + C_7\frac{v_1\rho\delta_l^3}{12\delta_t\omega_{10}\omega_5\omega_{15}}\frac{\partial^3 v_2}{\partial x_2^3} +$$

$$C_8\frac{v_3v_1\delta_l^3}{\omega_6\delta_t\omega_{13}\omega_9^2}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} + C_9\frac{v_3\rho\delta_l^3}{\omega_6\delta_t\omega_{13}\omega_9^2}\frac{\partial^3 v_1}{\partial x_1^2\partial x_3} + C_{10}\frac{v_1\rho\delta_l^3}{12\omega_6^2\delta_t\omega_{13}\omega_9^2}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} +$$

$$(-\omega_6\omega_5^2 - \omega_6\omega_8 + \omega_6\omega_5 + \omega_6\omega_8\omega_5 + \omega_5^2 - \omega_8\omega_5)\frac{v_3cs^2\rho\delta_l^3}{\omega_6\delta_t\omega_8\omega_5^2}\frac{\partial^3 v_2}{\partial x_1\partial x_2\partial x_3} +$$

$$(-\omega_6\omega_8 + \omega_6\omega_5 - \omega_6^2\omega_5 + \omega_6^2 + \omega_6\omega_8\omega_5 - \omega_8\omega_5)\frac{v_2cs^2\rho\delta_l^3}{\omega_6^2\delta_t\omega_8\omega_5}\frac{\partial^3 v_3}{\partial x_1\partial x_2\partial x_3} +$$

$$(-\omega_6\omega_5^2 - \omega_6\omega_8 + \omega_6\omega_5 + \omega_6\omega_8\omega_5 + \omega_5^2 - \omega_8\omega_5)\frac{v_3cs^2\rho\delta_l^3}{\omega_6\delta_t\omega_8\omega_5^2}\frac{\partial^3 v_1}{\partial x_2^2\partial x_3} +$$

$$(-6\omega_6\omega_7\omega_5 + 6\omega_7\omega_5 - \omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_8 + 6\omega_6\omega_7 + 6\omega_6\omega_8\omega_5 - 6\omega_8\omega_5)\frac{cs^2v_1\rho\delta_l^3}{6\omega_6\delta_t\omega_7\omega_8\omega_5}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} +$$

$$(-12 + 12\omega_6 - \omega_6^2)\frac{cs^4\delta_l^3}{6\omega_6^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} +$$

$$(-12\omega_6^2\omega_9 - \omega_6^2\omega_{13}\omega_9 - 12\omega_6\omega_{13} + 12\omega_6^2 - 12\omega_{13}\omega_9 + 12\omega_6\omega_9 + 12\omega_6\omega_{13}\omega_9)\frac{cs^2v_1\rho\delta_l^3}{6\omega_6^2\delta_t\omega_{13}\omega_9}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} +$$

$$(2\omega_6 - \omega_6^2 + \omega_6\omega_{18} - 2\omega_{18})\frac{v_3cs^2\rho\delta_l^3}{\omega_6^2\delta_t\omega_{18}}\frac{\partial^3 v_3}{\partial x_1\partial x_3^2} + (-\omega_6\omega_8 + \omega_6\omega_5 - \omega_6^2\omega_5 + \omega_6^2 + \omega_6\omega_8\omega_5 - \omega_8\omega_5)\frac{v_2cs^2\rho\delta_l^3}{\omega_6^2\delta_t\omega_8\omega_5}\frac{\partial^3 v_1}{\partial x_2\partial x_3^2} +$$

$$(-6\omega_6\omega_7\omega_5 + 6\omega_7\omega_5 - \omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_8 + 6\omega_6\omega_7 + 6\omega_6\omega_8\omega_5 - 6\omega_8\omega_5)\frac{cs^2v_1\rho\delta_l^3}{6\omega_6\delta_t\omega_7\omega_8\omega_5}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} +$$

$$C_{11}\frac{v_3v_1\delta_l^3}{12\omega_6\delta_t\omega_{11}\omega_{18}}\frac{\partial^3\rho}{\partial x_3^3} + C_{12}\frac{v_3\rho\delta_l^3}{6\omega_6^2\delta_t\omega_{18}}\frac{\partial^3 v_1}{\partial x_3^3} + C_{13}\frac{v_1\rho\delta_l^3}{12\omega_6\delta_t\omega_{11}\omega_{18}}\frac{\partial^3 v_3}{\partial x_3^3} + C_{14}\frac{v_1\delta_l^4}{12\delta_t\omega_9^3}\frac{\partial^4\rho}{\partial x_1^4} + C_{15}\frac{\rho\delta_l^4}{12\delta_t\omega_9^3}\frac{\partial^4 v_1}{\partial x_1^4} +$$

$$C_{16}\frac{v_2\delta_l^4}{4\delta_t\omega_5^2\omega_9^3\omega_{12}^2}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} + C_{17}\frac{v_2v_1\rho\delta_l^4}{4\delta_t\omega_5^2\omega_9^3\omega_{12}^2}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} + C_{18}\frac{\rho\delta_l^4}{12\delta_t\omega_5^3\omega_9^3\omega_{12}^2}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C_{19}\frac{v_1\delta_l^4}{12\delta_t\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} +$$

$$C_{20}\frac{\rho\delta_l^4}{12\delta_t\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} + C_{21}\frac{v_2v_1\rho\delta_l^4}{2\delta_t\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} + C_{22}\frac{v_2\delta_l^4}{12\delta_t\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} +$$

$$C_{23}\frac{v_2v_1\rho\delta_l^4}{12\delta_t\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} + C_{24}\frac{\rho\delta_l^4}{12\delta_t\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} + C_{25}\frac{v_1\delta_l^4}{24\delta_t\omega_{10}^2\omega_5^2\omega_{15}}\frac{\partial^4\rho}{\partial x_2^4} + C_{26}\frac{\rho\delta_l^4}{24\delta_t\omega_5^3\omega_{15}^2}\frac{\partial^4 v_1}{\partial x_2^4} +$$

$$C_{27}\frac{v_2v_1\rho\delta_l^4}{12\delta_t\omega_{10}^2\omega_5^2\omega_{15}}\frac{\partial^4 v_2}{\partial x_2^4} + C_{28}\frac{v_3\delta_l^4}{4\omega_6^2\delta_t\omega_{13}\omega_9^3}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} + C_{29}\frac{v_3v_1\rho\delta_l^4}{4\omega_6^2\delta_t\omega_{13}\omega_9^3}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} + C_{30}\frac{\rho\delta_l^4}{12\omega_6^3\delta_t\omega_{13}\omega_9^3}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$$

$$C_{31}\frac{v_2v_3v_1\delta_l^4}{\omega_6^2\delta_t\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} + C_{32}\frac{v_2v_3\rho\delta_l^4}{\omega_6^2\delta_t\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}^2}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} + C_{33}\frac{v_3v_1\rho\delta_l^4}{2\omega_6^2\delta_t\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}^2}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C_{34}\frac{v_2v_1\rho\delta_l^4}{2\omega_6^3\delta_t\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12}^2}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} + C_{35}\frac{2v_3cs^4\delta_l^4}{\omega_6^2\delta_t\omega_8^2\omega_5^3}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} + C_{36}\frac{v_3cs^2v_1\rho\delta_l^4}{2\omega_6^3\delta_t\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}^2}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} +$$

$$C_{37}\frac{v_2v_3cs^2\rho\delta_l^4}{\omega_6^2\delta_t\omega_{17}\omega_8^2\omega_5^3\omega_{15}^2}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3} + C_{38}\frac{cs^2\rho\delta_l^4}{12\omega_6^3\delta_t\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12}}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + C_{39}\frac{v_2v_3v_1\delta_l^4}{4\omega_6\delta_t\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} +$$

$$+ C_{40}\frac{v_2v_3\rho\delta_l^4}{2\omega_6^2\delta_t\omega_{17}\omega_8^2\omega_5^3\omega_{15}^2}\frac{\partial^4 v_1}{\partial x_2^3\partial x_3} + C_{41}\frac{v_3v_1\rho\delta_l^4}{4\omega_6\delta_t\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} + C_{42}\frac{v_2v_1\rho\delta_l^4}{12\omega_6^2\delta_t\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} +$$

$$C_{43}\frac{v_1\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{18}\omega_9^3}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} + C_{44}\frac{\rho\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{18}\omega_9^3}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} + C_{45}\frac{v_3v_1\rho\delta_l^4}{2\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{11}\omega_{18}^2\omega_9^3}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} +$$

$$C_{46}\frac{\delta_l^4}{2\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}}\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2} + C_{47}\frac{\rho\delta_l^4}{2\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C_{48}\frac{\rho\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{18}\omega_9\omega_{12}}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} + C_{49}\frac{v_3\rho\delta_l^4}{\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}}\frac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C_{50}\frac{\delta_l^4}{12\omega_6^2\delta_t\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_{15}}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} + C_{51}\frac{\rho\delta_l^4}{4\omega_6^3\delta_t\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_{15}}\frac{\partial^4 v_1}{\partial x_2^2\partial x_3^2} +$$

$$C_{52}\frac{v_2\rho\delta_l^4}{2\omega_6^2\delta_t\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_{15}}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} + C_{53}\frac{\rho\delta_l^4}{4\omega_6^2\omega_{19}\delta_t\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_{15}}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} +$$

$$C_{54}\frac{v_3\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_{11}^2\omega_{18}^2\omega_9}\frac{\partial^4\rho}{\partial x_1\partial x_3^3} + C_{55}\frac{v_3v_1\rho\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{11}^2\omega_{18}^2\omega_9^2}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + C_{56}\frac{\rho\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_{11}^2\omega_{18}^2\omega_9}\frac{\partial^4 v_3}{\partial x_1\partial x_3^3} +$$

$$C_{57}\frac{v_2v_3v_1\delta_l^4}{4\omega_6^2\omega_{19}\delta_t\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} + C_{58}\frac{v_2v_3\rho\delta_l^4}{2\omega_6^3\delta_t\omega_{20}\omega_8^2\omega_5^2\omega_{18}^2}\frac{\partial^4 v_1}{\partial x_2\partial x_3^3} + C_{59}\frac{v_3v_1\rho\delta_l^4}{12\omega_6^2\omega_{19}\delta_t\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} +$$

$$C_{60}\frac{v_2v_1\rho\delta_l^4}{4\omega_6^2\omega_{19}\delta_t\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} + C_{61}\frac{v_1\delta_l^4}{24\omega_6^2\delta_t\omega_{11}^2\omega_{18}^2}\frac{\partial^4\rho}{\partial x_3^4} + C_{62}\frac{\rho\delta_l^4}{24\omega_6^3\delta_t\omega_{18}^2}\frac{\partial^4 v_1}{\partial x_3^4} + C_{63}\frac{v_3v_1\rho\delta_l^4}{12\omega_6^2\delta_t\omega_{11}^2\omega_{18}^2}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = -12cs^4\omega_9 + 7v_1^4\omega_9^2 + 24cs^2v_1^2\omega_9^2 + 12cs^4 + 36v_1^4 + 144cs^2v_1^2 + cs^4\omega_9^2 - 36v_1^4\omega_9 - 144cs^2v_1^2\omega_9 - 7v_1^2\omega_9^2 + 12cs^2\omega_9 - 12cs^2 + 36v_1^2\omega_9 - cs^2\omega_9^2 - 36v_1^2$

$C_2 = -\omega_5\omega_{12} + \omega_5\omega_9 + v_1^2\omega_5\omega_9^2 - \omega_9\omega_{12} + v_1^2\omega_5\omega_{12} - v_1^2\omega_5\omega_9 - v_1^2\omega_5\omega_9\omega_{12} - \omega_5\omega_9^2 + \omega_9^2 + v_1^2\omega_9\omega_{12} + 3cs^2\omega_9\omega_{12} - v_1^2\omega_9^2 + 3cs^2\omega_5\omega_{12} - 3cs^2\omega_5\omega_9\omega_{12} - 3cs^2\omega_5\omega_9 + 3cs^2\omega_5\omega_9^2 - 3cs^2\omega_9^2 + \omega_5\omega_9\omega_{12}$

$C_3 = -\omega_5\omega_{12} + \omega_5\omega_9 + 3v_1^2\omega_5\omega_9^2 - \omega_9\omega_{12} + 3v_1^2\omega_5\omega_{12} - 3v_1^2\omega_5\omega_9 - 3v_1^2\omega_5\omega_9\omega_{12} - \omega_5\omega_9^2 + \omega_9^2 + 3v_1^2\omega_9\omega_{12} + cs^2\omega_9\omega_{12} - 3v_1^2\omega_9^2 + cs^2\omega_5\omega_{12} - cs^2\omega_5\omega_9\omega_{12} - cs^2\omega_5\omega_9 + cs^2\omega_5\omega_9^2 - cs^2\omega_9^2 + \omega_5\omega_9\omega_{12}$

$C_4 = -6\omega_5\omega_9^2\omega_{12} + 12cs^2\omega_5^2\omega_9^2 - 12v_1^2\omega_5\omega_9^2 + 6\omega_5^2\omega_9\omega_{12} + 42cs^2\omega_5\omega_9^2\omega_{12} - 3v_1^2\omega_5^2\omega_9^2\omega_{12} + 36cs^2\omega_5^2\omega_{12} - 12cs^2\omega_5^2\omega_9 - 18cs^2\omega_5^2\omega_9\omega_{12} + 12\omega_5\omega_9^2 - 24cs^2\omega_9^2\omega_{12} - 11cs^2\omega_5^2\omega_9^2\omega_{12} - 12\omega_5^2\omega_9^2 + 6v_1^2\omega_5\omega_9^2\omega_{12} + 12v_1^2\omega_5^2\omega_{12} - 6v_1^2\omega_5^2\omega_9\omega_{12} - 24cs^2\omega_5\omega_9\omega_{12} - 12v_1^2\omega_5^2\omega_9 - 12cs^2\omega_5\omega_9^2 + 12v_1^2\omega_5^2\omega_9^2 + 3\omega_5^2\omega_9^2\omega_{12} - 12\omega_5^2\omega_{12} + 12\omega_5^2\omega_9$

$C_5 = -\omega_{10}\omega_5\omega_{15} + 18\omega_{10}cs^2\omega_5 + 12v_2^2\omega_{15} + 6\omega_5\omega_{15} - 36\omega_{10}cs^2 + 12\omega_{10} - 12\omega_{10}v_2^2 - 6\omega_{10}\omega_5 - 18cs^2\omega_5\omega_{15} + 36cs^2\omega_{15} + 6\omega_{10}v_2^2\omega_5 + \omega_{10}v_2^2\omega_5\omega_{15} + 3\omega_{10}cs^2\omega_5\omega_{15} - 6v_2^2\omega_5\omega_{15} - 12\omega_{15}$

$C_6 = -v_2^2\omega_5^2\omega_{15} - 3\omega_5\omega_{15} - 6cs^2\omega_5 + 3cs^2\omega_5^2 - 3cs^2\omega_5^2\omega_{15} - 6v_2^2\omega_5 + 15cs^2\omega_5\omega_{15} - 12cs^2\omega_{15} + 6\omega_5 + \omega_5^2\omega_{15} - 3\omega_5^2 + 3v_2^2\omega_5\omega_{15} + 3v_2^2\omega_5^2$

$C_7 = -\omega_{10}\omega_5\omega_{15} + 6\omega_{10}cs^2\omega_5 + 36v_2^2\omega_{15} + 6\omega_5\omega_{15} - 12\omega_{10}cs^2 + 12\omega_{10} - 36\omega_{10}v_2^2 - 6\omega_{10}\omega_5 - 6cs^2\omega_5\omega_{15} + 12cs^2\omega_{15} + 18\omega_{10}v_2^2\omega_5 + 3\omega_{10}v_2^2\omega_5\omega_{15} + \omega_{10}cs^2\omega_5\omega_{15} - 18v_2^2\omega_5\omega_{15} - 12\omega_{15}$

$C_8 = \omega_6\omega_{13}v_1^2 + 3\omega_6\omega_{13}cs^2 + \omega_9^2 - \omega_6\omega_{13} - 3\omega_6cs^2\omega_9 + \omega_6v_1^2\omega_9^2 - \omega_6\omega_9^2 - v_1^2\omega_9^2 - 3\omega_6\omega_{13}cs^2\omega_9 + \omega_{13}v_1^2\omega_9 - \omega_{13}\omega_9 - \omega_6\omega_{13}v_1^2\omega_9 + 3\omega_{13}cs^2\omega_9 - 3cs^2\omega_9^2 + \omega_6\omega_9 + 3\omega_6cs^2\omega_9^2 - \omega_6v_1^2\omega_9 + \omega_6\omega_{13}\omega_9$

$C_9 = 3\omega_6\omega_{13}v_1^2 + \omega_6\omega_{13}cs^2 + \omega_9^2 - \omega_6\omega_{13} - \omega_6cs^2\omega_9 + 3\omega_6v_1^2\omega_9^2 - \omega_6\omega_9^2 - 3v_1^2\omega_9^2 - \omega_6\omega_{13}cs^2\omega_9 + 3\omega_{13}v_1^2\omega_9 - \omega_{13}\omega_9 - 3\omega_6\omega_{13}v_1^2\omega_9 + \omega_{13}cs^2\omega_9 - cs^2\omega_9^2 + \omega_6\omega_9 + \omega_6cs^2\omega_9^2 - 3\omega_6v_1^2\omega_9 + \omega_6\omega_{13}\omega_9$

$C_{10} = 12\omega_6^2\omega_9 - 12\omega_6^2v_1^2\omega_9 + 12\omega_6^2cs^2\omega_9^2 - 3\omega_6^2\omega_{13}v_1^2\omega_9^2 - 18\omega_6^2\omega_{13}cs^2\omega_9 + 6\omega_6^2\omega_{13}\omega_9 + 3\omega_6^2\omega_{13}\omega_9^2 + 12\omega_6^2v_1^2\omega_9^2 - 12\omega_6^2cs^2\omega_9 - 6\omega_6^2\omega_{13}v_1^2\omega_9 - 11\omega_6^2\omega_{13}cs^2\omega_9^2 - 12\omega_6^2\omega_9^2 - 12\omega_6^2\omega_{13} - 6\omega_6\omega_{13}\omega_9^2 - 12\omega_6v_1^2\omega_9^2 + 12\omega_6\omega_9^2 + 6\omega_6\omega_{13}v_1^2\omega_9^2 - 24\omega_{13}cs^2\omega_9^2 - 24\omega_6\omega_{13}cs^2\omega_9 + 12\omega_6^2\omega_{13}v_1^2 + 42\omega_6\omega_{13}cs^2\omega_9^2 - 12\omega_6cs^2\omega_9^2 + 36\omega_6^2\omega_{13}cs^2$

$C_{11} = -12\omega_{11}v_3^2 + 12v_3^2\omega_{18} + 3\omega_6\omega_{11}cs^2\omega_{18} - 6\omega_6\omega_{11} + 6\omega_6\omega_{11}v_3^2 - 6\omega_6v_3^2\omega_{18} + 18\omega_6\omega_{11}cs^2 - 36\omega_{11}cs^2 + 12\omega_{11} + 6\omega_6\omega_{18} - 18\omega_6cs^2\omega_{18} - 12\omega_{18} - \omega_6\omega_{11}\omega_{18} + \omega_6\omega_{11}v_3^2\omega_{18} + 36cs^2\omega_{18}$

$C_{12} = 6\omega_6 - 3\omega_6^2cs^2\omega_{18} - 6\omega_6cs^2 + 3\omega_6v_3^2\omega_{18} - 6\omega_6v_3^2 + \omega_6^2\omega_{18} - 3\omega_6^2 + 3\omega_6^2v_3^2 - 3\omega_6\omega_{18} + 15\omega_6cs^2\omega_{18} + 3\omega_6^2cs^2 - \omega_6^2v_3^2\omega_{18} - 12cs^2\omega_{18}$

$C_{13} = -36\omega_{11}v_3^2 + 36v_3^2\omega_{18} + \omega_6\omega_{11}cs^2\omega_{18} - 6\omega_6\omega_{11} + 18\omega_6\omega_{11}v_3^2 - 18\omega_6v_3^2\omega_{18} + 6\omega_6\omega_{11}cs^2 - 12\omega_{11}cs^2 + 12\omega_{11} + 6\omega_6\omega_{18} - 6\omega_6cs^2\omega_{18} - 12\omega_{18} - \omega_6\omega_{11}\omega_{18} + 3\omega_6\omega_{11}v_3^2\omega_{18} + 12cs^2\omega_{18}$

$C_{14} = 12 - 216cs^4\omega_9 + 90v_1^4\omega_9^2 + 404cs^2v_1^2\omega_9^2 + 144cs^4 + 144v_1^4 - 34cs^2v_1^2\omega_9^3 - 9v_1^4\omega_9^3 - \omega_9^3 - 5cs^4\omega_9^3 + 672cs^2v_1^2 + 82cs^4\omega_9^2 - 216v_1^4\omega_9 + 8\omega_9^2 - 1008cs^2v_1^2\omega_9 + 10v_1^2\omega_9^3 - 98v_1^2\omega_9^2 + 198cs^2\omega_9 - 132cs^2 + 234v_1^2\omega_9 - 78cs^2\omega_9^2 - 156v_1^2 - 18\omega_9 + 6cs^2\omega_9^3$

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$$\begin{aligned}
C_{15} = {} & 12 - 36cs^4\omega_9 + 310v_1^4\omega_9^2 + 252cs^2v_1^2\omega_9^2 + 24cs^4 + 504v_1^4 - 18cs^2v_1^2\omega_9^3 - 29v_1^4\omega_9^3 - \omega_9^3 - cs^4\omega_9^3 + 432cs^2v_1^2 + 14cs^4\omega_9^2 - 756v_1^4\omega_9 + \\
& 8\omega_9^3 - 648cs^2v_1^4\omega_9 + 14v_1^2\omega_9^3 - 154v_1^2\omega_9^2 + 54cs^2\omega_9 - 36cs^2 + 378v_1^2\omega_9 - 22cs^2\omega_9^2 - 252v_1^2 - 18\omega_9 + 2cs^2\omega_9^3
\end{aligned}$$

$$\begin{aligned}
C_{16} = {} & 4v_1^2\omega_5\omega_9^3 - 4cs^2\omega_5^2\omega_9^3 - 4cs^2\omega_9^2\omega_{12} - 16v_1^4\omega_5\omega_9\omega_{12} + 8cs^4\omega_5^2\omega_9\omega_{12} + 12cs^2\omega_5\omega_9\omega_{12}^2 + 13v_1^2\omega_5^2\omega_9^3\omega_{12} - 20v_1^4\omega_5\omega_9\omega_{12} - \\
& 72cs^2v_1^2\omega_5^2\omega_9\omega_{12} - 8cs^2\omega_5\omega_9^3\omega_{12} + 4cs^2\omega_9^2\omega_9 - 20v_1^4\omega_5^2\omega_9\omega_{12} + 4cs^2\omega_5^2\omega_9^2 - 48cs^2v_1^2\omega_5\omega_9^2\omega_{12} - 13v_1^2\omega_5^2\omega_9^2\omega_{12} + 8cs^2\omega_5\omega_9^3\omega_{12}^2 - \\
& 8cs^2\omega_5^2\omega_{12}^2 + 4cs^4\omega_5\omega_9^3 - 4v_1^4\omega_5\omega_9^3 - 84cs^2v_1^2\omega_5\omega_9\omega_{12}^2 - 32v_1^2\omega_5\omega_9\omega_{12} + 4cs^4\omega_9^2\omega_{12} - 4cs^4\omega_5\omega_9^3\omega_{12} - 36v_1^4\omega_5^2\omega_9\omega_{12} + 20v_1^4\omega_5\omega_9^3\omega_{12} + \\
& 4cs^4\omega_5\omega_9\omega_{12}^2 - 24cs^2v_1^2\omega_5\omega_9^3 - 144cs^2v_1^2\omega_5^2\omega_9\omega_{12} + 84cs^2v_1^2\omega_5\omega_9^3\omega_{12} + 4cs^2\omega_5^2\omega_9\omega_{12} - 4cs^4\omega_9^3\omega_{12} - 4cs^4\omega_5^2\omega_9^2 + 8cs^4\omega_5^2\omega_{12}^2 + \\
& 4cs^4\omega_5^2\omega_9^2\omega_{12} - 20v_1^4\omega_5\omega_9^2\omega_{12}^2 - 8v_1^4\omega_9^3\omega_{12} - 8cs^2\omega_5^2\omega_9^3\omega_{12} + 96cs^2v_1^2\omega_5^2\omega_{12} + 16v_1^2\omega_5\omega_9\omega_{12} + 51cs^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 4v_1^4\omega_5^2\omega_9^2 - 24cs^2v_1^2\omega_5\omega_9^2 + \\
& 20v_1^4\omega_5\omega_9\omega_{12}^2 + 8cs^4\omega_5\omega_9^3\omega_{12} - 12cs^4\omega_5^2\omega_9\omega_{12} - 13v_1^2\omega_5\omega_9^3\omega_{12} - 36cs^2v_1^2\omega_9^3\omega_{12} + 24v_1^4\omega_5^2\omega_{12} - 4cs^4\omega_5\omega_9^3 + 4v_1^4\omega_5^2\omega_9^3 + 8v_1^4\omega_9^3\omega_{12}^2 + \\
& 72cs^2v_1^2\omega_5\omega_9^2\omega_{12} + 20v_1^2\omega_5^2\omega_9\omega_{12} - 51cs^2v_1^2\omega_5\omega_9^3\omega_{12} - 8cs^2\omega_5\omega_9\omega_{12}^2 + 13v_1^4\omega_5^2\omega_9^2\omega_{12} + 36cs^2v_1^2\omega_9^2\omega_{12} + 24cs^2v_1^2\omega_5\omega_9^3 + 32v_1^4\omega_5\omega_9\omega_{12} + \\
& 8v_1^2\omega_9^3\omega_{12} + 4v_1^2\omega_5^2\omega_9^2 - 24v_1^2\omega_5^2\omega_{12}^2 - 20v_1^2\omega_5\omega_9^3\omega_{12} - 4cs^2\omega_9\omega_{12}^2 + 4cs^2\omega_5^2\omega_9^3\omega_{12} + 36v_1^2\omega_5^2\omega_9\omega_{12} - 4v_1^2\omega_5^2\omega_9^3 + 4cs^2\omega_5\omega_9^3 - \\
& 4cs^4\omega_5^2\omega_9\omega_{12} - 8v_1^2\omega_9^3\omega_{12} + 20v_1^2\omega_5\omega_9\omega_{12}^2 + 120cs^2v_1^2\omega_5\omega_9^2\omega_{12} - 4cs^2\omega_5^2\omega_9^2\omega_{12}
\end{aligned}$$

$$\begin{aligned}
C_{17} = {} & -16v_1^2\omega_5\omega_9^3 + 16cs^2\omega_5^2\omega_9^3 + 20cs^2\omega_9^2\omega_{12} - 72cs^2\omega_5\omega_9\omega_{12}^2 - 43v_1^2\omega_5^2\omega_9^3\omega_{12} + 64v_1^1\omega_5\omega_9\omega_{12}^2 + 44cs^2\omega_5\omega_9^3\omega_{12} + 16\omega_5\omega_9^2\omega_{12} - \\
& 20cs^2\omega_9^3\omega_{12} - 16cs^2\omega_5^2\omega_9^2 + 43v_1^2\omega_5^2\omega_9^2\omega_{12} - 44cs^2\omega_5\omega_9^2\omega_{12}^2 + 48cs^2\omega_5^2\omega_{12}^2 + 24\omega_5^2\omega_9\omega_{12} - 16cs^2\omega_5\omega_9^2\omega_{12} + 104v_1^2\omega_5^2\omega_9^2\omega_{12} - 28\omega_5\omega_9\omega_{12} + \\
& 8\omega_5\omega_9^3 + 48\omega_5^2\omega_9\omega_{12} - 32cs^2\omega_5^2\omega_{12} + 28\omega_5\omega_9\omega_{12}^2 + 17\omega_5^2\omega_9^3\omega_{12} - 24\omega_5\omega_9\omega_{12}^2 + 56cs^2\omega_5^2\omega_9^2\omega_{12} + 8\omega_5\omega_9^2 - 48v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_9^3\omega_{12} - \\
& 32\omega_5^2\omega_{12} - 12\omega_9^2\omega_{12} - 8\omega_5\omega_9^3 - 17\omega_5^2\omega_9^2\omega_{12} - 64v_1^2\omega_5^2\omega_9\omega_{12} - 28v_1^2\omega_9^3\omega_{12} - 16v_1^2\omega_5^2\omega_9^2 + 80v_1^2\omega_5^2\omega_{12} - 40\omega_5^2\omega_9\omega_{12} + 68v_1^2\omega_5\omega_9^3\omega_{12} + \\
& 32cs^2\omega_5\omega_9\omega_{12}^2 - 25cs^2\omega_5^2\omega_9^3\omega_{12} - 120v_1^2\omega_5\omega_9^2\omega_{12} + 16v_1^2\omega_5\omega_9^3 - 16cs^2\omega_5\omega_9^3 + 28v_1^2\omega_9^3\omega_{12} - 68v_1^2\omega_5\omega_9\omega_{12}^2 + 25cs^2\omega_5^2\omega_9^2\omega_{12}
\end{aligned}$$

$$\begin{aligned}
C_{18} = {} & 19v_1^4\omega_5^3\omega_9^2\omega_{12}^2 + 12cs^4\omega_5\omega_9^2\omega_{12} + 12cs^2\omega_5^2\omega_9\omega_{12} + 102cs^2v_1^2\omega_5\omega_9^3\omega_{12}^2 - 48v_1^2\omega_5^2\omega_9^3\omega_{12} - 12cs^2\omega_5\omega_9^3\omega_{12} + 12cs^4\omega_9^3\omega_{12} - 21cs^2v_1^2\omega_5^3\omega_9^3\omega_{12} + \\
& 36v_1^2\omega_5^3\omega_9\omega_{12} + 12cs^4\omega_5^2\omega_{12} + 12v_1^2\omega_5\omega_9^3\omega_{12} + 13cs^4\omega_5^3\omega_9^3\omega_{12} - 27v_1^4\omega_5^3\omega_9^3\omega_{12} - 12cs^4\omega_5^2\omega_9\omega_{12} + 60cs^2v_1^2\omega_5^2\omega_9^3\omega_{12} + 6cs^2\omega_5^2\omega_9^2\omega_{12} - \\
& 12v_1^2\omega_5^2\omega_9^2\omega_{12} - cs^2\omega_5^3\omega_9^2\omega_{12} + 54cs^2v_1^2\omega_5^2\omega_9^3\omega_{12} - 48cs^2v_1^2\omega_5\omega_9^2\omega_{12} + 24v_1^2\omega_5^2\omega_9^2\omega_{12} - 18cs^4\omega_5^2\omega_9^3\omega_{12} - 24v_1^2\omega_5\omega_9^3\omega_{12} + 4v_1^2\omega_5^3\omega_9^3\omega_{12}^2 + \\
& 6cs^2\omega_5\omega_9^3\omega_{12}^2 - 108cs^2v_1^2\omega_5^2\omega_9\omega_{12} - 12cs^2v_1^2\omega_5\omega_9^3\omega_{12} + 18v_1^2\omega_5^2\omega_9^3\omega_{12} - 12cs^2\omega_5^3\omega_{12}^2 + 90v_1^2\omega_5^3\omega_9\omega_{12} - 6cs^2\omega_5^3\omega_9^3\omega_{12} + 12cs^2v_1^2\omega_5^3\omega_9^3\omega_{12} + \\
& 60v_1^4\omega_5^3\omega_9^2\omega_{12} + 6cs^4\omega_5^2\omega_9^2\omega_{12} - 72v_1^2\omega_5^3\omega_{12} - 12cs^2\omega_5^2\omega_9^2\omega_{12} + 162cs^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 19v_1^2\omega_5^3\omega_9^3\omega_{12} - 36v_1^4\omega_5^3\omega_9\omega_{12} - cs^4\omega_5^2\omega_9^3\omega_{12} + 12v_1^4\omega_5^2\omega_9^2 + \\
& 12cs^4\omega_5^3\omega_9\omega_{12} - 12cs^4\omega_5^2\omega_9\omega_{12} + 48v_1^4\omega_5^2\omega_9^3\omega_{12} - 36cs^2v_1^2\omega_5^3\omega_9\omega_{12} - 12v_1^4\omega_5^3\omega_9 + 27v_1^2\omega_5^3\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_9\omega_{12} - 5cs^2\omega_5^3\omega_9^3\omega_{12} - 12v_1^2\omega_5\omega_9^3\omega_{12}^2 + \\
& 30cs^2v_1^2\omega_5^2\omega_9^3\omega_{12} + 12v_1^4\omega_5^2\omega_{12}^2 - 6cs^4\omega_5^3\omega_{12}^2 - 12v_1^2\omega_5^3\omega_9^3 - 12cs^2v_1^2\omega_5^3\omega_9^2 - 24v_1^4\omega_5^2\omega_9^2\omega_{12} + 72v_1^4\omega_5^3\omega_{12}^2 - 12cs^2v_1^2\omega_5^3\omega_9^2 + cs^4\omega_5^3\omega_9^2\omega_{12}^2 - \\
& 12v_1^4\omega_5^3\omega_9^2 - 4v_1^2\omega_5^3\omega_9^3\omega_{12}^2 - 306cs^2v_1^2\omega_5^3\omega_9\omega_{12}^2 + 24v_1^2\omega_5\omega_9^3\omega_{12} - 81cs^2v_1^2\omega_5^2\omega_9^3\omega_{12}^2 + 252cs^2v_1^2\omega_5^3\omega_{12}^2 + 18cs^2\omega_5^2\omega_9^3\omega_{12} + 12v_1^2\omega_5^2\omega_9^3 - 90v_1^4\omega_5^3\omega_9\omega_{12}^2 + \\
& 6cs^4\omega_5^3\omega_9^3\omega_{12} + 12cs^2v_1^2\omega_5^3\omega_9^3 - 48cs^2v_1^2\omega_9^3\omega_{12}^2 - 18v_1^4\omega_5^2\omega_9^2\omega_{12} - 24cs^4\omega_5\omega_9^3\omega_{12} - 12cs^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 6cs^2\omega_5^2\omega_9^2\omega_{12}^2 - 60v_1^2\omega_5^3\omega_9^2\omega_{12} + 12v_1^4\omega_5^3\omega_9
\end{aligned}$$

$$\begin{aligned}
C_{19} = {} & -18v_2^2cs^2\omega_9^3\omega_9^3\omega_{12} + 18cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 36v_2^2cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 + 12cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 24v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - \\
& 36v_2^2cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12}^2 + 6cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 24v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 36v_2^2cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + \\
& 6cs^2\omega_5^3\omega_9^3\omega_{12}^2 - 6cs^4\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 18cs^4\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 48cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3 + \\
& 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 36cs^4\omega_5^2\omega_{21}\omega_9^2\omega_{12} + 36cs^4\omega_5^2\omega_9^2\omega_{12} - 12cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 36cs^4\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 72v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + \\
& 18cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 + 12cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 + 2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 30cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 36cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} - \\
& 12cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 12cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 18v_2^2cs^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 18cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + \\
& 12cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 5cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 18cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 18cs^4\omega_5^3\omega_{21}\omega_9^2\omega_{12} - 12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + \\
& 36v_2^2cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 12cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - 6cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 12v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 96cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + \\
& 36cs^4\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 18v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 6cs^2\omega_5^3\omega_{21}\omega_9^2\omega_{12} + 12v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9 - 12cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + \\
& 6v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 18cs^2\omega_5^2\omega_9^3\omega_{12}^2 + 36cs^2\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2 - 12cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - \\
& 6cs^2v_1^2\omega_5^3\omega_9^3\omega_{12}^2 + 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - 42cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 36cs^4\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 36v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - \\
& 12cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12v_2^2v_1^2\omega_5^2\omega_9^3\omega_{12} + 36v_2^2cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 6v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - \\
& 12v_2^2\omega_5^2\omega_9^3\omega_{12}^2 - 72v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 18cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 18v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + \\
& 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 36v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 + 24v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 36v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - \\
& 18cs^4\omega_5^3\omega_9^3\omega_{12}^2 - 24v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12v_2^2v_1^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 12v_2^2\omega_5^2\omega_{21}\omega_9^2\omega_{12} - 12v_2^2v_1^2\omega_5^2\omega_{21}\omega_9^2\omega_{12} + 12v_2^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - \\
& 72v_2^2cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 88cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 18v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9 + 24v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - \\
& 6v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 24v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 108cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + \\
& 12cs^2v_1^2\omega_5\omega_{15}\omega_9^3\omega_{12} + 6v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 180cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 72v_2^2cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 6cs^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + \\
& 36v_2^2cs^2\omega_5^2\omega_9^3\omega_{12}^2 - 24v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 24v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 36v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 - 54v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6cs^2v_1^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 - \\
& 12cs^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 150cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 6v_2^2\omega_5^3\omega_9^3\omega_{12}^2 + 36cs^4\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - \\
& 12v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 36v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 6v_2^2v_1^2\omega_5^3\omega_9^3\omega_{12}^2 + 36v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 + 12v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12cs^2v_1^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 + \\
& 12v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 12cs^2v_1^2\omega_5^2\omega_9^3\omega_{12}^2 - \\
& 12cs^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 6cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9 + 12v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - \\
& 6cs^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 36v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 12v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 42cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - \\
& 36v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9 - 84cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 6v_2^2v_1^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 - 6v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 - \\
& 12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 2cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 6v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 - 6v_2^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 - 36cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 36v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9
\end{aligned}$$

$$\begin{aligned}
C_{20} = {} & -6v_2^2cs^2\omega_5^3\omega_9^3\omega_{12}^2 - 132cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12v_2^2cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 - 24cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 24v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - \\
& 12v_2^2cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12}^2 + 6cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 72v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 18cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12v_2^2cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - \\
& 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 6cs^2\omega_5^3\omega_9^3\omega_{12}^2 - 6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 6cs^4\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 84cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - \\
& 36v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 + 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 12cs^4\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 + 12cs^4\omega_5^2\omega_9^3\omega_{12}^2 + 24cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 12cs^4\omega_5^2\omega_{15}\omega_9^3\omega_{12}^2 + \\
& 24v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 180cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 + 12cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 + 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - \\
& 12cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 60cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12}^2 - 6v_2^2cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 - 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9 + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + \\
& 84cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - 12v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 6cs^4\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 - 36v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + \\
& 12v_2^2cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 36v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 12cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - 6cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12cs^4\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 +
\end{aligned}$$

$$12cs^4\omega_{10}^2\omega_{15}\omega_9^3\omega_{12} + 6v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 6cs^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 + 36v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 60cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 36v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 +$$
$$72cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 18v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 6v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6v_2^2cs^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 +$$
$$24cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 - 18cs^2v_1^2\omega_5^3\omega_9^3\omega_{12}^2 + 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - 12v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} +$$
$$36v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 42cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - 12cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 36v_2^2v_1^2\omega_5^3\omega_9^3\omega_{12}^2 + 12v_2^2cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} -$$
$$6v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 12v_2^2\omega_5^2\omega_9^3\omega_{12}^2 - 24v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 144cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 54v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} -$$
$$36v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 72v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - 36v_2^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12}^2 + 108v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 6cs^4\omega_5^3\omega_9^3\omega_{12}^2 - 24v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 -$$
$$36v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 12v_2^2\omega_5^3\omega_{21}\omega_9^3\omega_{12}^2 - 36v_2^2v_1^2\omega_5^3\omega_{21}\omega_9^3\omega_{12}^2 + 12v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 24v_2^2cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} +$$
$$36cs^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 4cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 18v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 24v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 18v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 72v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 -$$
$$48v_2^2v_1^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 36v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12cs^2\omega_5^2\omega_9^3\omega_{12}^2 + 36cs^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 6v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 18cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} +$$
$$24v_2^2cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 18cs^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 12v_2^2cs^2\omega_5^3\omega_9^3\omega_{12}^2 - 72v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 24v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 -$$
$$12v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 - 18v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 18cs^2v_1^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 - 36cs^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 24cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 +$$
$$24cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 6v_2^2\omega_5^3\omega_9^3\omega_{12}^2 - 108cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 36v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 18v_2^2v_1^2\omega_5^3\omega_9^3\omega_{12}^2 +$$
$$12v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 + 36v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 36cs^2v_1^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 + 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} +$$
$$12cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 36cs^2v_1^2\omega_5^2\omega_9^3\omega_{12} - 36cs^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 78cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 36v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} -$$
$$18cs^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 24cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 24cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} -$$
$$12v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12cs^4\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 18v_2^2v_1^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 - 6v_2^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 -$$
$$36v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 18cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 18v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 - 6v_2^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 + 6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2$$

$C_{21} = 2\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 2\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 4\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + \omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 4\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9 -$
$8\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9 - 4\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - \omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 - 4\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 4\omega_{10}cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12}^2 -$
$4\omega_{10}\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 26\omega_{10}cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 - 2\omega_{10}\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 8\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3 - 4\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3 +$
$\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 - 8\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 2\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 - 2\omega_{10}cs^2\omega_5^3\omega_{21}\omega_9^3\omega_{12}^2 + 4\omega_{10}v_1^2\omega_5^2\omega_{15}\omega_9^3\omega_{12}^2 - 2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 +$
$4\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 8\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - \omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 8\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 4\omega_{10}cs^2\omega_5^2\omega_{21}\omega_9^3\omega_{12}^2 -$
$2\omega_{10}\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 - 6\omega_{10}cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 - 8\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 + 4\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3 - 4\omega_{10}v_1^2\omega_5^3\omega_{15}^2\omega_9^3\omega_{12}^2 - 3\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 -$
$4cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 5\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 - 15\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 - 6\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 - 4\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 -$
$9\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 9\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 - 4\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 - 6\omega_{10}cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 +$
$6\omega_{10}\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 - 2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - 2\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - \omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 + 3\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 - 5\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 -$
$2\omega_{10}cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 2\omega_{10}\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 2cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 3\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12} - 5\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12} +$
$4\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 4\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + \omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 - 2\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 2\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 - 4\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 -$
$4\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 4\omega_{10}cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 16\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2 + 4\omega_{10}cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - 4\omega_{10}\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 3\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 -$
$\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_9\omega_{12} + 4cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 4\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 - 2\omega_{10}\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 2\omega_{10}cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} -$
$3\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12} + 8\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 4\omega_{10}cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 4\omega_{10}\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 12\omega_{10}cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} -$
$4\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 + 13\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 7\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 4\omega_{10}\omega_5^2\omega_{15}\omega_9^3\omega_{12} - 4\omega_{10}cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} - 2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} +$
$7\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12} + 2\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 24\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 2\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 2\omega_{10}cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 2\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2$

$C_{22} = 15\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 60\omega_{10}^2cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 6\omega_{10}^2v_2^2cs^2\omega_5^3\omega_{15}^2\omega_{12} + 27\omega_{10}cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 9\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} -$
$12\omega_{10}^2v_2^2v_1^2\omega_5^2\omega_{15}^2\omega_9\omega_{12} + 18\omega_{10}^2cs^4\omega_5^3\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10}cs^4\omega_5^2\omega_{21}\omega_{15}^2\omega_9 - 12\omega_{10}^2v_2^2cs^2\omega_5^2\omega_{21}\omega_9\omega_{12} - 36\omega_{10}cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} -$
$15\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 48\omega_{10}^2v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 24\omega_{10}^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2v_2^2cs^2\omega_5^3\omega_{15}^2\omega_9 +$
$12\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2 - 36\omega_{10}cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2 + 15\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 96\omega_{10}^2cs^4\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 12\omega_{10}^2v_2^2cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$12\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9 - 6\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12} - 6\omega_{10}^2cs^2\omega_5^3\omega_{15}^2\omega_9\omega_{12} - 12\omega_{10}^2cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 24\omega_{10}^2v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} -$
$12\omega_{10}^2v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{15}^2\omega_9 + 18\omega_{10}^2v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 6\omega_{10}v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$18\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 156\omega_{10}^2cs^4\omega_5\omega_{21}\omega_{15}^2\omega_9 - 6\omega_{10}v_2^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 6v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 3\omega_{10}^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$12\omega_{10}v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 5\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + \omega_{10}^2v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 6\omega_{10}^2v_1^2\omega_5^3\omega_{15}^2\omega_{12} - 12\omega_{10}v_2^2cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} -$
$36\omega_{10}^2cs^2v_1^2\omega_5^2\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10}^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10}^2cs^2\omega_5^2\omega_{15}^2\omega_9 - 12\omega_{10}v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9 -$
$36\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15} + 6v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12\omega_{10}^2v_2^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 36\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{15}^2 - 45\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12} +$
$6\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 36\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_9 - 6\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 6\omega_{10}^2v_2^2cs^2\omega_5^3\omega_{21}\omega_9\omega_{12} + 6\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{15}^2\omega_9\omega_{12} -$
$36\omega_{10}^2cs^4\omega_5^2\omega_{15}^2\omega_9\omega_{12} - 18\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{15}^2\omega_{12} + 12\omega_{10}^2v_2^2cs^2\omega_5^3\omega_{15}^2 + 12\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{15}^2\omega_9 - 36\omega_{10}^2cs^4\omega_5^2\omega_{15}^2\omega_9 + 12\omega_{10}^2cs^2\omega_5^2\omega_{15}^2\omega_9\omega_{12} +$
$18\omega_{10}v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 36cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12\omega_{10}^2v_1^2\omega_5^2\omega_{21}\omega_9\omega_{12} - 12\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 18\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} -$
$12\omega_{10}^2v_1^2\omega_5^3\omega_{15}^2 - 18\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15}^2 + 24\omega_{10}^2v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10}v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}^2 - 12\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 36\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{15}^2\omega_9 -$
$6\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 6\omega_{10}^2cs^2\omega_5\omega_{21}\omega_9\omega_{12} + 144\omega_{10}^2cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 36\omega_{10}^2cs^4\omega_5^2\omega_{15}^2\omega_9\omega_{12} +$
$12\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9 - 12v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{15}^2 + 36\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 6\omega_{10}cs^4\omega_5^3\omega_{21}\omega_9\omega_{12} - 12\omega_{10}^2cs^2\omega_5^3\omega_{15}^2 -$
$24\omega_{10}^2v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 72\omega_{10}cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} - 12\omega_{10}^2v_2^2v_1^2\omega_5^2\omega_{21}\omega_9\omega_{12} + 9\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10}^2v_2^2cs^2\omega_5^2\omega_{15}^2\omega_9\omega_{12} +$
$12\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2v_1^2\omega_5^2\omega_{15}^2\omega_9 + 12\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 12\omega_{10}^2v_2^2cs^2\omega_5^2\omega_{15}^2\omega_9 - 6\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$
$5\omega_{10}v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 36\omega_{10}^2cs^4\omega_5^2\omega_{15}\omega_9\omega_{12} - 18cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 12\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2 - 72\omega_{10}^2cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$18\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12} - 6\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 72\omega_{10}^2cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_{10}v_2^2v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} -$
$18\omega_{10}^2cs^4\omega_5^3\omega_{15}\omega_9\omega_{12} - 15\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 36\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{15}^2\omega_9 - 6\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 54\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} +$
$18\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12} - 42\omega_{10}^2cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12} - 12\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 - 6\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{15}^2\omega_{12} + 6\omega_{10}^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$
$36\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2 + 12\omega_{10}^2cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 36\omega_{10}^2cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2cs^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$12\omega_{10}cs^2\omega_5^3\omega_{21}\omega_{15}^2 - 36\omega_{10}^2cs^2v_1^2\omega_5^2\omega_{21}\omega_9\omega_{12} - 12\omega_{10}^2v_2^2v_1^2\omega_5^3\omega_{15}^2\omega_9 + 24\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 3\omega_{10}cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} -$
$48\omega_{10}^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 36\omega_{10}cs^4\omega_5^2\omega_5^2\omega_{15}^2\omega_9 + 36\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 108\omega_{10}cs^2v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 18\omega_{10}^2cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 18\omega_{10}^2cs^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10}v_2^2cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2cs^2\omega_5^3\omega_{15}\omega_9 - 18\omega_{10}cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$24\omega_{10}^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 36\omega_{10}cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 12\omega_{10}^2cs^2\omega_5^2\omega_{21}\omega_9\omega_{12} + 12\omega_{10}^2v_1^2\omega_5^2\omega_{15}^2\omega_9\omega_{12} +$
$72\omega_{10}cs^2v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 24\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 6\omega_{10}^2cs^2\omega_5^3\omega_{15}^2\omega_{12} - 3\omega_{10}^2v_2^2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 24\omega_{10}^2v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} -$
$\omega_{10}^2cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10}cs^4\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 6\omega_{10}^2v_2^2cs^2\omega_5^3\omega_{15}^2\omega_9\omega_{12} - 18\omega_{10}cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 6\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} +$

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$$12\omega_{10}^2 cs^4\omega_5^2\omega_{21}\omega_9\omega_{12} + 12\omega_{10}^2 cs^4\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}$$

$C_{23} = 18\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 24\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10} v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 36\omega_{10}^2 v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 24\omega_{10}^2 cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9 + 60\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 24\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 12\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 24\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2 v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24\omega_{10}^2 cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 24\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10}^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 36 cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 + \omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 24\omega_{10}^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 + 24\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 48\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12\omega_{10}^2 v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 6\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 24\omega_{10}^2 v_2^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 18\omega_{10} v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2\omega_5^3\omega_{15}\omega_9\omega_{12}^2 + 24\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 66\omega_{10}^2 v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24\omega_{10}^2 v_2^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10} cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 12\omega_{10}^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 - 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 36\omega_{10}^2 cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_{15}\omega_9\omega_{12}^2 - 24\omega_{10}^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 24\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 84\omega_{10}^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 24\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 3\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 6\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 6\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12 v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 72\omega_{10}^2 cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12\omega_{10} cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}^2 - 42\omega_{10} cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 18\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 90\omega_{10}^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24\omega_{10}^2\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2 - 48\omega_{10}^2 cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 - 12\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 156\omega_{10}^2 cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 24\omega_{10}^2 v_2^2\omega_5^3\omega_{15}\omega_9\omega_{12}^2 - 24\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 24\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 96\omega_{10}^2 cs^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 24\omega_{10}\omega_5^3\omega_{15}\omega_9\omega_{12} - 24\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 24\omega_{10}^2\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 6 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 24\omega_{10}^2 v_2^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 66\omega_{10}^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 12\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10} cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 12\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 12\omega_{10}^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 132\omega_{10}^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 12\omega_{10}^2 v_2^3\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 - \omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2 - 24\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 66\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 12\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 12\omega_{10}^2 v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 4\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 18\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24\omega_{10}^2 cs^2\omega_5^2\omega_{15}^2\omega_9^2\omega_{12}^2 - 12\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 36\omega_{10}^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 84\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 72\omega_{10}^2 cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 24\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 18 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}$

$C_{24} = 15\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 5\omega_{10}^2 cs^4\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_9\omega_{12} - 18\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{15}^2\omega_{12} + 9\omega_{10} cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 9\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}^2\omega_9\omega_{12} + 6\omega_{10}^2 cs^4\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10} cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 24\omega_{10}^2 v_2^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10} cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 5\omega_{10} cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10} v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 144\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 24\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 36\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{15}^2\omega_9 + 12\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2 - 12\omega_{10} cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2 + 6\omega_{10}^2 cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10} cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 60\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10} cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9 - 6\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12} - 6\omega_{10}^2 cs^2\omega_5^3\omega_{15}^2\omega_9\omega_{12} - 72\omega_{10}^2 v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10} v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_{10} v_1^2\omega_5^3\omega_{15}\omega_9 - 102\omega_{10}^2 v_2^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 18\omega_{10} v_2^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + \omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 6\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 18\omega_{10}^2 cs^4\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 18\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 18 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 6\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 36\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 5\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 6\omega_{10}^2 v_1^2\omega_5^3\omega_{15}^2\omega_{12} - 36\omega_{10} v_2^2 cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 12\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{15}^2\omega_{12} - 108\omega_{10} v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10}^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}^2\omega_9 - 36\omega_{10} v_2^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 - 12\omega_{10} cs^4\omega_5^3\omega_{21}\omega_{15}^2 + 6 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 36\omega_{10}^2 v_2^2 cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{15}^2 - 15\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 18\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10} cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_9 - 6\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12\omega_{10}^2 cs^2\omega_5^3\omega_{21}\omega_9\omega_{12} + 18\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}^2\omega_9\omega_{12} - 12\omega_{10} cs^4\omega_5^3\omega_{15}\omega_9\omega_{12} - 6\omega_{10} cs^2 v_1^2\omega_5^3\omega_{15}^2 + 36\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{15}^2 + 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_9 - 12\omega_{10} cs^4\omega_5^3\omega_{15}\omega_9 + 12\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 54\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12 cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}^2\omega_9 - 12\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9 + 6\omega_{10} cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12\omega_{10} v_1^2\omega_5^3\omega_{15}^2 - 6\omega_{10} cs^4\omega_5^3\omega_{15}^2\omega_{12} + 72\omega_{10} v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10} v_2^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2 - 12\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{15}\omega_9 - 6\omega_{10} v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 36\omega_{10} v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 48\omega_{10}^2 cs^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10} cs^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9 + 12\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9 - 12 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}^2 + 12\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}^2 - 24\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 24\omega_{10} cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12} + 27\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10}^2 v_2^2 cs^2\omega_5^2\omega_{15}^2\omega_9\omega_{12} + 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2 v_1^2\omega_5^3\omega_{15}^2\omega_9 + 36\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9 + 36\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{15}^2\omega_9 - 18\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 15\omega_{10} v_2^2 cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12\omega_{10}^2 cs^4\omega_5^3\omega_{15}\omega_9\omega_{12} - 6 cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2 - 24\omega_{10}^2 cs^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12} - 18\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 24\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 6\omega_{10} cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 45\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2 cs^2 v_1^2\omega_5^2\omega_{15}\omega_9 - 6\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 18\omega_{10} cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10} cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 18\omega_{10}^2 cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 36\omega_{10} v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9 - 18\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} + 6\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2 cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10} cs^4\omega_5^3\omega_{15}^2 + 12\omega_{10} cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 60\omega_{10}^2 v_2^2 cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10} cs^2\omega_5^3\omega_{21}\omega_{15}^2 - 12\omega_{10}^2 cs^2 v_1^2\omega_5^2\omega_{21}\omega_9\omega_{12} - 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_9 + 72\omega_{10} v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} - \omega_{10}^2 cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 48\omega_{10} v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2 cs^4\omega_5^2\omega_{15}\omega_9 + 36\omega_{10} v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 36\omega_{10} cs^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 18\omega_{10}^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 36 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 6\omega_{10}^2 cs^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 15\omega_{10}^2 v_2^2 cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10}^2 cs^2\omega_5^3\omega_{15}\omega_9 - 18\omega_{10} cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 24\omega_{10}^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 48\omega_{10}^2 v_2^2 cs^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 12\omega_{10} cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 12\omega_{10} v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 24\omega_{10} cs^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 24\omega_{10} v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10}^2 cs^2\omega_5^3\omega_{15}^2\omega_{12} + 30\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 72\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10} cs^4\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 18\omega_{10}^2 v_2^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 6\omega_{10} cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12\omega_{10}^2 cs^4\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} + 18\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}$

$C_{25} = 150\omega_{10} v_2^2 cs^2\omega_5^2\omega_{15}^2 + 12\omega_{10}^2 cs^4\omega_5^2 + 24\omega_{10} v_2^2\omega_5^2\omega_{15} - 12\omega_{10}^2 v_2^2\omega_5^2 + 14\omega_{10} cs^4\omega_5^2\omega_{15}^2 + 12 cs^2\omega_5^2\omega_{15}^2 + 48\omega_{10}^2 cs^4\omega_5\omega_{15} - 144\omega_{10}^2 v_2^2 cs^2\omega_5 - 12\omega_{10}^2 v_2^2 cs^2\omega_5^2\omega_{15}^2 - 36\omega_5^4\omega_5^2\omega_{15}^2 - 96\omega_{10}^2 v_2^2\omega_5\omega_{15} - 36\omega_{10} v_2^2\omega_5^2\omega_{15}^2 - 126\omega_{10}^2 v_2^2 cs^2\omega_5^2\omega_{15} - 24\omega_{10} v_2^2\omega_5^2\omega_{15} - 14\omega_{10} cs^2\omega_5^2\omega_{15}^2 + 72\omega_{10}^2 v_2^2 cs^2\omega_5^2 - 12 cs^4\omega_5^2\omega_{15}^2 - 48\omega_{10} cs^2\omega_5\omega_{15} + 24\omega_{10} cs^4\omega_5^2\omega_{15}^2 + 24\omega_{10}^2 v_2^2\omega_5 - 48\omega_{10}^2 v_2^4\omega_{15}^2 + 216\omega_{10} v_2^2 cs^2\omega_{15}^2 + 36 v_2^2\omega_5^2\omega_{15} + 96\omega_{10}^2 v_2^4\omega_5\omega_{15} + 72\omega_{10} v_2^2 cs^2\omega_5^2\omega_{15} + 288 v_2^2 cs^2\omega_5\omega_{15}^2 - 48\omega_{10} v_2^2\omega_{15}^2 - 24\omega_{10}^2 cs^4\omega_5 + 24\omega_{10}^2 cs^2\omega_{15} + 36\omega_{10}^2 v_2^4\omega_5^2\omega_{15} - 216\omega_{10}^2 v_2^2 cs^2\omega_{15} - \omega_{10}^2 cs^4\omega_5^2\omega_{15}^2 - 30\omega_{10}^2 v_2^4\omega_5^2\omega_{15} - 144 v_2^2 cs^2\omega_5^2\omega_{15} - 144\omega_{10}^2 v_2^2 cs^2\omega_5\omega_{15} - 72 v_2^2\omega_5\omega_{15} - 96\omega_{10} v_2^4\omega_5\omega_{15} + 3\omega_{10}^2 v_2^2\omega_5^2\omega_{15}^2 - 12\omega_{10}^2 v_2^2\omega_5^2 + 432\omega_{10} v_2^2 cs^2\omega_5\omega_{15} + 48\omega_{10} v_2^2\omega_5\omega_{15} + 12\omega_{10}^2 v_2^4\omega_5^2 + 48\omega_{10} cs^2\omega_5\omega_{15}^2 + 24 cs^4\omega_5\omega_{15} - 24\omega_{10}^2 v_2^4\omega_5 - 24\omega_{10} cs^2\omega_{15}^2 + 48\omega_{10}^2 v_2^2\omega_{15} + \omega_{10}^2 cs^2\omega_5^2\omega_{15}^2 + 30\omega_{10}^2 v_2^2\omega_5^2\omega_{15} + 72 v_2^4\omega_5\omega_{15} + 24\omega_{10}^2 cs^2\omega_5 + 48\omega_{10} v_2^4\omega_{15} + 96\omega_{10} v_2^2\omega_5\omega_{15} - 24\omega_{10}^2 cs^4\omega_{15} - 432\omega_{10} v_2^2 cs^2\omega_5\omega_{15} - 3\omega_{10}^2 v_2^4\omega_5^2\omega_{15}^2 - 48\omega_{10} v_2^4\omega_5\omega_{15} - 48\omega_{10} cs^4\omega_5\omega_{15}^2 - 12\omega_{10}^2 cs^4\omega_5^2\omega_{15} - 24 cs^2\omega_5\omega_{15}^2$

$C_{26} = -24 v_2^2 cs^2\omega_5\omega_{15} - 72 v_2^2\omega_5^2\omega_{15} - 3 cs^4\omega_5^3\omega_{15}^2 - 8 cs^2\omega_5^2\omega_{15}^2 - 18 v_2^4\omega_5^3\omega_{15} - 96 v_2^2 cs^2\omega_{15}^2 - 3 v_2^2\omega_5^3\omega_{15}^2 - 24 cs^4\omega_5^2\omega_{15} - 6 cs^2\omega_5^3\omega_{15}^2 - 24 v_2^4\omega_5^2\omega_{15}^2 + cs^2\omega_5^3\omega_{15}^2 + 24 cs^4\omega_{15}^2 + 72 v_2^4\omega_5\omega_{15}^2 - 24 v_2^4\omega_5^2 + 18 v_2^2\omega_5^3\omega_{15} + 24 cs^4\omega_5^2\omega_{15} + 24 cs^2\omega_5^2\omega_{15} + 3 v_2^4\omega_5^3\omega_{15}^2 + 24 v_2^2\omega_5^2\omega_{15}^2 + 156 v_2^2 cs^2\omega_5\omega_{15}^2 + 12 v_2^4\omega_5^3 + 6 cs^4\omega_5^3\omega_{15} - 24 v_2^2 cs^2\omega_5 - 24 cs^2\omega_5\omega_{15} - 72 v_2^2 cs^2\omega_5^2\omega_{15} - 24 v_2^2\omega_5\omega_{15} - 48 v_2^4\omega_5\omega_{15} + 12 v_2^2 cs^2\omega_5^3 - 48 cs^4\omega_5\omega_{15} - 12 v_2^2 cs^2\omega_5\omega_{15} + 24 cs^4\omega_5\omega_{15} + 6 v_2^2 cs^2\omega_5^3\omega_{15} + 24 v_2^4\omega_5\omega_{15} - 12 v_2^2\omega_5^3 + 48 v_2^2\omega_5\omega_{15} + 48 v_2^2 cs^2\omega_5^2\omega_{15} + 24 v_2^2\omega_5^2 + 12 cs^2\omega_5\omega_{15}^2$

$C_{27} = 24\omega_{10}\omega_5\omega_{15} + 24\omega_{10}^2 v_2^2\omega_5^2 - 36cs^2\omega_5^2\omega_{15}^2 + 12\omega_{10}cs^2\omega_5^2\omega_{15} + 21\omega_{10}^2\omega_5^2\omega_{15} + 36\omega_{10}^2\omega_{15} + 168\omega_{10}^2 v_2^2\omega_5\omega_{15} + 61\omega_{10}v_2^2\omega_5^2\omega_{15}^2 + 36\omega_{10}v_2^2\omega_5^2\omega_{15} - 48\omega_5\omega_{15}^2 + 39\omega_{10}cs^2\omega_5^2\omega_{15}^2 + 120\omega_{10}^2cs^2\omega_5\omega_{15} + 2\omega_{10}\omega_5^2\omega_{15}^2 - 48\omega_{10}^2 v_2^2\omega_5 - 60v_2^2\omega_5^2\omega_{15} + 72\omega_{10}\omega_5\omega_{15}^2 + 84\omega_{10}v_2^2\omega_5\omega_{15}^2 - 60\omega_{10}^2cs^2\omega_5\omega_{15} - 25\omega_{10}v_2^2\omega_5\omega_{15}^2 + 120v_2^2\omega_5\omega_{15} + 24\omega_{10}^2\omega_5 - 5\omega_{10}^2 v_2^2\omega_5\omega_{15}^2 - 36\omega_{10}^2\omega_{15}^2 + 24\omega_{10}^2cs^2\omega_5 - 72\omega_{10}v_2^2\omega_5\omega_{15} - 120\omega_{10}cs^2\omega_5\omega_{15}^2 + 24\omega_5^2\omega_{15}^2 - 33\omega_{10}^2cs^2\omega_5^2\omega_{15} + 60\omega_{10}cs^2\omega_5^2\omega_{15} - 24\omega_{10}cs^2\omega_5\omega_{15} - 84\omega_{10}^2 v_2^2\omega_{15} - 3\omega_{10}^2cs^2\omega_5^2\omega_{15} - 72\omega_{10}^2\omega_5\omega_{15} - 51\omega_{10}^2 v_2^2\omega_5^2\omega_{15} - 48\omega_{10}^2cs^2\omega_5 - 168\omega_{10}v_2^2\omega_5\omega_{15} - 12\omega_{10}\omega_5^2\omega_{15} - 12\omega_{10}^2\omega_5 + 72cs^2\omega_5\omega_{15}$

$C_{28} =$
$8\omega_6\omega_{13}^2cs^2\omega_9^2 - 8\omega_{13}^2 v_1^2\omega_9^2 - 20\omega_6\omega_{13}^2 v_1^2\omega_9 + 120\omega_6^2\omega_{13}cs^2 v_1^2\omega_9^2 + 13\omega_6^2\omega_{13}v_1^2\omega_9^3 - 4\omega_6^2cs^2\omega_9^3 - 4\omega_6 v_1^4\omega_9^3 + 96\omega_6^2\omega_{13}^2cs^2 v_1^2 + 84\omega_6\omega_{13}cs^2 v_1^2\omega_9^3 - 8\omega_6^2\omega_{13}^2cs^2 - 16\omega_6\omega_{13}v_1^4\omega_9^2 + 4\omega_6^2cs^2\omega_9^2 - 32\omega_6^2\omega_{13}v_1^2\omega_9^2 + 4\omega_6^2\omega_{13}cs^2\omega_9 - 51\omega_6^2\omega_{13}cs^2 v_1^2\omega_9^3 - 24\omega_6^2\omega_{13}v_1^2 - 4\omega_{13}cs^4\omega_9^3 + 20\omega_6\omega_{13}v_1^4\omega_9^3 - 48\omega_6\omega_{13}cs^2 v_1^2\omega_9^2 - 36\omega_6^2\omega_{13}^2 v_1^4\omega_9 + 4\omega_6^2\omega_{13}cs^4\omega_9^2 - 8\omega_{13}v_1^4\omega_9^3 + 8\omega_6\omega_{13}cs^4\omega_9^3 + 36\omega_{13}^2cs^2 v_1^2\omega_9^2 + 13\omega_6^2\omega_{13}v_1^4\omega_9^2 - 12\omega_6^2\omega_{13}cs^4\omega_9 + 4\omega_6^2 v_1^2\omega_9^2 + 20\omega_6^2\omega_{13}v_1^2\omega_9 - 8\omega_6^2\omega_{13}cs^2\omega_9^2 - 24\omega_6 cs^2 v_1^2\omega_9^3 - 4\omega_6 cs^4\omega_9^3 - 4\omega_6\omega_{13}cs^2\omega_9 + 20\omega_6\omega_{13}^2 v_1^4\omega_9^2 - 4\omega_{13}^2cs^2\omega_9^3 + 4\omega_6\omega_{13}cs^2\omega_9^3 - 72\omega_6^2\omega_{13}cs^2 v_1^2\omega_9 - 4\omega_6^2 v_1^2\omega_9^3 - 4\omega_6^2cs^4\omega_9^3 - 4\omega_6^2\omega_{13}cs^4\omega_9 + 32\omega_6^2\omega_{13}v_1^4\omega_9^2 - 20\omega_6\omega_{13}v_1^2\omega_9^3 + 4\omega_{13}cs^2\omega_9^3 + 51\omega_6^2\omega_{13}cs^2 v_1^2\omega_9^2 - 4\omega_6^2\omega_{13}cs^2\omega_9^2 + 36\omega_6^2\omega_{13}^2 v_1^4\omega_9 - 84\omega_6\omega_{13}^2cs^2 v_1^2\omega_9^2 + 20\omega_6\omega_{13}^2 v_1^4\omega_9 + 8\omega_{13}^2 v_1^4\omega_9^2 - 8\omega_6\omega_{13}cs^4\omega_9^2 - 13\omega_6^2\omega_{13}v_1^4\omega_9^3 + 4\omega_6^2cs^4\omega_9^3 + 4\omega_6 v_1^2\omega_9^3 + 16\omega_6\omega_{13}v_1^4\omega_9^2 + 4\omega_6 cs^2\omega_9^3 + 8\omega_6^2\omega_{13}cs^4 + 24\omega_6^2cs^2 v_1^2\omega_9^3 + 4\omega_{13}cs^4\omega_9^2 - 20\omega_6\omega_{13}^2 v_1^4\omega_9^3 + 4\omega_6\omega_{13}cs^4\omega_9 + 72\omega_6\omega_{13}^2cs^2 v_1^2\omega_9 - 4\omega_6^2\omega_{13}cs^4\omega_9 + 4\omega_6^2 v_1^4\omega_9 - 144\omega_6^2\omega_{13}^2cs^2 v_1^2\omega_9 - 8\omega_6\omega_{13}cs^2\omega_9^3 + 8\omega_{13}v_1^2\omega_9^3 - 24\omega_6^2cs^2 v_1^2\omega_9^2 + 12\omega_6^2\omega_{13}^2cs^2\omega_9 - 13\omega_6^2\omega_{13}^2 v_1^2\omega_9^2 - 4\omega_6^2 v_1^4\omega_9^3 - 36\omega_{13}cs^2 v_1^2\omega_9^3 + 8\omega_6^2\omega_{13}cs^4\omega_9^2 - 20\omega_6^2\omega_{13}v_1^4\omega_9 + 24\omega_6^2\omega_{13}^2 v_1^4$

$C_{29} = -44\omega_6\omega_{13}^2cs^2\omega_9^2 + 28\omega_{13}^2 v_1^4\omega_9^2 + 64\omega_6\omega_{13}^2 v_1^2\omega_9 - 32\omega_6^2\omega_{13} - 43\omega_6\omega_{13}v_1^2\omega_9^3 + 16\omega_6^2cs^2\omega_9^3 + 48\omega_6^2\omega_{13}^2cs^2 - 24\omega_6\omega_{13}^2\omega_9 - 16\omega_6^2cs^2\omega_9^2 + 104\omega_6^2\omega_{13}v_1^2\omega_9^2 - 32\omega_6^2\omega_{13}cs^2\omega_9 + 80\omega_6^2\omega_{13}^2 v_1^2 + 24\omega_6^2\omega_{13}\omega_9 - 40\omega_6^2\omega_{13}\omega_9^2 - 12\omega_{13}^2\omega_9^2 - 16\omega_6^2 v_1^2\omega_9^2 - 8\omega_6^2\omega_9^3 - 64\omega_6\omega_{13}v_1^2\omega_9 + 56\omega_6^2\omega_{13}cs^2\omega_9^2 + 28\omega_6\omega_{13}^2\omega_9^2 + 17\omega_6^2\omega_{13}\omega_9^3 + 32\omega_6\omega_{13}^2cs^2\omega_9 - 68\omega_6^2\omega_{13}v_1^2\omega_9 + 20\omega_{13}^2cs^2\omega_9^2 - 25\omega_6^2\omega_{13}cs^2\omega_9^2 + 8\omega_6^2\omega_9^2 + 16\omega_6^2 v_1^2\omega_9^3 + 16\omega_6\omega_{13}\omega_9^2 + 68\omega_6\omega_{13}v_1^2\omega_9^3 - 20\omega_{13}cs^2\omega_9^3 + 25\omega_6^2\omega_{13}cs^2\omega_9^2 - 120\omega_6^2\omega_{13}^2 v_1^2\omega_9 + 12\omega_{13}\omega_9^3 - 28\omega_6\omega_{13}\omega_9^3 - 17\omega_6^2\omega_{13}\omega_9^2 + 8\omega_6\omega_9^3 - 16\omega_6 v_1^2\omega_9^3 - 48\omega_6\omega_{13}v_1^2\omega_9^2 - 16\omega_6 cs^2\omega_9^2 - 16\omega_6\omega_{13}cs^2\omega_9^2 + 48\omega_6^2\omega_{13}\omega_9 + 44\omega_6\omega_{13}cs^2\omega_9^3 - 28\omega_{13}v_1^2\omega_9^3 - 72\omega_6^2\omega_{13}^2cs^2\omega_9 + 43\omega_6^2\omega_{13}v_1^2\omega_9^2$

$C_{30} = 4\omega_{13}^3\omega_{13}v_1^4\omega_9^3 - 12\omega_6^2\omega_{13}cs^2 v_1^2\omega_9^2 - 48\omega_6^2\omega_{13}v_1^2\omega_9^3 - 6\omega_6^3\omega_{13}cs^2\omega_9^3 - 12\omega_6\omega_{13}cs^2 v_1^2\omega_9^3 + 13\omega_6^2\omega_{13}^2cs^4\omega_9^3 - 12\omega_6^3\omega_{13}cs^4\omega_9 + 19\omega_6^3\omega_{13}^2 v_1^4\omega_9^2 + 24\omega_6^2\omega_{13}v_1^2\omega_9^2 + 30\omega_6^2\omega_{13}cs^2 v_1^2\omega_9^3 + 6\omega_6\omega_{13}^2cs^2\omega_9^3 - 24\omega_6\omega_{13}v_1^4\omega_9^3 + 6\omega_6^3\omega_{13}cs^2\omega_9^2 + 36\omega_6\omega_{13}v_1^2\omega_9 - 306\omega_6^3\omega_{13}^2cs^2 v_1^2\omega_9 + 6\omega_6^2\omega_{13}cs^4\omega_9^3 + 12\omega_6\omega_{13}cs^4\omega_9^3 - 12\omega_6^3 v_1^4\omega_9^3 + 60\omega_6^2\omega_{13}cs^2 v_1^2\omega_9^2 + 12\omega_6^2\omega_{13}v_1^4\omega_9^2 + 72\omega_6^3\omega_{13}^2 v_1^4 - 12\omega_6^2\omega_{13}cs^4\omega_9 - 60\omega_6\omega_{13}v_1^2\omega_9^2 - 12\omega_6^2\omega_{13}cs^2\omega_9^3 + \omega_6^3\omega_{13}^2cs^4\omega_9^3 - 90\omega_6^3\omega_{13}v_1^4\omega_9 - 12\omega_6\omega_{13}^2 v_1^2\omega_9^3 - 18\omega_6^2\omega_{13}^2 v_1^4\omega_9^3 + 12\omega_6^3\omega_{13}^2cs^2 v_1^2\omega_9^3 + 27\omega_6^3\omega_{13}v_1^4\omega_9^3 - 48\omega_{13}^2cs^2 v_1^2\omega_9^3 + 12\omega_6^3 v_1^4\omega_9^3 + 12\omega_6^3\omega_{13}^2cs^4 + 18\omega_6^2\omega_{13}cs^2\omega_9^3 - \omega_6^3\omega_{13}^2cs^4\omega_9^3 + 252\omega_6^3\omega_{13}^2cs^2 v_1^2 + 12\omega_6^2 v_1^2\omega_9^3 - 24\omega_6^2\omega_{13}v_1^4\omega_9^2 - 19\omega_6^3\omega_{13}^2 v_1^2\omega_9^2 + 12\omega_6^3\omega_{13}^2cs^2\omega_9 + 102\omega_6\omega_{13}^2cs^2 v_1^2\omega_9^3 - 24\omega_6\omega_{13}^2cs^4\omega_9^3 - 12\omega_6^3cs^2 v_1^2\omega_9^2 + 24\omega_6\omega_{13}v_1^2\omega_9^3 + 162\omega_6^2\omega_{13}^2cs^2 v_1^2\omega_9^2 - 72\omega_6^3\omega_{13}^2 v_1^2 - 6\omega_6^2\omega_{13}^2cs^2\omega_9^2 - 36\omega_6^3\omega_{13}v_1^4\omega_9 - 6\omega_6^3\omega_{13}cs^4\omega_9^2 - 12\omega_6^3\omega_{13}^2cs^2 - 48\omega_6\omega_{13}^2cs^2 v_1^2\omega_9^3 + 12\omega_6^3cs^2 v_1^2\omega_9^3 - 36\omega_6^3\omega_{13}cs^2 v_1^2\omega_9^3 + 48\omega_6^2\omega_{13}v_1^4\omega_9^3 - 4\omega_6^2\omega_{13}^2 v_1^4\omega_9^3 - 5\omega_6^2\omega_{13}^2cs^2\omega_9^3 + 6\omega_6^3\omega_{13}cs^4\omega_9^2 - 81\omega_6^2\omega_{13}^2cs^2 v_1^2\omega_9^3 - 27\omega_6^3\omega_{13}v_1^4\omega_9^3 + 18\omega_6^2\omega_{13}^2 v_1^2\omega_9^3 - 12\omega_6^3 v_1^2\omega_9^3 - 12\omega_6^2cs^2 v_1^2\omega_9^3 + 54\omega_6^3\omega_{13}cs^2 v_1^2\omega_9^3 - 18\omega_6^3\omega_{13}cs^4\omega_9^3 - 12\omega_6^3 v_1^4\omega_9^3 - 108\omega_6^2\omega_{13}cs^2 v_1^2\omega_9 - 12\omega_6\omega_{13}cs^2\omega_9^3 + 12\omega_6^3 v_1^2\omega_9^2 + 60\omega_6^3\omega_{13}v_1^4\omega_9^2 + 12\omega_6^2\omega_{13}cs^2\omega_9 - 12\omega_6^2\omega_{13}^2 v_1^2\omega_9^2 + 90\omega_6^3\omega_{13}^2 v_1^4\omega_9 - \omega_6^2\omega_{13}^2cs^2\omega_9^2 + 12\omega_6^2\omega_{13}cs^4\omega_9^3 + 12\omega_{13}^2cs^4\omega_9^3 - 21\omega_6^3\omega_{13}cs^2 v_1^4\omega_9^3 + 12\omega_6\omega_{13}v_1^4\omega_9^3$

$C_{31} = -\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - 9\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12}^2 + 6\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12}^2 - 3\omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12}^2 + \omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^3\omega_9\omega_{12} - 3\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 + \omega_6\omega_{13}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} - \omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} - 2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_{14}cs^2\omega_5^2\omega_9\omega_{12}^2 - 6\omega_6^2\omega_{13}^2\omega_8\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}cs^2\omega_5\omega_9^3\omega_{12} - 3\omega_6\omega_{13}\omega_{14}cs^2\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_8\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + 6\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + 3\omega_6^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6\omega_{13}^2 v_1^2\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2\omega_9^3 + 3\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2\omega_9\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3 - 2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^3\omega_9^2\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2\omega_9^3 + \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_9^3\omega_{12} + \omega_{13}\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12} + 3\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12}^2 + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} + 3\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12}^2 - 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - \omega_6^2\omega_{13}^2 v_1^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2\omega_{12} + 3\omega_6^2\omega_{13}^2cs^2\omega_5\omega_9^3\omega_{12}^2 + \omega_6\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12}^2 + 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6\omega_{13}^2\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_8\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_9^2\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3 - 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3 - \omega_6\omega_{13}^2\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12}^2 + 3\omega_6^2\omega_{13}^2\omega_8cs^2\omega_5^3\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^3\omega_9 - \omega_6^2\omega_{13}^2\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - 6\omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^3\omega_9^2\omega_{12} + 2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} - 3\omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12} - \omega_{13}\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12}^2 + \omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12} + \omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^3 + \omega_6^2\omega_{13}^2\omega_{14}\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3 + 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^3\omega_9 - \omega_6^2\omega_{13}^2\omega_8cs^2\omega_5^3\omega_9^3\omega_{12} - 3\omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^3\omega_9^3\omega_{12} + \omega_6\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12}^2 + \omega_6^2\omega_{13}^3 v_1^2\omega_5\omega_9^3\omega_{12} + \omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} - 3\omega_6^2\omega_{13}cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_8cs^2\omega_5\omega_9^3\omega_{12} + \omega_6\omega_{13}\omega_8\omega_5^3\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2\omega_9 + \omega_6^2\omega_{13}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + \omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 - \omega_6^2\omega_{13}\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_8cs^2\omega_5^3\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{12} - \omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - \omega_6^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + 3\omega_6\omega_{13}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_5\omega_9^2\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12}^2 + 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} + \omega_6\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12}^2 - 3\omega_{13}\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_8cs^2\omega_5\omega_9^3\omega_{12} + 6\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5\omega_9^2\omega_{12} - \omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}cs^2\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}cs^2\omega_5\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{14}\omega_8cs^2\omega_5\omega_9\omega_{12}^2 + \omega_6^2\omega_{13}\omega_{14} v_1^2\omega_5\omega_9^2\omega_{12}^2 + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + \omega_6\omega_{13}^2\omega_8\omega_5\omega_9^3\omega_{12}^2 - \omega_6^2\omega_{13}^2\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} - \omega_6^2\omega_{13}\omega_8\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} + 3\omega_6\omega_{13}^2cs^2\omega_5^2\omega_9^3\omega_{12}$

$C_{32} = -3\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12}^2 + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12}^2 - \omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^3\omega_9\omega_{12} - \omega_6^2\omega_{13}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 + 3\omega_6\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12}^2 - \omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} + \omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} - 3\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} +$

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$3\omega_6^2\omega_{13}^2\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + \omega_6\omega_{13}^2\omega_{14}\omega_5^2\omega_9^2\omega_{12} -$
$2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} + \omega_6^2\omega_{13}\omega_{14}cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} -$
$\omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} - 3\omega_6\omega_{13}\omega_{14}v_1^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} -$
$3\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + \omega_6^2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} + 3\omega_6\omega_{13}^2 v_1^2\omega_5\omega_9^3\omega_{12} - 3\omega_6\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2 +$
$\omega_6^2\omega_{13}\omega_8 cs^2\omega_5^2\omega_9\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2 - 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_5^2\omega_9^2\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_9^3\omega_{12} + \omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} -$
$3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12} + \omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} + \omega_6^2\omega_{13}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} -$
$3\omega_6^2\omega_{13}^2 v_1^2\omega_5\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_{12} + \omega_6^2\omega_{13}cs^2\omega_5\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} + \omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6\omega_{13}^2\omega_5^2\omega_9^3\omega_{12} -$
$3\omega_6\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} + \omega_6^2\omega_{13}\omega_8\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_9^2\omega_{12} + \omega_6^2\omega_{13}^2\omega_5\omega_9^3\omega_{12} +$
$3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9 - \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5\omega_9^3 - 3\omega_6\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12} + \omega_6^2\omega_{13}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9 -$
$3\omega_6^2\omega_{13}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - 2\omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12} + 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12} - \omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} +$
$3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} +$
$3\omega_6^2\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3 + \omega_6^2\omega_{13}\omega_{14}\omega_5\omega_9^2\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3 + \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3 - \omega_6^2\omega_{13}\omega_8\omega_5^2\omega_9^3\omega_{12} -$
$\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12} + 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12} + 3\omega_6^2\omega_{13}^2 v_1^2\omega_5\omega_9^3\omega_{12} +$
$\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - \omega_6^2\omega_{13}cs^2\omega_5\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_8\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9 +$
$3\omega_6^2\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_5\omega_9^3\omega_{12} - 3\omega_6\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - \omega_6\omega_{13}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_9^3\omega_{12} +$
$\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_8\omega_5^2\omega_9\omega_{12} +$
$2\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - \omega_6^2\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} - 6\omega_6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} + \omega_6\omega_{13}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} -$
$\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} - 2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{13}\omega_8\omega_5^2\omega_9^3\omega_{12} + 3\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 3\omega_6\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_8\omega_5\omega_9^3\omega_{12} -$
$\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5\omega_9\omega_{12} + \omega_6^2\omega_{13}\omega_8 cs^2\omega_5\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 3\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - 9\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} -$
$\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - \omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_8 cs^2\omega_5\omega_9\omega_{12} - 2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_9^2\omega_{12} +$
$\omega_6\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} - \omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_8\omega_5^2\omega_9^3\omega_{12} + 2\omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12} -$
$3\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - \omega_6\omega_{13}\omega_{14}cs^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_{14}cs^2\omega_5\omega_9^2\omega_{12} +$
$\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12} + \omega_6^2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}\omega_{14}v_1^2\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} +$
$\omega_6\omega_{13}\omega_8\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_8\omega_5^2\omega_9^2\omega_{12} - \omega_6\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} + 3\omega_6^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} + \omega_6\omega_{13}^2 cs^2\omega_5\omega_9^3\omega_{12}$

$C_{33} = -2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}^2 + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}^2 - 2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^3\omega_{12}^2 + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12}^2 +$
$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9\omega_{12}^2 + 15\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}^2 + 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} -$
$9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} + 3\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12} - 5\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9\omega_{12}^2 -$
$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} -$
$4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^2\omega_{12} - 2\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} + 4\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_5^3\omega_9\omega_{12} + 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9\omega_{12} +$
$2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} + 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} - \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} -$
$4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^2\omega_{12} - 3\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} + \omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9\omega_{12} -$
$2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3 - \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3 +$
$6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} + 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} -$
$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9 - 2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3 + 2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^3\omega_{12}^2 + 8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{13}\omega_7\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} -$
$\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^2\omega_{12} + \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} +$
$2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} - 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12} +$
$2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^3\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} - 11\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12} -$
$8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_9^3\omega_{12} + 6\omega_6^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9 + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9 + 2\omega_6\omega_{13}^2\omega_7\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12} +$
$2\omega_6\omega_{13}^2\omega_7\omega_{14}cs^2\omega_5^3\omega_9^3\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}^2 + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_9^3\omega_{12} +$
$6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} - 2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} +$
$\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12} - 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} -$
$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5^3\omega_9^3\omega_{12} +$
$\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3 + 2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} +$
$8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6\omega_{13}^2\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12}^2 + 2\omega_6\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} -$
$2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 4\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} +$
$2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} -$
$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3 + 2\omega_6^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - \omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12} +$
$9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3\omega_9^3\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} -$
$2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^3\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} +$
$4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} + 3\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^2\omega_{12} + \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}cs^2\omega_5^3\omega_9^3\omega_{12} -$
$8\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} -$
$15\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12}^2 + 9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 3\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - 8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12}^2 +$
$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} + 5\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} + \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} -$
$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^3 + 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} + 11\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}cs^2\omega_5^3\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9\omega_{12} - 3\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} +$
$\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12} + 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} -$
$2\omega_6^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3\omega_{12} - 6\omega_6\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} - 13\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}$

$C_{34} = 6\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_{12}^2 + 3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^3\omega_{12} - 5\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2\omega_9^3\omega_{12} -$
$3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_9^3\omega_{12} + 11\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12} - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^2\omega_{12} -$
$4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12} - \omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_9^3 + 2\omega_6\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 6\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3 -$
$4\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2 v_1^2\omega_5^3\omega_9\omega_{12} - 2\omega_6^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^3\omega_{12} +$

$$2\omega_6^3\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12}^2 - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9 + 4\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_9^3\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^2\omega_{12} -$$
$$2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9^3\omega_{12}^2 - 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_9^3\omega_{12} + 3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12}^2 +$$
$$2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9^3\omega_{12}^2 + \omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12}^2 + 2\omega_6^3\omega_{13}\omega_7\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12}^2 - 2\omega_6^3\omega_{13}\omega_7\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12}^2 + 4\omega_6^3\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12}^2 -$$
$$\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^3\omega_{12}^2 - 3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12}^2 + 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_9^3\omega_{12}^2 - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9^3\omega_{12} +$$
$$2\omega_6^3\omega_{13}^2\omega_7\omega_{14}cs^2\omega_5\omega_9^3\omega_{12}^2 + 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} + 8\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} +$$
$$2\omega_6^3\omega_{13}^2\omega_7\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}^2 - 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} +$$
$$2\omega_6^2\omega_{13}^2\omega_7\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_9^3\omega_{12} - 2\omega_6^3\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} - \omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} +$$
$$9\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_8v_1^2\omega_5^2\omega_9^3\omega_{12} -$$
$$8\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_8cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9 - 2\omega_6^2\omega_{13}^2\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12} -$$
$$4\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_9^3\omega_{12}^2 - 4\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8\omega_8\omega_5^2\omega_9^3\omega_{12} -$$
$$2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} + \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9\omega_{12}^2 -$$
$$2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} + 4\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12}^2 + 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9 - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} -$$
$$4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_9^3\omega_{12} -$$
$$2\omega_6^3\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5\omega_9^3\omega_{12}^2 + 2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_8v_1^2\omega_5^2\omega_9^3\omega_{12} - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8cs^2\omega_5^2\omega_9\omega_{12} +$$
$$3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 4\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12}^2 + \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} -$$
$$11\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12}^2 + 2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8v_1^2\omega_5\omega_9^3\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} +$$
$$8\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_{12} +$$
$$3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9^3\omega_{12} - 8\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12}^2 - 2\omega_6^3\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12}^2 + 2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12} +$$
$$5\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} + 4\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^3\omega_{12} -$$
$$2\omega_6^3\omega_{13}^2\omega_7\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}cs^2\omega_5\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_9^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12} +$$
$$2\omega_6^2\omega_{13}\omega_7\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^3 - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9\omega_{12} + 4\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12} -$$
$$2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12} - 6\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} +$$
$$2\omega_6^3\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 6\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9 + 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8\omega_8\omega_5\omega_9^3\omega_{12} - 8\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12} +$$
$$\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} - 15\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_9^3\omega_{12} +$$
$$9\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} +$$
$$2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 2\omega_6\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} + 12\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{12} + 4\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5\omega_9^3\omega_{12} +$$
$$2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12} + 6\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_8^2cs^2\omega_5\omega_9^3\omega_{12} + 4\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12} +$$
$$\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} + 15\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} + 6\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_9^2\omega_{12} + 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^3\omega_{12} -$$
$$9\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^3 + 6\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^3 - 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5\omega_9^3\omega_{12} -$$
$$2\omega_6^3\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} - 13\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2\omega_9^3\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2\omega_9^3\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_8^2v_1^2\omega_5^2\omega_9^3\omega_{12}$$

$C_{35} = \omega_6^2\omega_8\omega_5 - \omega_6\omega_8^2\omega_5 + \omega_6\omega_5^3 + 2\omega_6^2\omega_8\omega_5^2 + \omega_6^2\omega_8\omega_5 - \omega_8^2\omega_5 - 2\omega_6^2\omega_8\omega_5 - 2\omega_6\omega_8\omega_5^3 - \omega_6^2\omega_8^2\omega_5 + \omega_8\omega_5^3 - \omega_6^2\omega_5^3 - 2\omega_6^2\omega_8^2 + \omega_6^2\omega_5^2 + 3\omega_6^2\omega_8^2\omega_5$

$C_{36} = -4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^3\omega_5\omega_9^2\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9\omega_{12}^2 -$
$$2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^2\omega_{12} - 4\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_9^2\omega_{12} -$$
$$8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9 + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9\omega_{12} + 2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} -$$
$$4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_{12} - 5\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^3\omega_5\omega_9 -$$
$$4\omega_6^2\omega_7\omega_8^2\omega_5^3\omega_9\omega_{12} - 8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12}^2 -$$
$$8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9 - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12} + 5\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9\omega\omega_{12} +$$
$$4\omega_6\omega_{13}\omega_7\omega_8\omega_5^3\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} +$$
$$4\omega_6^2\omega_7\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega\omega_{12} + 8\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega\omega_{12} + 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12} -$$
$$10\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} - 4\omega_6\omega_7\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 4\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9\omega_{12} +$$
$$4\omega_6\omega_{13}\omega_7\omega_8^2\omega_5^3\omega_9^2\omega_{12} + 4\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} - 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} +$$
$$4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12} + 4\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_{14}\omega_8^3\omega_5^2\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_8^3\omega_5\omega_9\omega_{12} - 4\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}$$

$C_{37} = 3\omega_6^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_6^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + \omega_6^2\omega_{17}\omega_5^2\omega_{15} + 2\omega_6\omega_{17}\omega_8^2\omega_5^2\omega_{15} - \omega_6^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_8\omega_5^3\omega_{15} - \omega_6\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$$\omega_6^2\omega_{17}\omega_5^3\omega_{15} - 4\omega_6^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + \omega_{17}\omega_8\omega_5^3\omega_{15}^2 + 2\omega_6\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6^2\omega_8\omega_5^2\omega_{15} + \omega_6\omega_8^2\omega_5^3\omega_{15} - 4\omega_6^2\omega_{17}\omega_8^2\omega_{15}^2 - 2\omega_6\omega_{17}\omega_8\omega_5\omega_{15}^2 +$$
$$\omega_6^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_8\omega_5^3\omega_{15} + 2\omega_6^2\omega_8\omega_5^2\omega_{15} + \omega_6^2\omega_{17}\omega_8\omega_5^3\omega_{15} + 2\omega_6^2\omega_{17}\omega_8^2\omega_5\omega_{15} + \omega_6\omega_{17}\omega_5^3\omega_{15}^2 - 2\omega_6^2\omega_8^2\omega_5\omega_{15} + 5\omega_6^2\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$2\omega_6\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + 2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - \omega_6^2\omega_8\omega_5^2\omega_{15} - 4\omega_6^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_6^2\omega_{17}\omega_8^2\omega_5^3 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}^2 - 3\omega_6\omega_{17}\omega_8^2\omega_5\omega_{15}$$

$C_{38} =$
$$-12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^2\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_{12} -$$
$$2\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 24\omega_6^2\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5\omega_{15}\omega_9\omega_{12} - 24\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_{12} - 24\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 18\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5\omega_{15}\omega_9\omega_{12} - 12\omega_6^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6^3\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_9\omega_{12} -$$
$$12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} - 24\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8v_1^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5\omega_{15}\omega_9 +$$
$$12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_9 + 6\omega_6^2\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega\omega_{12} - 6\omega_6\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$36\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 24\omega_6^2\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$24\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8v_1^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15} + 12\omega_6^3\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^3\omega_{13}\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$$
$$6\omega_6^3\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8^3\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 10\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_{12} -$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_9 - 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{15}\omega_9 - 12\omega_6^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 6\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12} + 24\omega_6^3\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5\omega_{15}\omega_9\omega_{12} - 12\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_{12} - \omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 24\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8v_1^2\omega_5\omega_{15}\omega_9\omega_{12} +$$

$$12\omega_6^3\omega_7^2\omega_{17}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12} -$$
$$6\omega_6^2\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6^3\omega_{13}\omega_7^2 v_2^2\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12} - 24\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_{15}\omega_9\omega_{12} - 12\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_9 - 48\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15}\omega_9 - 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_9 - 24\omega_6^2\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_9\omega_{12} + 6\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$24\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{15}\omega_{12} - 24\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 24\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14} v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$30\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15} - 6\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{15} -$$
$$6\omega_6^3\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12} - 18\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_8 v_1^2\omega_5^3\omega_9\omega_{12} - 12\omega_6^3\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_9 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_8^2 v_1^2\omega_5\omega_{15}\omega_9\omega_{12} + 6\omega_6^3\omega_{13}\omega_7^2 v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12} +$$
$$36\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{15}\omega_9\omega_{12} + 18\omega_6\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6^2\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^3\omega_7^2\omega_{17}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_{12} + 24\omega_6\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$$
$$36\omega_6^3\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^2\omega_7^2\omega_{17}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 18\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} -$$
$$6\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8\omega_5\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8 v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} -$$
$$12\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14} v_1^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12} - 24\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{15}\omega_{12} -$$
$$12\omega_6^3\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 18\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_{12} + 6\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} -$$
$$48\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_6\omega_{13}\omega_7^2 v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} +$$
$$12\omega_6^3\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_9 + 12\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}$$

$C_{39} = -3\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + 2\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 -$
$12\omega_6\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2 + 12\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2 + 8\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} +$
$6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^3\omega_{15} + 6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{10}^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{12} - 3\omega_6\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + 2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$
$12\omega_6\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2 - 9\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 - 6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$3\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + 24\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5\omega_{15} + 12\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$
$2\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10} v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10} v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_5\omega_{15} + 2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} + 4\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2 v_2^2\omega_8\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7\omega_8\omega_5^2\omega_{15} +$
$3\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_{15} - 4\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5\omega_{15} - 12\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} -$
$6\omega_6\omega_{16}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 12\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17} cs^2\omega_5\omega_{15} - 4\omega_{10}^2 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$
$2\omega_6\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5 + 9\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 - 4\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5\omega_{15}^2 -$
$4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2\omega_{15}^2 - 2\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15}^2 - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5\omega_{15}^2 + 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17} cs^2\omega_5^2\omega_{15}^2 + 4\omega_6\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} +$
$2\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_{16}\omega_{10}\omega_7\omega_8 cs^2\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 24\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 4\omega_{10}^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$6\omega_6\omega_{16}\omega_{10}\omega_7\omega_8 cs^2\omega_5^2 + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17} cs^2\omega_5 - 4\omega_6\omega_{10}^2\omega_8\omega_5\omega_{15}^2 + 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} -$
$8\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_{15} - 4\omega_{16}\omega_{10}^2\omega_7\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} +$
$6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5^2\omega_{15} - 2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_5\omega_{15} - 12\omega_{16}\omega_{10}\omega_7\omega_{17} cs^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 12\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_{15} +$
$4\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}\omega_{10} v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_8\omega_5^2\omega_{15} +$
$4\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5\omega_{15} + 4\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 + 2\omega_6\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15}^2 -$
$4\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_{15} + 4\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2\omega_{15} + 8\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 -$
$12\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 + 12\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 4\omega_{16}\omega_{10} v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_6\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 -$
$8\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{10}^2 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5\omega_{15}$

$C_{40} = -2\omega_6^2\omega_8^2 cs^2\omega_5^2\omega_{15} + \omega_6 v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + \omega_6^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6^2 v_2^2\omega_8^2\omega_5^2\omega_{15} - \omega_6^2\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15} + 2\omega_6\omega_{17} cs^2\omega_5^3\omega_{15} - \omega_6\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$
$\omega_6^2 v_2^2\omega_8^2\omega_5^3\omega_{15} - 5\omega_6^2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} - \omega_6^2\omega_8^2 cs^2\omega_5^3\omega_{15} + \omega_6 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + \omega_6^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6^2\omega_8\omega_5^3\omega_{15} - \omega_6\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$2\omega_6\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} - 2\omega_6^2\omega_{17} cs^2\omega_5^3\omega_{15} + 4\omega_6^2 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 7\omega_6\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 2\omega_{17}\omega_8 cs^2\omega_5^3\omega_{15} + \omega_6^2 v_2^2\omega_{17}\omega_8\omega_5^3 - \omega_6^2 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$
$4\omega_6^2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + \omega_6^2 v_2^2\omega_8\omega_5^3\omega_{15} - 2\omega_6 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 4\omega_6^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + \omega_6^2\omega_8 cs^2\omega_5^3\omega_{15} + 6\omega_6^2\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - \omega_6 v_2^2\omega_8^2\omega_5^3\omega_{15} +$
$2\omega_6^2\omega_{17} cs^2\omega_5^2\omega_{15} - 2\omega_6^2 v_2^2\omega_{17}\omega_8^2\omega_5 - \omega_6^2 v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{17}\omega_8^2\omega_5^2\omega_{15} - \omega_6^2\omega_8 cs^2\omega_5^3\omega_{15} + \omega_6\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15} + 2\omega_6^2\omega_8 cs^2\omega_5^2\omega_{15} -$
$2\omega_6^2\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_8\omega_5^3\omega_{15} - 8\omega_6^2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 2\omega_6^2 v_2^2\omega_8\omega_5^2\omega_{15} - \omega_6^2 v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 7\omega_6\omega_{17}\omega_8 cs^2\omega_5^3\omega_{15} - 2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + \omega_6\omega_{17}\omega_8\omega_5^3\omega_{15} +$
$\omega_6^2\omega_8\omega_5^3\omega_{15} + 2\omega_6^2\omega_8\omega_5\omega_{15} - 2\omega_6^2 v_2^2\omega_8\omega_5^2\omega_{15} - 6\omega_6\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + \omega_6^2\omega_{17}^2\omega_5^3\omega_{15} + 2\omega_6 v_2^2\omega_5^2\omega_{15} - 2\omega_6\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} -$
$2\omega_6\omega_8\omega_5^3\omega_{15} - 11\omega_6^2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 2\omega_6^2\omega_8\omega_5^2\omega_{15} - \omega_6^2\omega_{17}\omega_8\omega_5^3\omega_{15} - \omega_6 v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} + 2\omega_6^2\omega_8\omega_5\omega_{15} - 2\omega_6^2\omega_8 cs^2\omega_5^3\omega_{15} +$
$2\omega_6^2 v_2^2\omega_8\omega_5^2\omega_{15} + 13\omega_6^2\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - 2\omega_6^2\omega_8^2\omega_5^2\omega_{15} - \omega_6^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6^2\omega_{17}\omega_8^2 cs^2\omega_5^2 + 2\omega_6^2\omega_{17}\omega_8^2 + \omega_6^2 v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} -$
$2\omega_6^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - \omega_6^2\omega_8^2\omega_5^3\omega_{15} + 5\omega_6^2\omega_{17}\omega_8 cs^2\omega_5^3\omega_{15} + \omega_6^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_6\omega_8 cs^2\omega_5^3\omega_{15} - \omega_6^2\omega_{17}\omega_8^2\omega_5^3 + \omega_6^2\omega_{17}\omega_8 cs^2\omega_5^3$

$C_{41} = -3\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + 6\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 -$
$4\omega_6\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2 + 4\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2 + 24\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2\omega_{15} + 2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 12\omega_6\omega_{10}^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 9\omega_6\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$4\omega_6\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - 3\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$3\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 8\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 4\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5^2\omega_{15} - 6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 12\omega_6\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$
$6\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10} v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5\omega_{15} + 12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_5\omega_{15} + 2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} + 12\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_{15} + 6\omega_6\omega_{16}\omega_{10}^2 v_2^2\omega_8\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7\omega_8\omega_5^2\omega_{15} +$
$9\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_{15} - 4\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5\omega_{15} - 4\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} -$
$2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_5^2\omega_{15} - 12\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_5^2\omega_{15} +$
$4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_{10}\omega_7\omega_{17} cs^2\omega_5\omega_{15} - 12\omega_{10}^2 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2\omega_{15} - 12\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$

$$6\omega_6\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5 + 3\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 - 4\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5\omega_{15}^2 -$$
$$4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2\omega_{15}^2 - 6\omega_6\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5\omega_{15}^2 + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17} cs^2\omega_5^2\omega_{15}^2 + 12\omega_6\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15}^2 +$$
$$6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_8 cs^2\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - 8\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 4\omega_{10}^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 +$$
$$2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_8\omega_5\omega_{15} + 2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} -$$
$$24\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15}^2 + 4\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_{15} - 4\omega_{16}\omega_{10}^2\omega_7\omega_5^2\omega_{15}^2 + 4\omega_6\omega_{16}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} +$$
$$2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5^2\omega_{15} - 2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_5^2\omega_{15} - 4\omega_{16}\omega_{10}\omega_7\omega_{17} cs^2\omega_5^2\omega_{15}^2 +$$
$$4\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 4\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_{15} +$$
$$4\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10} v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5\omega_{15} +$$
$$12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5\omega_{15} + 12\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15}^2 + 4\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 + 6\omega_6\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$$
$$12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_5^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_{15} + 4\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2\omega_{15} + 8\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_{15} -$$
$$4\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 4\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 12\omega_{16}\omega_{10} v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 -$$
$$8\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{10}^2 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 12\omega_6\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5\omega_{15}$$

$C_{42} = \omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5\omega_{15} - 36\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} - \omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$12\omega_6^2\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 54\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - 24\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 9\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$9\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_{15} - 9\omega_6^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2 cs^2\omega_5^2\omega_{15} -$
$24\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 42\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}^2\omega_8^2 cs^2\omega_5^2\omega_{15} +$
$12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 18\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$
$36\omega_6^2\omega_{16}\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_8\omega_5^2\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5 + 36\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 -$
$18\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5\omega_{15} + 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$
$12\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5^2 - 54\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17} cs^2\omega_5^2\omega_{15} +$
$12\omega_6^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 9\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5\omega_{15} - 6\omega_6\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$6\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2 cs^2\omega_5\omega_{15} + 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 12\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5\omega_{15} -$
$6\omega_6^2\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_{15} - 12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} + 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5^2\omega_{15} - 6\omega_6^2\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} +$
$12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - 24\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 3\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} -$
$24\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} - 3\omega_6^2\omega_{16}\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} + 12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} -$
$12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} - 6\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 3\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 24\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} +$
$6\omega_6^2\omega_{16}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5\omega_{15} + 6\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} - 36\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 +$
$18\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_{15} + 24\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} +$
$18\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 18\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_{15} + 24\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} +$
$12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17} cs^2\omega_5\omega_{15} - 12\omega_6^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 6\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$
$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 12\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} -$
$6\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2 cs^2\omega_5^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2 cs^2\omega_5\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8^2 cs^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} +$
$12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5\omega_{15} + 6\omega_6^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_8^2\omega_5^2\omega_{15} -$
$12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_{15} -$
$12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2 cs^2\omega_5\omega_{15} - 6\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_6^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} -$
$12\omega_6^2\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} +$
$12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17} cs^2\omega_5^2\omega_{15} - 12\omega_6\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 6\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 6\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 6\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} +$
$6\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5\omega_{15} + 36\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5\omega_{15} - 42\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$12\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_8\omega_5\omega_{15} + 12\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 6\omega_6^2\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 54\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15} +$
$18\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 + 30\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 54\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5\omega_{15}$

$C_{43} =$
$-12\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^3 - 18\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{13}^2 v_3^2\omega_{18}\omega_9^3 - 36\omega_6^3\omega_{22}\omega_{13} v_3^2 cs^2\omega_{18}\omega_9^3 + 36\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9 +$
$6\omega_6^3\omega_{13}^2 cs^2\omega_{18}\omega_9^2 - 2\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_9^2 + 180\omega_6\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22} cs^2\omega_{18}\omega_9^2 -$
$6\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 + 36\omega_6^2\omega_{13}^2 cs^4\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22}\omega_{13} cs^4\omega_{18}\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{13}^2 v_3^3 v_1^2\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{22} v_3^2\omega_{18}\omega_9^3 +$
$36\omega_6^2\omega_{13}^2 cs^4\omega_{18}\omega_9^3 - 84\omega_6\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}^2 v_3^3 v_1^2\omega_{18} + 6\omega_6^3\omega_{13}^2 v_3^3\omega_9^3 - 6\omega_6^3\omega_{13}^2 cs^2\omega_{18}\omega_9 + \omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 +$
$24\omega_6\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^3 + 72\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_9^2 - 18\omega_6^3\omega_{22}\omega_{13}^2\omega_{18} + 12\omega_6^2\omega_{13}^2 v_3^3 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{22} v_3^3 v_1^2\omega_{18}\omega_9^3 +$
$12\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^3 - 48\omega_6^2\omega_{22}\omega_{13} cs^4\omega_{18}\omega_9 + 36\omega_6^2\omega_{13}^2 v_3^2 cs^2\omega_9^3 + 18\omega_6^3\omega_{22}\omega_{13} cs^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{22} cs^2\omega_{18}\omega_9^3 + 18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9 -$
$12\omega_6^2\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_9^3 - 12\omega_6^3\omega_{22} cs^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 + 30\omega_6^3\omega_{22}\omega_{13} cs^4\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{13}^2 v_3^2 v_1^2\omega_9^3 - 36\omega_6^3\omega_{22}\omega_{13} v_3^3 cs^2\omega_{18}\omega_9^2 +$
$12\omega_6^3\omega_{13}^2 v_3^3\omega_{18}\omega_9^3 + 150\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^3 - 24\omega_6\omega_{22}\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{13}^2 v_3^2\omega_9^3 - 12\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^3 -$
$12\omega_6^3\omega_{22}\omega_{13} cs^2 v_1^2\omega_{18}\omega_9 + 18\omega_6^3\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9^3 - 36\omega_6^2\omega_{22}\omega_{13} v_3^3\omega_{18}\omega_9^2 - 18\omega_6^2\omega_{13}^2 cs^4\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13} v_3^3\omega_{18}\omega_9^2 - 36\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_9^2 -$
$36\omega_6^3\omega_{22} v_3^2 cs^2\omega_{18}\omega_9^2 + 36\omega_6^3\omega_{13} v_3^2 cs^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22} cs^4\omega_{18}\omega_9^2 + 36\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18} + 24\omega_6\omega_{22}\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9^2 - 36\omega_6^3\omega_{22}\omega_{13} v_3^2 cs^2\omega_{18}\omega_9 +$
$6\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9 + 12\omega_6^2\omega_{22}\omega_{13} cs^2\omega_{18}\omega_9 + 18\omega_6^2\omega_{13}^2 cs^4\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{22}\omega_{13} v_3^3\omega_{18}\omega_9^3 - 18\omega_6^3\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9 + 18\omega_6^2\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9 -$
$6\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_9^3 - 12\omega_6^2\omega_{13} cs^2\omega_{18}\omega_9^3 + 12\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^2 - 42\omega_6^2\omega_{22}\omega_{13} cs^4\omega_{18}\omega_9^3 - 54\omega_6^3\omega_{22}\omega_{13} v_3^2 cs^2\omega_{18}\omega_9 - 88\omega_6^2\omega_{22}\omega_{13} cs^4\omega_{18}\omega_9^3 -$
$12\omega_6\omega_{13} v_3^3\omega_{18}\omega_9^3 + 108\omega_6^2\omega_{22}\omega_{13} v_3^2 cs^2\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{13} cs^2 v_1^2\omega_{18}\omega_9^3 + 36\omega_6^2\omega_{13} cs^2 v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{13} cs^2 v_1^2\omega_{18}\omega_9^2 - 72\omega_6^3\omega_{22}\omega_{13} v_3^2 cs^2\omega_{18}\omega_9 -$
$12\omega_6^3\omega_{22} cs^4\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9 + 18\omega_6^2\omega_{22}\omega_{13} cs^2 v_1^2\omega_{18}\omega_9^3 - 18\omega_6^3\omega_{13} cs^4\omega_9^3 + 18\omega_6^3\omega_{22}\omega_{13} v_3^2 cs^2\omega_9^3 - 36\omega_6^3\omega_{13} v_3^2 cs^2\omega_{18}\omega_9^3 +$
$36\omega_6^3\omega_{22} v_3^2 cs^2\omega_{18}\omega_9^3 + 12\omega_6\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 - 36\omega_6^3\omega_{22}\omega_{13} cs^4\omega_{18}\omega_9 - 6\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13} cs^4\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9 -$
$36\omega_6^2\omega_{22}\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9^3 - 18\omega_6^3\omega_{22}\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{13} cs^2\omega_{18}\omega_9^2 - 24\omega_6^2\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6\omega_{22}\omega_{13} cs^4\omega_{18}\omega_9^3 -$
$\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22} v_3^2 v_1^2\omega_{18}\omega_9^3 - 24\omega_6\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{13}^2 v_3^2\omega_{18}\omega_9^3 - 6\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_9^3 -$
$72\omega_6\omega_{22}\omega_{13} v_3^2 cs^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9^3 + 36\omega_6^2\omega_{13}^2 cs^4\omega_{18} + 12\omega_6^2\omega_{22} cs^4\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22}\omega_{13} v_3^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_9^3 -$
$12\omega_6\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6\omega_{22}\omega_{13} cs^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{22} v_3^2 v_1^2\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{13}^2 cs^2\omega_9^3 + 2\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^2 -$
$18\omega_6^3\omega_{22}\omega_{13} cs^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13} v_3^2 v_1^2\omega_9^3 - 36\omega_6^2\omega_{13}^2 cs^4\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13} v_3^2 v_1^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{13} cs^2\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_9^3 +$
$72\omega_6\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9^3 - 96\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{22} v_3^2\omega_{18}\omega_9^3 + 36\omega_6^2\omega_{13} v_3^2 cs^2\omega_{18}\omega_9^3 - 36\omega_6^3\omega_{22} v_3^2 cs^2\omega_{18}\omega_9^3 -$

$$36\omega_6^2\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_9^2 + 24\omega_6^3\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{18}\omega_9^3 + 36\omega_6^3\omega_{13}cs^4\omega_{18}\omega_9^2 - 24\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_9^2 +$$
$$12\omega_6^2\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^3 + 6\omega_6^3\omega_{13}cs^2\omega_9^3 - 12\omega_6^3\omega_{22}cs^2 v_1^2\omega_{18}\omega_9^2 + 5\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^3 - 6\omega_6^3\omega_{13}^2 v_3^2\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18} +$$
$$12\omega_6^2\omega_{22}\omega_{13}v_3^3 v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{22}cs^2\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22}v_3^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 - 18\omega_6^3\omega_{13}^2 v_3^2 cs^2\omega_9^3 -$$
$$6\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_9^2 - 42\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{18}\omega_9^3 + 6\omega_6^3\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_9^2 - 36\omega_6^3\omega_{13}cs^4\omega_{18}\omega_9^3 +$$
$$24\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^3 - 36\omega_6^2\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{13}^2 cs^2\omega_{18}\omega_9^3$$

$C_{44} = -12\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{18}\omega_9^3 - 24\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{13}^2 v_3^2\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{22}\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9 +$
$6\omega_6^3\omega_{13}^2 cs^2\omega_{18}\omega_9^2 - 18\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_9^2 + 18\omega_6\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^3 + 78\omega_6^3\omega_{22}\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^3 +$
$12\omega_6^2\omega_{13}^2 cs^4\omega_9^3 - 108\omega_6^2\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9 - 36\omega_6^2\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{22}v_3^2\omega_{18}\omega_9^3 - 48\omega_6^2\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 +$
$12\omega_6^2\omega_{13}^2 cs^4\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9 + 36\omega_6^2\omega_{22}\omega_{13}^3 v_3^2 v_1^2\omega_{18} + 6\omega_6^3\omega_{13}^2 v_3^3\omega_9^3 - 6\omega_6^3\omega_{13}^2 cs^2\omega_{18}\omega_9^3 + 24\omega_6\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^3 +$
$24\omega_6^3\omega_{22}\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{18}\omega_9^2 + 36\omega_6^3\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^3 - 36\omega_6^3\omega_{22}v_3^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9 +$
$12\omega_6^2\omega_{13}^2 v_3^2 cs^2\omega_9^3 - 144\omega_6^3\omega_{22}\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9 - 36\omega_6^2\omega_{22}\omega_{13}cs^2 v_1^2\omega_9^2 + 24\omega_6^3\omega_{22}cs^2 v_1^2\omega_{18}\omega_9^2 + 36\omega_6^3\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^2 +$
$12\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{18}\omega_9^3 + 36\omega_6^2\omega_{13}^2 v_3^2 v_1^2\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{13}v_3^2\omega_{18}\omega_9^3 + 24\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^2 - 72\omega_6\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^3 -$
$42\omega_6^2\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{13}^2 v_3^2\omega_9^3 + 72\omega_6^3\omega_{22}\omega_{13}cs^2 v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9^3 - 36\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^3 - 6\omega_6^3\omega_{13}cs^4\omega_{18}\omega_9^2 -$
$6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_9^2 - 12\omega_6^3\omega_{22}v_3^2 cs^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^2 + 60\omega_6\omega_{22}\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18} +$
$72\omega_6\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{13}v_3^2 cs^2\omega_{18}\omega_9 + 18\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 + 6\omega_6^3\omega_{13}cs^4\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^2 +$
$180\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^2 - 18\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_9^3 - 12\omega_6^2\omega_{13}cs^2\omega_{18}\omega_9^3 + 12\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{18}\omega_9^2 -$
$18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9 - 4\omega_6^2\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9 - 12\omega_6^2\omega_{13}^2 v_3^2 cs^4\omega_{18}\omega_9^2 + 36\omega_6^2\omega_{22}v_3^2 cs^2\omega_{18}\omega_9^3 - 36\omega_6^3\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^3 -$
$24\omega_6^3\omega_{22}cs^2 v_1^2\omega_{18}\omega_9^2 - 18\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9 - 24\omega_6^2\omega_{22}\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9 -$
$132\omega_6^2\omega_{22}\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^3 - 6\omega_6^3\omega_{13}^2 cs^4\omega_9^3 + 6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_9^2 - 12\omega_6^3\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{22}v_3^2 cs^2\omega_{18}\omega_9^3 + 84\omega_6\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 +$
$6\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9 - 18\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^3 + 6\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9 + 108\omega_6^2\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^3 - 54\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9 -$
$12\omega_6^3\omega_{13}cs^2\omega_{18}\omega_9^2 - 72\omega_6^2\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}cs^4\omega_{18}\omega_9^3 - 36\omega_6^3\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^3 + 36\omega_6^3\omega_{22}v_3^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{18}\omega_9^2 -$
$24\omega_6\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{13}^2 v_3^2\omega_{18}\omega_9^3 - 18\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_9^3 - 24\omega_6\omega_{22}\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^3 - 36\omega_6^2\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9 +$
$18\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^3 - 84\omega_6\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 + 60\omega_6\omega_{22}\omega_{13}cs^2 v_1^2\omega_{18}\omega_9^3 - 36\omega_6^3\omega_{22}v_3^2 v_1^2\omega_{18}\omega_9^3 + 36\omega_6^3\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{13}^2 cs^2\omega_9^3 +$
$6\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{18}\omega_9^3 + 24\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{18}\omega_9^3 - 36\omega_6^2\omega_{22}\omega_{13}v_3^2 v_1^2\omega_9^3 - 12\omega_6^2\omega_{13}^2 cs^4\omega_{18}\omega_9^3 - 36\omega_6^2\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{13}cs^2\omega_{18}\omega_9^3 +$
$36\omega_6^3\omega_{13}^2 cs^2 v_1^2\omega_9^3 + 24\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{18}\omega_9^3 - 6\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}v_3^2\omega_{18}\omega_9^3 + 12\omega_6^2\omega_{13}v_3^2 cs^2\omega_{18}\omega_9^3 -$
$12\omega_6^2\omega_{22}v_3^2 cs^2\omega_9^3 - 12\omega_6^2\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_9^2 + 72\omega_6^3\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^2 - 12\omega_6\omega_{22}\omega_{13}cs^2\omega_{18}\omega_9^3 + 12\omega_6^3\omega_{13}cs^4\omega_{18}\omega_9^2 - 24\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 -$
$6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_9^2 + 36\omega_6^3\omega_{13}cs^2 v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{13}^2 cs^2\omega_9^3 + 24\omega_6^2\omega_{22}cs^2 v_1^2\omega_{18}\omega_9^3 - \omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^3 - 6\omega_6^3\omega_{13}^2 v_3^2\omega_{18}\omega_9^3 +$
$12\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{18}\omega_9^2 + 36\omega_6^2\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9 - 36\omega_6^3\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}v_3^2\omega_{18}\omega_9^3 - 36\omega_6^2\omega_{13}^2 cs^2 v_1^2\omega_{18}\omega_9^3 - 6\omega_6^3\omega_{13}^2 v_3^2 cs^2\omega_9^3 -$
$6\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_9^2 - 24\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{18}\omega_9^3 + 6\omega_6^3\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13}^2 cs^2 v_1^2\omega_9^2 - 12\omega_6^3\omega_{13}cs^4\omega_{18}\omega_9^3 +$
$24\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^3 - 12\omega_6^2\omega_{13}^2 v_3^2 cs^2\omega_{18}\omega_9^3 - 12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18} + 18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{13}^2 cs^2\omega_{18}\omega_9^3$

$C_{45} = 2\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}^2\omega_9^3 - \omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^3 + 6\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^3 + 8\omega_6^3\omega_{22}\omega_{11}cs^2\omega_{18}^2\omega_9^3 -$
$4\omega_6^3\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 + 5\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9 - 2\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 2\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}\omega_9^3 - 15\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^3 +$
$11\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 + 4\omega_6^3\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^2 - 8\omega_6^3\omega_{22}\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 4\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}\omega_9^3 - 8\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 +$
$2\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}^2\omega_9^2 - 2\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^3 + 4\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_9^3 - 8\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 + 4\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9 -$
$6\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^3 + 4\omega_6^2\omega_{22}\omega_{11}\omega_{18}\omega_9^3 + 2\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^2 - 2\omega_6^3\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^3 + 2\omega_6^3\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 + \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}^2\omega_9^3 -$
$4\omega_6^3\omega_{13}\omega_{11}\omega_{18}\omega_9^2 + 2\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2 - 4\omega_6^2\omega_{22}\omega_{11}v_1^2\omega_{18}\omega_9^3 + 4\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^3 + 13\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 - \omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2\omega_9^2 -$
$9\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2\omega_9^3 + 4\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^3 + 4\omega_6^3\omega_{13}\omega_{11}\omega_{18}\omega_9^3 - 4\omega_6^2\omega_{13}^2\omega_{11}v_1^2\omega_{18}^2\omega_9^3 - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18} + 3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 -$
$5\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9 - 16\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^3 + \omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^2 - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^2 +$
$4\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9 - 4\omega_6^2\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 + 4\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^3 + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^3 - 3\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^3 - 2\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^3 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_9^3 + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18} - 2\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^3 + 8\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{18}\omega_9^3 - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^3 -$
$4\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{18}^2\omega_9^3 - 2\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2 - 4\omega_6^2\omega_{13}\omega_{11}\omega_{18}\omega_9^3 + 7\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^2 - 8\omega_6^2\omega_{22}\omega_{11}cs^2\omega_{18}^2\omega_9^3 + 4\omega_6^2\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 +$
$4\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^2 - 4\omega_6^3\omega_{22}\omega_{11}v_1^2\omega_{18}^2\omega_9^3 + 4\omega_6^3\omega_{22}\omega_{11}\omega_{18}^2\omega_9^3 + 2\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{18}^2\omega_9^3 - 4\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 - 6\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 -$
$24\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^3 - \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}^2\omega_9^3 - 4\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}\omega_9^3 - 2\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^2 - 6\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^3 +$
$3\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2\omega_9^3 + 3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}^2\omega_9 + 2\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}^2\omega_9^3 + 2\omega_6^3\omega_{13}^2\omega_{11}v_1^2\omega_{18}^2\omega_9^3 - 2\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^3 - 3\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^2 +$
$8\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^2 + 26\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^3 - 4\omega_6^3\omega_{22}\omega_{11}\omega_{18}^2\omega_9^3 + 4\omega_6^3\omega_{22}\omega_{11}v_1^2\omega_{18}^2\omega_9^3 - 4\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^3 + 12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18} -$
$2\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}^2\omega_9^3 - 2\omega_6^3\omega_{13}^2\omega_{11}v_1^2\omega_{18}^2\omega_9^3 - 7\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2\omega_9^2 + 9\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9^3 - 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 + \omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2\omega_9^3$

$C_{46} = -2\omega_6^2\omega_{22}\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}v_2 v_3^2\omega_{14}\omega_8 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5\omega_{18}\omega_9 +$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2 v_3^2\omega_8 v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{20}v_3^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8 cs^2 v_1\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2 v_3^2\omega_8 v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5^2\omega_{18} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2 v_3\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2 v_3^2\omega_8 cs^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2 v_3^2\omega_8^2 v_1^2\omega_5\omega_{18}\omega_9\omega_{12} +$
$4\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8 cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2 v_3^2\omega_8^2 v_1\omega_5\omega_{18}\omega_9 -$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2 v_3\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5\omega_{18}\omega_9 +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2 cs^2 v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{20}v_2\omega_{14}\omega_8^2 cs^2 v_1\omega_5\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2 cs^2 v_1^2\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8 cs^2 v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2 cs^2 v_1\omega_5^2\omega_9\omega_{12} +$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2 v_3\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8 cs^2 v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8 cs^2 v_1\omega_5\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2 cs^2 v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2 v_3^2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2 v_3^2\omega_8^2 v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{14}\omega_8 cs^2 v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8 cs^2 v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2 cs^2 v_1^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8^2 cs^2 v_1\omega_5\omega_{18}\omega_9\omega_{12} +$

$$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9 + 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18} + \omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18} +$$

$$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 8\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18} +$$

$$2\omega_6^2\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_9\omega_{12} -$$

$$\omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 8\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^4\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^2\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} + \omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{20}v_2^2v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{12} -$$

$$4\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$\omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{22}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9 +$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18} + 2\omega_6^2\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 +$$

$$2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18} + \omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2cs^2\omega_5\omega_{18}\omega_9 +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^2\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_9 - 2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} -$$

$$4\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^4\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$\omega_6^3\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5^2\omega_{18} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9 +$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9 + 2\omega_6^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_9\omega_{12} +$$

$$\omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$4\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5\omega_{18} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2cs^2\omega_5\omega_{18}\omega_9 -$$

$$2\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5\omega_{18}\omega_9 +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9 +$$

$$2\omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} - 8\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^4\omega_5\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{13}\omega_{20}v_2v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 4\omega_6\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{12} +$$

$$2\omega_6^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9 -$$

$$4\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9 +$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9 - 2\omega_6^2\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18} - \omega_6^3\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12} -$$

$$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} - \omega_6^3\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{22}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_9\omega_{12} -$$

$$8\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^2\omega_{22}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 12\omega_6\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$2\omega_6^3\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9 - \omega_6^3\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^3\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8v_1^2\omega_5^2\omega_{18} - \omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$
$$2\omega_6^3\omega_{22}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}cs^4\omega_5\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} -$$
$$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}v_2\omega_{14}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$
$$\omega_6^3\omega_{22}\omega_{13}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$
$$\omega_6^3\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{20}v_2v_3\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$
$$2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$
$$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{12} -$$
$$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_3^2\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} -$$
$$2\omega_6^2\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_9\omega_{12} +$$
$$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{13}\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9\omega_{12} -$$
$$\omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$$
$$2\omega_6^2\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$
$$\omega_6^3\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{12} +$$
$$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_9\omega_{12} +$$
$$2\omega_6^2\omega_{22}\omega_{13}v_2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}$$

$C_{47} = 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$
$4\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{14}\omega_8cs^2\omega_5^2\omega_9^2\omega_{12} -$
$4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2 + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9 - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$
$4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9 -$
$2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 8\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + \omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_{18}\omega_9^2\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 12\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - \omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9 - 4\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$4\omega_6^2\omega_{13}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9 + \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9^2 +$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9 +$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 4\omega_6^3\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2 + 4\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9^2 - 2\omega_6^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 + 4\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9^2 +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 8\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$4\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9 - 2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - \omega_6^3\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} + 9\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9 - 14\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^2\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2 - 2\omega_6^3\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$
$4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}\omega_9 +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9 + 2\omega_6^2\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5\omega_{18}\omega_9 -$
$4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9^2\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9 + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$
$4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$

$$\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 8\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$
$$2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9 +$$
$$4\omega_6^3\omega_{22}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_9 +$$
$$\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$$
$$4\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$$
$$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9 +$$
$$4\omega_6^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9^2\omega_{12} -$$
$$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12} -$$
$$4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + \omega_6^3\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$$
$$4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} - \omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$$
$$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2 + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8\omega_5^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} -$$
$$\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$$
$$2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_{18}\omega_9^2\omega_{12} + \omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} -$$
$$\omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 8\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6\omega_{22}\omega_{13}^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$$
$$8\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$$
$$\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$$
$$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$$
$$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} -$$
$$4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9 -$$
$$4\omega_6^3\omega_{13}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$
$$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} - 4\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_9^2 -$$
$$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5\omega_{18}\omega_9^2 - \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8\omega_5\omega_{18}\omega_9\omega_{12} +$$
$$4\omega_6^3\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 12\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} +$$
$$2\omega_6^3\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2 -$$
$$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} +$$
$$2\omega_6^3\omega_{22}\omega_{13}^2\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$$
$$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} + \omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} +$$
$$2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} + \omega_6^3\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8cs^2\omega_5\omega_{18}\omega_9^2\omega_{12} -$$
$$4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_9^2\omega_{12} +$$
$$2\omega_6^2\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} +$$
$$2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9 + 6\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2\omega_{12} -$$
$$2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12} + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9^2 +$$
$$4\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_9^2\omega_{12} + \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9$$

$C_{48} = 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} +$
$18\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_8cs^2\omega_5^3\omega_{18}\omega_{12} +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_{12} - 12\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} + 24\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$
$6\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9 - 24\omega_6^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_9\omega_{12} +$
$6\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$
$24\omega_6^3\omega_{22}\omega_7^2v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_9\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18} +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} - 24\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^3\omega_{18}\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9 +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9 +$
$12\omega_6^3\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9 +$
$12\omega_6^2\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$24\omega_6^2\omega_{22}\omega_7^2\omega_{20}v_2v_3^2\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_9\omega_{12} - 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$
$12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^4\omega_5^3\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2\omega_9\omega_{12} - 48\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9 - 60\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 10\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$24\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$
$24\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_9\omega_{12} + 24\omega_6^2\omega_{22}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$24\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9 -$
$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_9\omega_{12} + 12\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} -$
$24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_{18}v_1\omega_5^3\omega_9\omega_{12} - 12\omega_6^3\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} - 24\omega_6^3\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9 - 24\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$24\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_{12} - 6\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} - 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_9\omega_{12} +$
$12\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_9\omega_{12} -$
$12\omega_6^3\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$
$42\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 18\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} -$

$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^3\omega_{18} + 36\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^2\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} +$$

$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 12\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} - 12\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$24\omega_6^2\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^3\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$24\omega_6^2\omega_{22}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^3v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12} +$$

$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} - 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^4\omega_5^3\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8^3v_1\omega_5^3\omega_{18}\omega_{12} + 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_{12} +$$

$$6\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_{12} - 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^2\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_{18}\omega_{12} -$$

$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_9\omega_{12} - 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8^3v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$6\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^2\omega_{22}\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} +$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9 - 18\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9 -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9 - 24\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18} +$$

$$12\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$24\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_{12} -$$

$$24\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18} +$$

$$36\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12} - 6\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_{12} +$$

$$24\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} +$$

$$24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_9\omega_{12} - 12\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_9\omega_{12} -$$

$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 60\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12} - 24\omega_6^3\omega_{20}v_2v_3^2\omega_{14}\omega_8^3v_1\omega_5^3\omega_{18}\omega_{12} +$$

$$24\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_{12} -$$

$$12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^2\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9 + 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_{12} +$$

$$12\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_9\omega_{12} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_9 - 24\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9 -$$

$$24\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} - 12\omega_6^3\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 24\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9 +$$

$$12\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} + 12\omega_6^3\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12} +$$

$$24\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{12} +$$

$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9 + 24\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{12} -$$

$$18\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18} +$$

$$12\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^3\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} +$$

$$12\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_9\omega_{12} - 18\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} + 12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18} - 12\omega_6^3\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$$

$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_9\omega_{12} + 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2v_1^2\omega_5^3\omega_{18}\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_9\omega_{12} + 24\omega_6^2\omega_{22}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$6\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9 -$$

$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^4\omega_5^2\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

$$12\omega_6^3\omega_{22}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_{18} - 24\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_8v_1\omega_5^3\omega_{18}\omega_9\omega_{12} +$$

$$12\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2v_1^2\omega_5^3\omega_9\omega_{12} - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12} -$$

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$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2\omega_9\omega_{12} + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_9\omega_{12} - 36\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12} - 24\omega_6^2\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^3\omega_9\omega_{12}$$

$C_{49} = \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}cs^2\omega_5\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}^2\omega_9\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9 + 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2v_1^2\omega_5\omega_{18}^2\omega_9 - \omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9 +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^2\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$6\omega_6^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2 - 2\omega_6^2\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18} -$
$\omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_{12} - \omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$5\omega_6\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}^2\omega_9\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_9 +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$\omega_6^3\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{20}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5^2\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}v_2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5\omega_{18}^2\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8cs^2\omega_5\omega_{18}^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}^2\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 4\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} -$
$2\omega_6^3\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8v_1\omega_5\omega_{18}^2\omega_9\omega_{12} +$
$\omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^3\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18} - 2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8v_1\omega_5\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{20}v_2\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8cs^2\omega_5^2\omega_{18}^2 -$
$2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2cs^2v_1\omega_5\omega_{18}^2 + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}^2\omega_9 + 3\omega_6\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_9 +$
$\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5\omega_{18}^2 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + \omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2v_1^2\omega_5\omega_{18} + \omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9\omega_{12} - 3\omega_6\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} -$
$2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_{12} -$
$\omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{20}v_2\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8v_1^2\omega_5\omega_{18}^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}^2\omega_9\omega_{12} +$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8cs^2\omega_5^2\omega_{18}^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8cs^2v_1\omega_5\omega_{18}^2\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} -$
$6\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_9 + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2v_1\omega_5\omega_{18}^2\omega_9\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}^2\omega_9 - 2\omega_6^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8^2cs^2\omega_5\omega_{18}^2\omega_9 + 2\omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8v_1^2\omega_5\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8v_1^2\omega_5\omega_{18}^2\omega_9 - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_8v_1^2\omega_5^2\omega_{18}^2\omega_9 +$
$\omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_{12} + 2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8cs^2\omega_{18}^2\omega_9\omega_{12} +$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_8v_1^2\omega_5^2\omega_{18}\omega_{12} +$
$2\omega_6\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{20}v_2\omega_{14}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{20}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8cs^2v_1\omega_5\omega_{18}^2\omega_9 + \omega_6^3\omega_{22}\omega_{13}\omega_{14}cs^2v_1\omega_5\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} +$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5\omega_{18}^2\omega_{12} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{20}v_2\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9 - \omega_6^3\omega_{22}\omega_{13}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{22}\omega_{20}v_2^2\omega_8^2v_1\omega_5\omega_{18}^2\omega_{12} - 2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8cs^2v_1\omega_5^2\omega_{18}^2\omega_9\omega_{12} -$
$4\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_{20}v_2^2\omega_8v_1\omega_5\omega_{18}^2\omega_9 + \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}v_2\omega_{14}\omega_8\omega_8cs^2\omega_5^2\omega_9\omega_{12} -$
$2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} + 2\omega_6^3\omega_{22}\omega_{13}v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - 2\omega_6^3\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{18}\omega_9\omega_{12} -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_9\omega_{12} - \omega_6^3\omega_{13}\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18}^2\omega_9\omega_{12}$

$C_{50} = 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5\omega_{18} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 6\omega_6^2\omega_7^2v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_{15} + 6\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{18} +$
$12\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} -$
$12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} - 48\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4v_1\omega_5^2\omega_{18}\omega_{15} + 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18} - 3\omega_6^2\omega_7^2\omega_{20}v_2\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{18} +$

$$6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{17}v_3^2\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8cs^2\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1^2\omega_5^2\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2v_2^2\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{18}{}_{15} + 3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{18} +$$
$$6\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}{}_{15} - 28\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5^2\omega_{18}{}_{15} + 6\omega_6\omega_7^2\omega_{20}v_3\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}{}_{15} + 3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{15} +$$
$$3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{18}{}_{15} + 3\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_3\omega_8cs^2v_1^2\omega_5^2\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} + 6\omega_6\omega_7^2\omega_{20}v_2^2v_3\omega_8^2v_1^2\omega_5^2\omega_{18}{}_{15} - 6\omega_6\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} + 6\omega_6^2\omega_7^2\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{18}{}_{15} +$$
$$12\omega_6\omega_7^2\omega_{20}v_3^2\omega_8cs^2v_1\omega_5^2\omega_{18}{}_{15} + 3\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}{}_{15} + 2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5^2\omega_{18}{}_{15} + 6\omega_6\omega_7^2v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18}{}_{15} -$$
$$6\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8v_1\omega_5\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2\omega_{20}v_2\omega_8^2cs^2v_1\omega_5^2\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{18} +$$
$$6\omega_6\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{15} + 48\omega_6\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5^2\omega_{18}{}_{15} - 12\omega_6^2v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{17}v_3\omega_8cs^2v_1^2\omega_5\omega_{18}{}_{15} -$$
$$6\omega_6^2\omega_7^2\omega_{20}v_3\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}{}_{15} + 24\omega_6^2\omega_7^2\omega_{20}\omega_{17}cs^4v_1\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2v_3\omega_8^2cs^2\omega_5\omega_{18} + 6\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8^2v_1^2\omega_5\omega_{18} -$$
$$12\omega_6\omega_7^2\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3v_3\omega_8v_1^2\omega_5^2\omega_{18}{}_{15} + 3\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} +$$
$$3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18} - 12\omega_6^2\omega_7^2\omega_{20}v_2v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 6\omega_6\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}{}_{15} + 24\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5^2\omega_{18}{}_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1^2\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} - 12\omega_6\omega_7^2v_2^2\omega_{17}v_3\omega_8cs^2\omega_5\omega_{18}{}_{15} - 12\omega_6\omega_7^2v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} +$$
$$24\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5\omega_{18} - 6\omega_6\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} -$$
$$3\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}{}_{15} - 6\omega_6\omega_7^2\omega_{20}v_2^2\omega_8^2cs^2v_1\omega_5^2\omega_{18}{}_{15} - 3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5^2\omega_{15} -$$
$$3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5^2 + 12\omega_6\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}{}_{15} + 6\omega_6\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} +$$
$$12\omega_6\omega_7^2v_2^2\omega_{17}v_3\omega_8v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5^2\omega_{18} - 24\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{17}v_3^2\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} - 6\omega_6\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{15} +$$
$$12\omega_6^2\omega_7^2\omega_{20}v_2v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 12\omega_6\omega_7^2\omega_{20}v_3\omega_8cs^2v_1^2\omega_5^2\omega_{18}{}_{15} - 6\omega_6\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5\omega_{18}{}_{15} -$$
$$6\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1^2\omega_5^2\omega_{18}{}_{15} - 24\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5^2\omega_{18}{}_{15} + 3\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5\omega_{15} - 3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} -$$
$$6\omega_6\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{18}{}_{15} + 12\omega_6\omega_7^2\omega_{17}v_3^2\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2v_3\omega_8v_1^2\omega_5\omega_{18}{}_{15} + 12\omega_6\omega_7^2v_2^2\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} +$$
$$12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8cs^2\omega_5^2\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} - 3\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} -$$
$$24\omega_6^2\omega_7^2\omega_{20}\omega_{17}cs^4v_1\omega_5\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_7^2\omega_{17}v_3\omega_8cs^2v_1^2\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} -$$
$$6\omega_6^2\omega_7^2\omega_{20}v_2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{18}{}_{15} - 24\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5\omega_{18}{}_{15} - 12\omega_6\omega_7^2v_2^2\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{18}{}_{15} - 6\omega_6\omega_7^2v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} +$$
$$12\omega_6\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5\omega_{18} + 12\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} - 48\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4v_1\omega_5\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8^2cs^2\omega_5\omega_{18} +$$
$$12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1^2\omega_5\omega_{18} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1^2\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{15} +$$
$$24\omega_6^2\omega_7^2\omega_{20}\omega_{17}cs^4v_1\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2v_3^2\omega_8^2cs^2v_1\omega_5\omega_{18} + 6\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18} +$$
$$6\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8cs^2\omega_5\omega_{18}{}_{15} - 12\omega_6\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2v_3\omega_8^2v_1^2\omega_5\omega_{18}{}_{15} +$$
$$6\omega_6^2\omega_7^2\omega_{17}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5\omega_{18} - 24\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5^2\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2v_2^2\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}{}_{15} +$$
$$12\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - 12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8cs^2\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8v_1^2\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2v_2^2\omega_{17}\omega_8cs^2v_1\omega_5\omega_{15} -$$
$$6\omega_6^2\omega_7^2\omega_{17}v_3\omega_8^2cs^2v_1\omega_5\omega_{15} + 6\omega_6\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{15} + 6\omega_6\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} + 6\omega_6\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} +$$
$$48\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4v_1\omega_5\omega_{18}{}_{15} - 12\omega_6^2\omega_7\omega_{17}v_3\omega_8cs^2v_1^2\omega_5^2\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2\omega_{20}v_3\omega_8^2cs^2v_1^2\omega_5^2\omega_{18} + 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2v_1^2\omega_5^2\omega_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{20}v_3^2\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} + 24\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4v_1\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8cs^2\omega_5\omega_{18}{}_{15} - 3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{17}v_3\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5\omega_{18}{}_{15} - 12\omega_6^2v_2^2\omega_{17}\omega_8cs^2v_1\omega_5\omega_{15} - 6\omega_6\omega_7^2\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6\omega_7^2\omega_{20}v_2v_3\omega_8cs^2\omega_5^2\omega_{18}{}_{15} + 12\omega_6\omega_7^2v_2^2\omega_{17}\omega_8cs^2v_1\omega_5\omega_{15} + 12\omega_6\omega_7^2v_3\omega_8cs^2v_1\omega_5^2\omega_{15} - 12\omega_6\omega_{17}v_3^2\omega_8^2cs^2v_1\omega_5\omega_{15} -$$
$$3\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_7^2v_2^2\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} + 12\omega_6\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1^2\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_8cs^2v_1\omega_5\omega_{18} -$$
$$3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18} + 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18} - 6\omega_6^2\omega_7^2\omega_{17}v_3\omega_8^2cs^2v_1^2\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5\omega_{18}{}_{15} -$$
$$12\omega_6^2\omega_7^2\omega_{20}v_3\omega_8cs^2v_1^2\omega_5\omega_{18}{}_{15} + 6\omega_6\omega_7^2\omega_{20}v_2^2v_3\omega_8cs^2\omega_5^2\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5\omega_{18}{}_{15} +$$
$$3\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18} + 24\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4v_1\omega_5^2\omega_{18}{}_{15} - 12\omega_6^2\omega_7^2\omega_{20}v_2^2\omega_8cs^2v_1\omega_5\omega_{18}{}_{15} -$$
$$6\omega_6^2\omega_7^2v_2^2\omega_{17}\omega_8^2v_1^2\omega_5^2\omega_{18}{}_{15} + 12\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8v_1\omega_5\omega_{18}{}_{15} + 6\omega_6^2\omega_7^2v_2^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 6\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15}$$

$C_{51} = 4\omega_6^2\omega_{20}v_3\omega_8^2cs^2v_1\omega_5^3\omega_{18}{}_{15} + \omega_6^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{18} - 8\omega_6^3\omega_{20}v_2^2v_3\omega_8v_1\omega_5^2\omega_{18}{}_{15} - 4\omega_6^3v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{18}{}_{15} +$
$4\omega_6^2\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}{}_{15} + 8\omega_6\omega_{20}\omega_{17}v_3^2\omega_8cs^2\omega_5^3\omega_{18}{}_{15} + 4\omega_6^3v_2^2\omega_{17}v_3\omega_8\omega_5^2\omega_{18}{}_{15} + 4\omega_6\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{18}{}_{15} - 2\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3\omega_{18} -$
$4\omega_6^3\omega_{20}\omega_{17}\omega_8cs^4\omega_5^3\omega_{18}{}_{15} - 8\omega_6^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5^3\omega_{18}{}_{15} - 4\omega_6^3\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}{}_{15} + 8\omega_6^3\omega_{20}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}{}_{15} +$
$4\omega_6^3\omega_{20}v_2^2v_3\omega_8^2\omega_5^2\omega_{18} + 4\omega_6^3v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 2\omega_6^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}{}_{15} - 4\omega_6^3\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^3\omega_{18}{}_{15} +$
$2\omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{18}{}_{15} - 4\omega_6^3\omega_{20}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}{}_{15} - 2\omega_6^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^2\omega_{15} + 4\omega_6^3\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^3\omega_{15} -$
$4\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{18}{}_{15} + 4\omega_6^3\omega_{20}v_2^2v_3\omega_8\omega_5^3\omega_{18}{}_{15} - 16\omega_6^2\omega_{20}\omega_{17}v_3^2\omega_8cs^2\omega_5^3\omega_{18}{}_{15} + 2\omega_6^3\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18} -$
$12\omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{18}{}_{15} + 4\omega_6^2\omega_{20}v_2^2\omega_{17}cs^2\omega_5^3\omega_{18}{}_{15} + 2\omega_6^3v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{18}{}_{15} - 12\omega_6^3\omega_{20}\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}{}_{15} +$
$4\omega_6^3\omega_{20}\omega_8^2cs^4\omega_5^2\omega_{18}{}_{15} - 16\omega_6^3\omega_{20}v_2^2v_3\omega_8v_1\omega_5^2\omega_{18}{}_{15} - 2\omega_6^2\omega_{20}v_3\omega_8^2cs^2\omega_5^3\omega_{18}{}_{15} + 8\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{18}{}_{15} +$
$\omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{18} + 8\omega_6^3\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^2\omega_{18}{}_{15} + 8\omega_6^3v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{18}{}_{15} + 4\omega_6^3\omega_{20}v_2^2v_3\omega_8v_1\omega_5^3\omega_{18} - 4\omega_6^3\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}{}_{15} +$
$4\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2\omega_{15} + 6\omega_6\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{18}{}_{15} + 4\omega_6^2\omega_{20}v_2^2v_3\omega_8v_1\omega_5^3\omega_{18}{}_{15} + 4\omega_6^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{15} + 4\omega_6^2\omega_{20}\omega_8cs^2\omega_5^3\omega_{18}{}_{15} -$
$2\omega_6^3\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5\omega_{18}{}_{15} - 4\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{18}{}_{15} + 2\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{18}{}_{15} + \omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{15} +$
$2\omega_6^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^3\omega_{18}{}_{15} + 4\omega_6^3\omega_{20}v_2^2v_3\omega_8\omega_5^3\omega_{18}{}_{15} - 2\omega_6^3\omega_{20}v_2^2v_3\omega_8^2\omega_5^3\omega_{18} - 4\omega_6^3v_2^2\omega_{17}\omega_8cs^2\omega_5^2\omega_{18}{}_{15} + 4\omega_6^3\omega_{20}v_2^2\omega_{17}cs^2\omega_5^2\omega_{18}{}_{15} -$
$4\omega_6^2\omega_{17}\omega_8^2cs^4\omega_5^3\omega_{15} + 4\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3\omega_{18} - 4\omega_6^3\omega_{17}\omega_8cs^4\omega_5^3\omega_{18}{}_{15} - 12\omega_6^3\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2\omega_{18}{}_{15} - 2\omega_6^3\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2\omega_{15} -$
$2\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{18} - 8\omega_6^3\omega_{20}v_2^2v_3\omega_8v_1\omega_5^2\omega_{18} + 4\omega_6^2v_2^2\omega_{17}v_3\omega_8\omega_5^3\omega_{18}{}_{15} + 2\omega_6^3\omega_{17}\omega_8cs^4\omega_5^2\omega_{18}{}_{15} - 8\omega_6^3\omega_{20}v_3\omega_8cs^2v_1\omega_5^3\omega_{18}{}_{15} +$
$2\omega_6^3\omega_{20}v_2^2v_3\omega_8^2\omega_5^3\omega_{18}{}_{15} + 8\omega_6^3\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}{}_{15} + \omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^3\omega_{15} + 4\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5^3\omega_{18}{}_{15} -$
$8\omega_6^3\omega_{20}v_3\omega_8cs^2v_1\omega_5^3\omega_{18}{}_{15} - 4\omega_6^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 8\omega_6^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^2\omega_{18}{}_{15} + 8\omega_6^3\omega_{17}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}{}_{15} -$
$2\omega_6^2\omega_{20}v_3^2\omega_8^2cs^2\omega_5\omega_{18}{}_{15} - 2\omega_6\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3\omega_{18}{}_{15} + 4\omega_6^3\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^3\omega_{18} - 2\omega_6\omega_{20}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18} + 4\omega_6^3v_2^2\omega_8^2cs^2\omega_5^2\omega_{18} +$
$2\omega_6^3v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{18}{}_{15} - 4\omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}{}_{15} + 4\omega_6^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 4\omega_6^3\omega_{20}\omega_8cs^4\omega_5^2\omega_{18} - 8\omega_6^3v_2^2\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{18}{}_{15} -$
$2\omega_6^3v_2^2\omega_{17}v_3\omega_8^2\omega_5^3\omega_{15} - 4\omega_6^3\omega_{20}v_2^2v_3\omega_8v_1\omega_5\omega_{18}{}_{15} + 2\omega_6^3\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2\omega_{18}{}_{15} - 4\omega_6^2\omega_{17}\omega_8cs^4\omega_5^3\omega_{18}{}_{15} + 4\omega_6^3\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}{}_{15} -$
$8\omega_6\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}{}_{15} - 4\omega_6\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5^2\omega_{18}{}_{15} - 8\omega_6^2v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{18}{}_{15} - 2\omega_6^3v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{18}{}_{15} +$
$4\omega_6^2\omega_{20}\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}{}_{15} + 4\omega_6^2\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5^2\omega_{18}{}_{15} + 4\omega_6^3v_2^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{18}{}_{15} + 4\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5\omega_{18}{}_{15} -$
$2\omega_6^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{15} - 8\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{18}{}_{15} + 8\omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8cs^2\omega_5^3\omega_{18}{}_{15} + 8\omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5^3\omega_{18}{}_{15} -$

$$2\omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^2\omega_{15} - 4\omega_6^3\omega_{20}v_3^2\omega_8cs^2\omega_5^3\omega_{18}\omega_{15} + 8\omega_6^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^3\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} +$$
$$8\omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^2\omega_{20}v_3\omega_8^2cs^2v_1\omega_5^3\omega_{18} + 4\omega_6^2\omega_{20}\omega_{17}v_3^2cs^2\omega_5^3\omega_{18}\omega_{15} -$$
$$2\omega_6^3\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^3\omega_{18} + 2\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^2\omega_{18} + \omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18} -$$
$$2\omega_6^3v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{15} - 2\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{18} - \omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{15} + 2\omega_6^3\omega_{20}v_3\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{15} + 8\omega_6^2\omega_{17}v_3\omega_8\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_{15} +$$
$$8\omega_6^3\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_{15} - \omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^3v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^3\omega_{15} +$$
$$8\omega_6^3\omega_{20}v_2^2v_3\omega_8v_1\omega_5^3\omega_{18}\omega_{15} - 4\omega_6^2\omega_{20}v_3\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^3\omega_{20}\omega_{17}\omega_8cs^4\omega_5^3\omega_{18}\omega_{15} + 2\omega_6^3\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^3\omega_{18}\omega_{15} +$$
$$4\omega_6^2\omega_{17}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{15} - 2\omega_6^2\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^3\omega_{18}\omega_{15} + 8\omega_6^3v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{18}\omega_{15} - 2\omega_6^3\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{15} - 4\omega_6^3v_2^2\omega_{17}v_3\omega_8\omega_5^3\omega_{18}\omega_{15} +$$
$$4\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{15} - 8\omega_6^3\omega_{17}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + \omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^3\omega_{15} -$$
$$8\omega_6^3\omega_{17}v_3\omega_8\omega_8^2cs^2v_1\omega_5^3\omega_{15} - 8\omega_6^3\omega_{17}v_3\omega_8\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_{15} - 4\omega_6^2\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^3\omega_{20}\omega_{17}v_3^2cs^2\omega_5^2\omega_{18}\omega_{15} -$$
$$2\omega_6^3\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5^3\omega_{15} - 2\omega_6^3v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} - 8\omega_6^3v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 2\omega_6^2\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^2\omega_{20}\omega_{17}\omega_8cs^4\omega_5^3\omega_{18}\omega_{15} -$$
$$4\omega_6^3\omega_{20}v_2^2v_3\omega_8^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5^3\omega_{18}\omega_{15} + 6\omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} - 2\omega_6^3\omega_{17}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{15} -$$
$$4\omega_6^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{18}\omega_{15} + 8\omega_6^3\omega_{20}v_3\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_{15} - 8\omega_6^3\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5^3\omega_{18}\omega_{15} - 4\omega_6^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8\omega_5^2\omega_{18}\omega_{15} +$$
$$2\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{15} - 4\omega_6^2\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8cs^2\omega_5\omega_{18}\omega_{15} + 8\omega_6^3\omega_{20}v_2^2\omega_{17}\omega_8cs^2\omega_5\omega_{18}\omega_{15} +$$
$$4\omega_6^3\omega_{17}\omega_8cs^4\omega_5^3\omega_{18}\omega_{15} + 8\omega_6^2\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_8v_1\omega_5^3\omega_{18}\omega_{15} + 4\omega_6^2v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} - \omega_6^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8\omega_5^3\omega_{18}\omega_{15} - 2\omega_6^2\omega_{20}v_2^2\omega_{17}\omega_8^2cs^2\omega_5^3\omega_{18} +$$
$$4\omega_6^3\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{18} - 2\omega_6^2\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_5^3\omega_{18} - 4\omega_6^3\omega_{20}v_2^2\omega_{17}cs^2\omega_5^3\omega_{18}\omega_{15} - 4\omega_6^2v_2^2\omega_{17}v_3\omega_8^2\omega_8^3\omega_{18}\omega_{15} + 2\omega_6^3\omega_{17}\omega_8cs^4\omega_5^3\omega_{15} +$$
$$4\omega_6^3\omega_{20}\omega_{17}v_3\omega_8cs^2v_1\omega_5^3\omega_{18} - 8\omega_6^3\omega_{20}v_3\omega_8cs^2v_1\omega_5^3\omega_{18} + 4\omega_6^3v_2^2\omega_{17}\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^3\omega_{20}v_2^2v_3\omega_8\omega_5^3\omega_{18}\omega_{15} - 4\omega_6^3\omega_{20}\omega_{17}v_3^2\omega_8^2cs^2\omega_{18}\omega_{15}$$

$C_{52} = 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3^2\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} -$
$\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{18} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18} +$
$2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + \omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{18} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{15} -$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2\omega_5\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{18}\omega_{15} +$
$4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2cs^2\omega_5^2\omega_{18} +$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} +$
$\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}\omega_{15} -$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} + \omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2v_1^2\omega_5\omega_{18} -$
$2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} +$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} +$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} - 3\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} + \omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3^2\omega_8v_1\omega_5\omega_{18}\omega_{15} -$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8cs^2\omega_5\omega_{18}\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} -$
$4\omega_6^2\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_{15} +$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - \omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{15} +$
$4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} + 3\omega_6^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{15} -$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_3\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_3\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{15} - 8\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} -$
$\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2v_1\omega_5\omega_{18}\omega_{15} +$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + \omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{15} -$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} +$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} +$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8v_1^2\omega_5\omega_{18}\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} +$
$4\omega_6^2\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{18}\omega_{15} - \omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} +$
$2\omega_6^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 6\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} -$
$2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} -$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{18}\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} -$
$4\omega_6^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8v_1\omega_5\omega_{18}\omega_{15} +$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} -$
$4\omega_6^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5\omega_{18}\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} +$
$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8v_1\omega_5\omega_{18}\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} -$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2v_1^2\omega_5\omega_{18} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2cs^2\omega_5\omega_{18} -$
$10\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8v_1^2\omega_5\omega_{18}\omega_{15} -$
$\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} -$
$2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} -$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8^2v_1\omega_5\omega_{18} - 4\omega_6\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} +$
$\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8v_1^2\omega_5\omega_{18}\omega_{15} -$
$4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}v_3\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} +$
$2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2\omega_5\omega_{18} - \omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{18} +$
$4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{18} -$
$4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_3\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15}$

$C_{53} = 8\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} -$
$8\omega_6^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}v_2^2\omega_{11}\omega_8^2v_1^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} +$
$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_5\omega_{18}\omega_{15} + 8\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} -$
$4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_{18}\omega_{15} + 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{15} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} +$
$6\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} +$

$$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{15} + $$
$$4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - $$
$$4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{15} + 2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{15} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{15} - $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_2^2\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_{15} - $$
$$8\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 8\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} + $$
$$2\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_{15} - 8\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}\omega_{15} + $$
$$8\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} - $$
$$\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} + $$
$$4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} - $$
$$4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - $$
$$4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{15} - $$
$$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_{15} + 8\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} + $$
$$4\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} + 8\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}\omega_{15} + 8\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}\omega_{15} + $$
$$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18} + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}\omega_{15} - $$
$$8\omega_6\omega_{19}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 8\omega_6\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{15} - $$
$$8\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + 8\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{15} - $$
$$4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} - 8\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + $$
$$\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} + $$
$$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2v_1\omega_5\omega_{18} - 2\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}v_2^2\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} + $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3cs^2v_1\omega_5\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_{15} + $$
$$2\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} - $$
$$8\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_{15} + 2\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} - $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} + $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{15} - $$
$$\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} - 8\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} - 8\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + $$
$$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_{15} + $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}\omega_{15} - $$
$$8\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18} - $$
$$\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5^2\omega_{18} - 4\omega_6^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} + $$
$$4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3cs^2v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{15} + $$
$$4\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_5\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2v_1^2\omega_5\omega_{18} + $$
$$2\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_{15} + $$
$$\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8cs^2v_1^2\omega_5^2\omega_{15} - 4\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{15} - $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} + 8\omega_6\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} - $$
$$8\omega_6^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{15} - $$
$$8\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} - 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + $$
$$8\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5\omega_{18} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5^2\omega_{15} - 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + $$
$$4\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} - 8\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6^2\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5^2\omega_{15} + $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3cs^2v_1\omega_5^2\omega_{18}\omega_{15} + \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} - 20\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} - $$
$$2\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}\omega_{15} - 4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2v_1\omega_5\omega_{18}\omega_{15} - 16\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} - $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8cs^2v_1\omega_5^2\omega_{18} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2v_1^2\omega_5\omega_{18}\omega_{15} + 8\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8cs^2v_1\omega_5\omega_{18}\omega_{15} + $$
$$2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5^2\omega_{15} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5^2\omega_{18}\omega_{15} + $$
$$8\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + 8\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + $$
$$8\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}\omega_{15} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} + 4\omega_6\omega_{19}\omega_7^2v_2^2\omega_{17}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_{15} - $$
$$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8v_1^2\omega_5\omega_{18}\omega_{15} + 2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2v_1^2\omega_5\omega_{18}\omega_{15} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2v_1^2\omega_5^2\omega_{15} + $$
$$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8v_1^2\omega_5^2\omega_{18} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2cs^2\omega_5\omega_{18}$$

$C_{54} = 54\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}^2 + 12\omega_6^2\omega_{22}\omega_{11}v_1^2\omega_{18}^2\omega_9 + 12\omega_6^3\omega_{11}^2v_3^2v_1^2\omega_{18}^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2 - $
$12\omega_6^3\omega_{22}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} + 36\omega_6^3\omega_{22}\omega_{11}cs^4\omega_{18}^2\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_9 - $
$12\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 + 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 - 36\omega_6^2\omega_{22}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 - 72\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - $
$12\omega_6^3\omega_{22}\omega_{11}v_3^2v_1^2\omega_{18}^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_9 - 72\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18} - 12\omega_6^3\omega_{11}^2v_1^2\omega_{18}^2 - 36\omega_6^2\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 + $
$6\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2 - 6\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2\omega_9 - 12\omega_6^3\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 + 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 - $
$6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}^2\omega_9 - 36\omega_6^3\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}^2 - $
$12\omega_6^2\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{22}\omega_{11}v_1^4\omega_{18}^2 - 36\omega_6^3\omega_{11}^2cs^2v_1^2\omega_{18}^2\omega_9 + 24\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}^2\omega_9 - $
$36\omega_6^2\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 - 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 - 18\omega_6^3\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18} - 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9 + $
$18\omega_6^3\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - 3\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 + 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{11}cs^2\omega_{18}^2 - 12\omega_6^2\omega_{11}^2v_1^2\omega_{18}^2\omega_9 - $
$12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9 + 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 + 3\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{11}v_3^2cs^2\omega_{18}^2 - 12\omega_6^2\omega_{22}\omega_{11}cs^2\omega_{18}^2\omega_9 + $
$6\omega_6^3\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^4\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}^2\omega_9 + 156\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 - 45\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - $
$6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}^2 - 6\omega_6^3\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{11}^2cs^2\omega_{18}^2 + 6\omega_6^3\omega_{22}\omega_{13}v_1^2\omega_{18}^2\omega_9 - 108\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 + $
$12\omega_6^3\omega_{22}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2\omega_9 - 24\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 - 18\omega_6^3\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 + $
$12\omega_6^3\omega_{11}^2cs^2\omega_{18}\omega_9 + 9\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2 + 12\omega_6^3\omega_{11}^2v_3^2cs^2\omega_{18}^2 + 36\omega_6^3\omega_{22}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}v_1^2v_1^2\omega_{18}^2 - $
$12\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 - 42\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 + 12\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{11}^2v_3^2v_1^2\omega_{18}^2\omega_9 + 48\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 - $
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_9 + 12\omega_6^3\omega_{22}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9 + 27\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_9 + $
$12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_9 + 18\omega_6^3\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 36\omega_6^3\omega_{11}^2cs^2v_1^2\omega_{18}^2\omega_9 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 + 144\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 + $

$6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_9 - 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 + 12\omega_6^3\omega_{11}^2v_1^2\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_9 +$
$12\omega_6^2\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 + 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 + 12\omega_6^2\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2\omega_9 - 60\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 - 12\omega_6^2\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 -$
$18\omega_6^3\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 + \omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}^2 - 36\omega_6^2\omega_{22}\omega_{11}cs^4\omega_{18}^2\omega_9 -$
$18\omega_6^3\omega_{13}\omega_{11}^2cs^4\omega_{18}^2 + 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9 - 12\omega_6^2\omega_{11}^2cs^2\omega_{18}^2\omega_9 - 18\omega_6^3\omega_{22}\omega_{13}cs^2v_1^2\omega_{18}^2\omega_9 -$
$6\omega_6^3\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 - 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}^2\omega_9 - 12\omega_6^2\omega_{22}\omega_{11}v_1^2\omega_{18}^2\omega_9 +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} + 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 - \omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^4\omega_{18} - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 -$
$6\omega_6^3\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}^2 + 36\omega_6^2\omega_{22}\omega_{13}cs^2v_1^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2 - 96\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 72\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}^2\omega_9 -$
$9\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 - 12\omega_6^3\omega_{11}^2v_3^2v_1^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 + 72\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}^2 + 6\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 -$
$36\omega_6\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2\omega_9 + 36\omega_6^3\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2 - 48\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^4\omega_{18}\omega_9 + 36\omega_6^2\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 -$
$12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 - 36\omega_6^3\omega_{22}\omega_{11}cs^2v_1^2\omega_{18}^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 - 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} + 12\omega_6^3\omega_{13}\omega_{11}\omega_{11}v_3^2cs^2\omega_{18}\omega_9 -$
$12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^4\omega_9 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}v_1^4\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_9 -$
$24\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 - 36\omega_6^3\omega_{22}\omega_{11}cs^4\omega_{18}^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 - 12\omega_6^2\omega_{22}\omega_{11}v_3^2v_1^2\omega_{18}^2\omega_9 + 36\omega_6\omega_{11}^2cs^4\omega_{18}^2\omega_9 +$
$3\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_9 + 36\omega_6^3\omega_{11}^2cs^4\omega_{18} + 36\omega_6^3\omega_{11}^2cs^2v_1^2\omega_{18}$

$C_{55} = -42\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 - 12\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 + 24\omega_6^2\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9^2 + 24\omega_6^2\omega_{22}\omega_{11}^2cs^2\omega_{18}^2\omega_9^2 - 24\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^2 +$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 + 24\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_9^2 - 24\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 +$
$12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2v_3^2\omega_{18}\omega_9^2 - 72\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9 - 12\omega_6\omega_{22}\omega_{13}^2\omega_{18}\omega_9^2 +$
$24\omega_6^2\omega_{13}\omega_{11}^2v_3^2\omega_{18}\omega_9^2 - 24\omega_6^2\omega_{13}\omega_{11}^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2\omega_9^2 - 24\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_9^2 -$
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9^2 + 24\omega_6^3\omega_{13}\omega_{11}^2v_3^2\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 - 24\omega_6^2\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2\omega_9^2 -$
$24\omega_6^3\omega_{13}\omega_{11}^2v_3^2\omega_{18}^2\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{13}^2v_3^2\omega_{18}\omega_9^2 - 36\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2v_3^2\omega_{18}\omega_9^2 -$
$12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 - 24\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 + 156\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9 - 18\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{18}^2\omega_9^2 - 4\omega_6^3\omega_{22}^2\omega_{13}\omega_{11}\omega_{18}\omega_9^2 +$
$72\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2 -$
$12\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_{18}^2\omega_9^2 + 24\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_9^2 +$
$90\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9 - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_9^2 + 66\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 -$
$6\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 + 6\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^2 - 24\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 24\omega_6^2\omega_{22}^2\omega_{13}\omega_{11}\omega_{18}\omega_9 -$
$12\omega_6^3\omega_{13}^2v_3^2\omega_{18}\omega_9^2 + 4\omega_6^3\omega_{22}^2\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 - 24\omega_6^2\omega_{22}^2\omega_{13}cs^2\omega_{18}^2 - 66\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_9^2 + 12\omega_6^2\omega_{22}^2\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9 +$
$36\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}^2v_3^2\omega_{18}\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 - 132\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^2 - \omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2 -$
$12\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 - 36\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9^2 - 84\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 + 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2 - 24\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9^2 -$
$24\omega_6^3\omega_{22}\omega_{11}^2cs^2\omega_{18}^2\omega_9^2 - 24\omega_6^2\omega_{13}^2\omega_{11}v_3^2\omega_{18}^2\omega_9^2 + 60\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 24\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 +$
$24\omega_6^2\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 - 96\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 24\omega_6^2\omega_{22}\omega_{11}^2cs^2\omega_9^2 - 48\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_9^2 +$
$18\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 + 48\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}\omega_9 + 24\omega_6^2\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9 + 36\omega_6^2\omega_{22}^2\omega_{13}cs^2\omega_{18}^2\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}\omega_9 +$
$84\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}\omega_9 - 18\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 + 24\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_{18}^2\omega_9^2 + 3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 12\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 -$
$24\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 - 24\omega_6^3\omega_{13}^2\omega_{11}^2\omega_{18}\omega_9 - 18\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}^2\omega_9^2 - 66\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_{18}^2\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}^2\omega_{18}^2\omega_9^2$

$C_{56} = 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}^2 + 12\omega_6\omega_{22}\omega_{11}v_1^4\omega_{18}^2\omega_9 + 36\omega_6^3\omega_{11}^2v_3^2v_1^2\omega_{18}^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^4\omega_{18}^2 -$
$36\omega_6^2\omega_{22}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 + 60\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^4\omega_{18} + 12\omega_6^3\omega_{22}\omega_{11}cs^4\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_9 +$
$24\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 - 12\omega_6^2\omega_{22}\omega_{11}cs^2v_1^2\omega_{18}^2\omega_9 - 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - 36\omega_6^3\omega_{22}\omega_{11}v_3^2v_1^2\omega_{18} -$
$24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18} - 12\omega_6^3\omega_{11}^2v_1^4\omega_{18} - 12\omega_6^2\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2 -$
$6\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2\omega_9 - 36\omega_6^3\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 + 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9 + 36\omega_6^2\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}^2\omega_9 -$
$12\omega_6^3\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 72\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18} - 36\omega_6^3\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 + 36\omega_6^3\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{22}\omega_{11}v_1^4\omega_{18} -$
$12\omega_6^3\omega_{11}^2cs^2v_1^2\omega_{18}^2\omega_9 + 72\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18} - 12\omega_6^3\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}^2 - 6\omega_6^3\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18} -$
$18\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{11}^2cs^2v_1^2\omega_{18}^2\omega_9 + 30\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18} +$
$12\omega_6^3\omega_{22}\omega_{11}cs^2\omega_{18}^2 - 12\omega_6^3\omega_{11}^2v_1^2\omega_{18}^2\omega_9 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9 + 54\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 -$
$36\omega_6^3\omega_{22}\omega_{11}v_3^2cs^2\omega_{18}^2 - 12\omega_6^3\omega_{22}\omega_{11}cs^2\omega_{18}^2\omega_9 + 18\omega_6^3\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_9 - 18\omega_6^3\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 +$
$18\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}^2 - 18\omega_6^3\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}^2\omega_9 - 12\omega_6^3\omega_{11}^2cs^2\omega_{18}^2 +$
$6\omega_6^3\omega_{22}\omega_{13}v_1^2\omega_{18}^2\omega_9 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}^2\omega_9 + 36\omega_6^2\omega_{22}\omega_{13}v_3^2cs^2\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 - 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2\omega_9 -$
$24\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 + 12\omega_6^3\omega_{11}^2cs^2\omega_{18}^2\omega_9 + 27\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2 +$
$36\omega_6^3\omega_{11}^2v_3^2cs^2\omega_{18}^2 + 12\omega_6^2\omega_{22}\omega_{11}cs^2v_1^2\omega_{18}^2\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2 - 12\omega_6^2\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 - 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 +$
$12\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 + 36\omega_6^3\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 + 144\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_9 +$
$36\omega_6^3\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 + 9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{11}^2cs^2v_1^2\omega_{18}^2\omega_9 +$
$12\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2\omega_{18}^2\omega_9 + 48\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 + 12\omega_6^3\omega_{11}^2v_1^2\omega_{18}^2\omega_9 -$
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_9 + 36\omega_6^2\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 - 102\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 - 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2\omega_9 -$
$12\omega_6^2\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - 45\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18} - 12\omega_6^2\omega_{22}\omega_{11}cs^4\omega_{18}^2\omega_9 -$
$6\omega_6^3\omega_{13}\omega_{11}^2cs^4\omega_{18}^2 + 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 - 108\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}^2\omega_9 - 12\omega_6^2\omega_{11}^2cs^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}cs^2v_1^2\omega_{18}^2\omega_9 -$
$18\omega_6^3\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 - 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 + 18\omega_6^3\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 - 12\omega_6^2\omega_{22}\omega_{11}v_1^2\omega_{18}^2\omega_9 +$
$36\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} + 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}\omega_9 - 18\omega_6^2\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} +$
$12\omega_6^2\omega_{22}\omega_{13}cs^2v_1^2\omega_{18}^2\omega_9 - 18\omega_6^3\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2 - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 + 24\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}^2\omega_9 - 9\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2\omega_9 -$
$36\omega_6^3\omega_{11}^2v_3^2v_1^2\omega_{18}^2\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 + 24\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2v_1^2\omega_{18}^2 + 6\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9 - 12\omega_6\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2\omega_9 +$
$12\omega_6^3\omega_{13}\omega_{11}^2cs^2v_1^2\omega_{18}\omega_9 - 48\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_{18}^2 - 48\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^4\omega_{18}\omega_9 + 12\omega_6^2\omega_{13}\omega_{11}^2cs^4\omega_{18}\omega_9 -$
$36\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2\omega_{18}^2\omega_9 - 12\omega_6^3\omega_{22}\omega_{11}cs^2v_1^2\omega_{18}^2 + \omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}^2\omega_9 - 72\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} + 36\omega_6^2\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}\omega_9 -$
$36\omega_6^2\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^4\omega_9 + 12\omega_6^2\omega_{22}\omega_{11}cs^2\omega_{18}^2\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}v_1^4\omega_{18}^2\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_9 -$
$72\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{22}\omega_{11}cs^4\omega_{18}^2 + 60\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_{18}^2\omega_9 - 36\omega_6^2\omega_{22}\omega_{11}v_3^2v_1^2\omega_{18}^2\omega_9 + 12\omega_6^2\omega_{11}^2cs^4\omega_{18}^2\omega_9 -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4\omega_{18}^2\omega_9 - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2\omega_{18}\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2cs^2\omega_9 + 12\omega_6^3\omega_{11}^2cs^4\omega_{18}^2 + 12\omega_6^3\omega_{11}^2cs^2v_1^2\omega_{18}$

$$C_{57} = 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18}^2 - 2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5\omega_{18}^2 -$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_{18}^2 + 2\omega_6^2\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_{18} - 2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_{18}^2 -$$
$$4\omega_6\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{19}\omega_7\omega_{11}^2 cs^2\omega_{18}^2 - 24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}^2 + 4\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 -$$
$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_{18} + 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} - 12\omega_{19}\omega_7\omega_{20}\omega_{11}^2 cs^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2\omega_{18}^2 -$$
$$2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_8\omega_{18}^2 + 6\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_{18}^2 + 4\omega_6\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 + 9\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}^2 +$$
$$4\omega_6\omega_{19}\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5\omega_{18}^2 + 4\omega_6\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} -$$
$$4\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} + 12\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} - 12\omega_6^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5\omega_{18}^2 +$$
$$12\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} + 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} +$$
$$2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_5\omega_{18}^2 + 24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_{18}^2 -$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} - 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 + 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5\omega_{18}^2 + 12\omega_6\omega_{19}\omega_7\omega_{11}^2 cs^2\omega_5\omega_{18}^2 +$$
$$12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2\omega_5\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18}^2 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18} +$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}v_3^2\omega_8\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18}^2 + 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_{18}^2 + 2\omega_6^2\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_{18} + 4\omega_6\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_5\omega_{18}^2 +$$
$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5\omega_{18}^2 + 4\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 - 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} -$$
$$4\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_{18}^2 + 2\omega_6^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} + 3\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_{18} + 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 -$$
$$4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 - 12\omega_6^2\omega_{19}\omega_7\omega_{11}^2 cs^2\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} +$$
$$4\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 3\omega_6^2\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} + 6\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} - 4\omega_6\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_{18} +$$
$$4\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5 - 12\omega_6^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18}^2 + 4\omega_6\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 +$$
$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2\omega_{18}^2 - 9\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 - 12\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}^2 -$$
$$6\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 + 6\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{18}^2 -$$
$$3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_{18}^2 + 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18}^2 + 4\omega_6\omega_{19}\omega_7\omega_{20}v_3^2\omega_8\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 -$$
$$12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2\omega_5\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 - 4\omega_6^2\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_{18}^2$$

$$C_{58} =$$
$$6\omega_6\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18}^2 - 2\omega_6^2\omega_{20}\omega_8 cs^2\omega_5^2 - 2\omega_6^3\omega_{20} cs^2\omega_5^2\omega_{18}^2 + 2\omega_6^2\omega_{20}\omega_8\omega_5\omega_{18} - \omega_6^3\omega_{20}v_3^2\omega_8^2\omega_5\omega_{18} + 7\omega_6^2\omega_{20}\omega_8 cs^2\omega_5\omega_{18} + 2\omega_6^2\omega_8 cs^2\omega_5\omega_{18} -$$
$$\omega_6^2\omega_{20}v_3^2\omega_8\omega_5\omega_{18} - 2\omega_6^2\omega_8\omega_5^2\omega_{18} - 2\omega_6\omega_8 cs^2\omega_5^2\omega_{18} + \omega_6^3\omega_{20}\omega_8\omega_5\omega_{18} + 2\omega_6^2 v_3^2\omega_8^2\omega_5\omega_{18} + \omega_6^2\omega_{20}v_3^2\omega_8\omega_5\omega_{18} - 7\omega_6^3\omega_{20}\omega_8 cs^2\omega_5\omega_{18} + 2\omega_6^2\omega_{20}\omega_8\omega_5^2 -$$
$$\omega_6^3\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18} - 2\omega_6^2\omega_{20}v_3^2\omega_8^2\omega_5\omega_{18} + \omega_6^3\omega_{20}v_3^2\omega_8^2\omega_5 - 2\omega_6^2 v_3^2\omega_8^2\omega_5^2\omega_{18} - \omega_6^3\omega_{20}v_3^2\omega_8\omega_5\omega_{18} - 2\omega_6^3 v_3^2\omega_8\omega_5^2\omega_{18} - \omega_6^3\omega_8^2 cs^2\omega_5\omega_{18} -$$
$$8\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18} + \omega_6^2\omega_{20}\omega_8\omega_5^2\omega_{18} - \omega_6^3\omega_{20}\omega_8^2\omega_5^2 + \omega_6^3\omega_8^2\omega_5\omega_{18} - 11\omega_6^2\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18} - 2\omega_6^2\omega_8^2 cs^2\omega_5^2\omega_{18} - 2\omega_6^2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18} +$$
$$\omega_6^3\omega_{20}\omega_8\omega_5\omega_{18} + 2\omega_6^3\omega_8^2\omega_5^2\omega_{18} - \omega_6^3 v_3^2\omega_8^2\omega_5\omega_{18} - \omega_6^2\omega_{20}\omega_8^2\omega_5\omega_{18} - 6\omega_6\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18} + 4\omega_6^2\omega_{20}\omega_8 cs^2\omega_5\omega_{18} + 2\omega_6^2 v_3^2\omega_8\omega_5^2\omega_{18} +$$
$$4\omega_6^2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18} - \omega_6^3\omega_{20}\omega_8\omega_5^2\omega_{18} - 2\omega_6^3\omega_8\omega_5\omega_{18} + \omega_6^2\omega_{20}\omega_8^2\omega_5^2\omega_{18} + 13\omega_6\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18} + \omega_6^3 v_3^2\omega_8^2\omega_5^2\omega_{18} - 2\omega_6^2\omega_{20}v_3^2\omega_8^2\omega_5 -$$
$$2\omega_6^2\omega_8^2\omega_5^2\omega_{18} + 4\omega_6^2\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} - \omega_6\omega_{20}\omega_8^2\omega_5^2\omega_{18} + \omega_6^3\omega_{20}v_3^2\omega_8\omega_5^2\omega_{18} + \omega_6^3\omega_8^2 cs^2\omega_5^2\omega_{18} + \omega\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} + 2\omega_6^3 v_3^2\omega_8\omega_5\omega_{18} -$$
$$\omega_6^3 v_3^2\omega_8^2\omega_5\omega_{18} - \omega_6^3\omega_8^2 cs^2\omega_5^2\omega_{18} - 2\omega_6\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} - 2\omega_6^2\omega_{20}\omega_8 cs^2\omega_{18}^2 + 2\omega_6^3\omega_8 cs^2\omega_5\omega_{18} + \omega_6^3\omega_8^2\omega_5\omega_{18} - \omega_6^2\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} + 2\omega_6^2\omega_8^2\omega_5\omega_{18}^2 +$$
$$5\omega_6^3\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18} + 2\omega_6^2\omega_{20} cs^2\omega_5^2\omega_{18} + \omega_6^3\omega_{20}\omega_8 cs^2\omega_5 - \omega_6^3\omega_{20}\omega_8\omega_5\omega_{18} + 2\omega_6\omega_{20}\omega_8^2\omega_5^2\omega_{18} + 2\omega_6^3\omega_{20}\omega_8 cs^2\omega_{18}^2 + \omega_6^3\omega_{20}\omega_8 cs^2\omega_5\omega_{18} -$$
$$2\omega_6\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18} - 4\omega_6^2\omega_{20}\omega_8^2\omega_5^2\omega_{18} - \omega_6^3 v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{20} cs^2\omega_5\omega_{18} + 2\omega_6^2\omega_8 cs^2\omega_5^2\omega_{18} + \omega_6^3\omega_{20}v_3^2\omega_8^2\omega_5\omega_{18} - 5\omega_6^2\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18}$$

$$C_{59} = -24\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2\omega_{18}^2 + 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18}^2 - 54\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18}^2 - 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_{18}^2 -$$
$$12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2\omega_{18} - 12\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} - 12\omega_6\omega_{19}\omega_7^2\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18} + 6\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} -$$
$$12\omega_6\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5^2\omega_{18} - 18\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} - 12\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18} - 12\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18}^2 +$$
$$12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2 + 24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2\omega_{18} - 24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2\omega_{18}^2 + 30\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18}^2 -$$
$$12\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18} - 6\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 18\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18} +$$
$$6\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 v_3^2\omega_8^2\omega_5 - 36\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 12\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8^2\omega_5\omega_{18} -$$
$$12\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5\omega_{18} + 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{18} - 9\omega_6\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 6\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18} - 6\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18} +$$
$$3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5^2\omega_{18} + 12\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2 cs^2\omega_5^2\omega_{18} - 6\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2 cs^2\omega_5\omega_{18}^2 +$$
$$12\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 54\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18}^2 + 6\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{18}^2 - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} -$$
$$12\omega_6^2\omega_{19}\omega_7^2\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18} + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 9\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} + 6\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18} - 12\omega_6^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{18} - 24\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5\omega_{18} - 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 cs^2\omega_5^2\omega_{18} + 12\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} +$$
$$6\omega_6^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} - 36\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} + 6\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 24\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18} -$$
$$6\omega_6^2\omega_7\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} - 6\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5^2\omega_{18} + 12\omega_6\omega_{19}\omega_7^2\omega_{11}v_3^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18} +$$
$$12\omega_6^2\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5^2\omega_{18} + 6\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5\omega_{18} - 18\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5\omega_{18} +$$
$$36\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18} - 36\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 cs^2\omega_5\omega_{18} + 24\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18}^2 +$$
$$6\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2 v_3^2\omega_8^2\omega_5^2\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8^2\omega_5^2\omega_{18} + 42\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} + 12\omega_6\omega_{19}\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} +$$
$$12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} - 54\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{18} + 6\omega_6^2\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} -$$
$$12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5^2 + 18\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2 + 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} +$$
$$6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}\omega_7^2\omega_{11}v_3^2\omega_8\omega_5\omega_{18} - 12\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} -$$
$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} + 6\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18} -$$
$$6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18} - 12\omega_6\omega_{19}\omega_7^2\omega_{11}v_3^2\omega_8\omega_5\omega_{18} - 12\omega_6\omega_{19}\omega_7\omega_{11}^2 v_3^2\omega_8\omega_5\omega_{18} -$$
$$9\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2\omega_{18} + 18\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 v_3^2\omega_8^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 cs^2\omega_5\omega_{18} +$$
$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18} - 42\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18} - 6\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} + 36\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18} +$$
$$9\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 18\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} + 6\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5\omega_{18} + 12\omega_6^2\omega_7\omega_{20}\omega_{11}^2 v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18} +$$
$$12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18} + 12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 cs^2\omega_5^2\omega_{18} + 12\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_6^2\omega_7\omega_{11}^2 v_3^2\omega_8\omega_5^2\omega_{18} +$$
$$6\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^2\omega_{18} + 54\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} - 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} -$$
$$6\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} + 12\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5^2\omega_{18} + 12\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5^2\omega_{18} + 12\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}$$

$$C_{60} = 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5\omega_{18}^2 - 2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5\omega_{18}^2 -$$

$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_{18}^2 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} - 2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 - 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 -$$
$$12\omega_6\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7\omega_{11}^2cs^2\omega_{18}^2 - 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2 + 12\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 -$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_{18} + 24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} - 4\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}^2 -$$
$$6\omega_6^2\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_8\omega_{18}^2 + 2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_{18}^2 + 12\omega_6\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 + 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2 +$$
$$12\omega_6\omega_{19}\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5\omega_{18}^2 + 12\omega_6\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18}^2 -$$
$$4\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} + 4\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5\omega_{18}^2 +$$
$$4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8cs^2\omega_5\omega_{18} + 9\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 + 4\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 +$$
$$2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 - 12\omega_6^2\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_5\omega_{18}^2 + 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}^2 -$$
$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5 - 12\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} - 24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} + 4\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2 +$$
$$4\omega_6\omega_{19}\omega_7\omega_{11}^2cs^2\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18} +$$
$$12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}v_3^2\omega_8\omega_5\omega_{18}^2 + 12\omega_6^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} + 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8cs^2\omega_{18}^2 + 6\omega_6^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} + 12\omega_6\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_5\omega_{18} +$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5\omega_{18}^2 + 4\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 + 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_5\omega_{18}^2 + 12\omega_6^2\omega_{19}\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 - 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} -$$
$$4\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_{18}^2 + 6\omega_6^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 + 3\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 - 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} + 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 -$$
$$4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_5\omega_{18}^2 - 12\omega_6^2\omega_{19}\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_7\omega_{11}^2cs^2\omega_5\omega_{18}^2 - 6\omega_6^2\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} +$$
$$4\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 9\omega_6^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2 - 12\omega_6\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_{18} +$$
$$4\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5\omega_{18}^2 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5 - 4\omega_6\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2 + 4\omega_6\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 +$$
$$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}^2 - 3\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2 + 6\omega_6^2\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2 -$$
$$2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8cs^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8cs^2\omega_{18}^2 + 2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5 + 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{18}^2 -$$
$$3\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 + 12\omega_6^2\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_{18}^2 + 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18}^2 + 12\omega_6\omega_{19}\omega_7\omega_{20}v_3^2\omega_8\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 -$$
$$4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}cs^2\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}cs^2\omega_5\omega_{18}^2 - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 - 12\omega_6^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18}^2$$

$C_{61} = -432\omega_6\omega_{11}v_3^2cs^2\omega_{18}^2 - 36\omega_6^2\omega_{11}v_3^2\omega_{18}^2 - 216\omega_{11}^2v_3^2cs^2\omega_{18} - 24\omega_{11}^2cs^4\omega_{18} - 24\omega_6\omega_{11}^2v_3^4 - 24\omega_{11}cs^2\omega_{18}^2 - 12\omega_6^2\omega_{11}^2v_3^2 + 24\omega_6cs^4\omega_{18}^2 -$
$30\omega_6^2\omega_{11}^2v_3^4\omega_{18} + 72\omega_6^2\omega_{11}^2v_3^2cs^2 - 96\omega_6\omega_{11}^2v_3^2\omega_{18} - 36\omega_6^2v_3^4\omega_{18}^2 - 144\omega_6^2v_3^2cs^2\omega_{18}^2 + \omega_6^2\omega_{11}^2cs^2\omega_{18}^2 + 150\omega_6^2\omega_{11}v_3^2cs^2\omega_{18}^2 - 96\omega_6\omega_{11}v_3^4\omega_{18}^2 +$
$72\omega_6^2\omega_{11}v_3^2cs^2\omega_{18}^2 + 12\omega_6^2\omega_{11}^2cs^2\omega_{18} - 72\omega_6v_3^4\omega_{18}^2 + 48\omega_{11}v_3^4\omega_{18}^2 - 48\omega_6\omega_{11}v_3^4\omega_{18} + 48\omega_{11}^2v_3^4\omega_{18} + 14\omega_6^2\omega_{11}cs^4\omega_{18}^2 + 48\omega_6\omega_{11}cs^2\omega_{18}^2 -$
$3\omega_6^2\omega_{11}^2v_3^4\omega_{18} - 12\omega_6^2\omega_{11}^2cs^2 - 24\omega_6\omega_{11}^2cs^4 - 24\omega_6^2\omega_{11}^2v_3^2\omega_{18} - 144\omega_6\omega_{11}v_3^2cs^2\omega_{18} + 12\omega_6^2cs^2\omega_{18}^2 + 48\omega_6\omega_{11}^2cs^4\omega_{18} + 96\omega_6\omega_{11}^2v_3^4\omega_{18} +$
$36\omega_6^2v_3^2\omega_{18}^2 - \omega_6^2\omega_{11}^2cs^4\omega_{18}^2 + 96\omega_6\omega_{11}v_3^2\omega_{18}^2 + 24\omega_6\omega_{11}^2cs^2 + 36\omega_6^2\omega_{11}v_3^4\omega_{18} + 288\omega_6v_3^2cs^2\omega_{18}^2 - 12\omega_6^2\omega_{11}^2v_3^2cs^2\omega_{18} + 24\omega_{11}^2cs^2\omega_{18} +$
$24\omega_{11}cs^4\omega_{18} - 24\omega_6cs^2\omega_{18}^2 - 144\omega_6\omega_{11}^2v_3^2cs^2 + 30\omega_6^2\omega_{11}v_3^2\omega_{18} + 12\omega_6^2\omega_{11}^2cs^4 - 48\omega_6\omega_{11}cs^4\omega_{18}^2 + 12\omega_6^2\omega_{11}^2v_3^4 + 3\omega_6^2\omega_{11}^2v_3^2\omega_{18}^2 +$
$24\omega_6^2\omega_{11}v_3^4\omega_{18} - 12\omega_6^2cs^4\omega_{18}^2 - 48\omega_6\omega_{11}^2cs^2\omega_{18} - 126\omega_6^2\omega_{11}^2v_3^2cs^2\omega_{18} + 24\omega_6\omega_{11}^2v_3^2 + 216\omega_{11}v_3^2cs^2\omega_{18}^2 - 12\omega_6^2\omega_{11}cs^4\omega_{18} + 72\omega_6v_3^4\omega_{18}^2 +$
$48\omega_6\omega_{11}v_3^2\omega_{18} - 48\omega_{11}v_3^2\omega_{18}^2 + 432\omega_6\omega_{11}^2v_3^2cs^2\omega_{18} - 48\omega_{11}^2v_3^4\omega_{18} - 14\omega_6^2\omega_{11}cs^2\omega_{18}^2$

$C_{62} = 24\omega_6^2cs^2\omega_{18} - 48\omega_6cs^4\omega_{18}^2 + 6\omega_6^3cs^4\omega_{18} - 24\omega_6^2v_3^4\omega_{18}^2 - 12\omega_6^3v_3^2cs^2\omega_{18} + 24cs^4\omega_{18}^2 - 72\omega_6^2v_3^2cs^2\omega_{18}^2 - 3\omega_6^3v_3^2\omega_{18}^2 + 48\omega_6v_3^2\omega_{18} +$
$12\omega_6^3v_3^4 + 48\omega_6^2v_3^2cs^2\omega_{18} + 18\omega_6^3v_3^2\omega_{18} - 24\omega_6v_3^2\omega_{18}^2 + 72\omega_6^2v_3^4\omega_{18}^2 + 6\omega_6^3v_3^2cs^2\omega_{18}^2 + 24\omega_6cs^4\omega_{18} - 24\omega_6^2v_3^4 - 3\omega_6^3cs^4\omega_{18}^2 - 24\omega_6^2v_3^2cs^2 -$
$8\omega_6^2cs^2\omega_{18}^2 + 24\omega_6^2v_3^2\omega_{18} + 3\omega_6^3v_3^4\omega_{18}^2 - 48\omega_6v_3^4\omega_{18} - 24\omega_6^2cs^4\omega_{18} + 156\omega_6v_3^2cs^2\omega_{18}^2 + 12\omega_6cs^2\omega_{18} + 24\omega_6^2v_3^2 - 6\omega_6^3cs^2\omega_{18} - 24\omega_6cs^2\omega_{18} +$
$\omega_6^3cs^2\omega_{18}^2 + 12\omega_6^3v_3^2cs^2 - 24\omega_6v_3^2cs^2\omega_{18}^2 - 96v_3^2cs^2\omega_{18}^2 + 24\omega_6cs^4\omega_{18}^2 - 18\omega_6^3v_3^4\omega_{18} + 24\omega_6v_3^4\omega_{18}^2 - 12\omega_6^3v_3^2 - 72\omega_6^2v_3^2\omega_{18}$

$C_{63} = 36\omega_{11}^2\omega_{18} + 61\omega_6^2\omega_{11}v_3^2\omega_{18}^2 + 60\omega_{11}cs^2\omega_{18}^2 - 24\omega_6\omega_{11}cs^2\omega_{18} - 12\omega_6^2\omega_{11}\omega_{18} + 24\omega_6^2\omega_{11}^2v_3^2 + 24\omega_6^2\omega_{18} + 168\omega_6\omega_{11}v_3^2\omega_{18} -$
$3\omega_6^2\omega_{11}^2cs^2\omega_{18}^2 - 72\omega_6\omega_{11}^2\omega_{18} - 33\omega_6^2\omega_{11}cs^2\omega_{18} + 120\omega_6v_3^2\omega_{18}^2 - 84\omega_{11}^2v_3^2\omega_{18} + 24\omega_6\omega_{11}^2 - 25\omega_6^2\omega_{11}\omega_{18} - 120\omega_6\omega_{11}cs^2\omega_{18}^2 + 24\omega_6^2\omega_{11}^2cs^2 +$
$36\omega_6^2\omega_{11}v_3^2\omega_{18} - 36\omega_6^2cs^2\omega_{18} - 60\omega_6^2v_3^2\omega_{18}^2 + 2\omega_6^2\omega_{11}^2\omega_{18} + 12\omega_6^2\omega_{11}cs^2\omega_{18} - 36\omega_{11}\omega_{18}^2 - 168\omega_6\omega_{11}v_3^2\omega_{18} - 48\omega_6\omega_{11}^2cs^2 + 72\omega_6\omega_{11}\omega_{18} -$
$60\omega_{11}^2cs^2\omega_{18} + 72\omega_6cs^2\omega_{18}^2 - 12\omega_6^2\omega_{11} - 51\omega_6^2\omega_{11}^2v_3^2\omega_{18} - 48\omega_6\omega_{18}^2 - 5\omega_6^2\omega_{11}v_3^2\omega_{18}^2 + 120\omega_6\omega_{11}^2cs^2\omega_{18} + 24\omega_6\omega_{11}\omega_{18} - 48\omega_6\omega_{11}^2v_3^2 -$
$72\omega_6\omega_{11}v_3^2\omega_{18} + 84\omega_{11}v_3^2\omega_{18}^2 + 21\omega_6^2\omega_{11}\omega_{18} + 39\omega_6^2\omega_{11}cs^2\omega_{18}^2$

2.2.4 Conservation of momentum: ρv_2

📎 attached text file: `output_d3q27_nse_mrt1_symbolic_pde_02.txt`

$v_2\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_2}{\partial t} + \frac{v_2v_1\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{v_2\rho\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_1\rho\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_1} + (v_2^2 + cs^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{2v_2\rho\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{v_2v_3\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{v_3\rho\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_3} +$
$\frac{v_2\rho\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 + \omega_5)\frac{cs^2\delta_l^2}{2\delta_t\omega_5}\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_1} + (-2 + \omega_5)\frac{cs^2\delta_l^2}{2\delta_t\omega_5}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_2} +$
$(-2 + \omega_{10} - 3\omega_{10}v_2^2 + 6v_2^2 - 2cs^2\omega_{10} + 4cs^2)\frac{\delta_l^2}{\delta_t\omega_{10}}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_2} + (2 - \omega_{10})\frac{3v_2\rho\delta_l^2}{\delta_t\omega_{10}}\left(\frac{\partial v_2}{\partial x_2}\right)^2 + (-2 + \omega_7)\frac{cs^2\delta_l^2}{2\delta_t\omega_7}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_2} +$
$(-2 + \omega_7)\frac{cs^2\delta_l^2}{2\delta_t\omega_7}\frac{\partial\rho}{\partial x_3}\frac{\partial v_2}{\partial x_3} + (-2 + \omega_5)\frac{cs^2\rho\delta_l^2}{2\delta_t\omega_5}\frac{\partial^2 v_2}{\partial x_1^2} + (-2 + \omega_5)\frac{cs^2\rho\delta_l^2}{2\delta_t\omega_5}\frac{\partial^2 v_1}{\partial x_1\partial x_2} +$
$(-2 + \omega_{10} - \omega_{10}v_2^2 + 2v_2^2 - 3cs^2\omega_{10} + 6cs^2)\frac{v_2\delta_l^2}{2\delta_t\omega_{10}}\frac{\partial^2\rho}{\partial x_2^2} + (-2 + \omega_{10} - 3\omega_{10}v_2^2 + 6v_2^2 - cs^2\omega_{10} + 2cs^2)\frac{\rho\delta_l^2}{2\delta_t\omega_{10}}\frac{\partial^2 v_2}{\partial x_2^2} +$
$(-2 + \omega_7)\frac{cs^2\rho\delta_l^2}{2\delta_t\omega_7}\frac{\partial^2 v_3}{\partial x_2\partial x_3} + (-2 + \omega_7)\frac{cs^2\rho\delta_l^2}{2\delta_t\omega_7}\frac{\partial^2 v_2}{\partial x_3^2} + C_1\frac{v_2v_1\delta_l^3}{12\delta_t\omega_5\omega_9\omega_{12}}\frac{\partial^3\rho}{\partial x_1^3} + C_2\frac{v_2\rho\delta_l^3}{12\delta_t\omega_5\omega_9\omega_{12}}\frac{\partial^3 v_1}{\partial x_1^3} + C_3\frac{v_1\rho\delta_l^3}{6\delta_t\omega_5^2\omega_{12}}\frac{\partial^3 v_2}{\partial x_1^3} +$
$(-12 + 12\omega_5 - \omega_5^2)\frac{cs^4\delta_l^3}{6\delta_t\omega_5^2}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} + (\omega_5\omega_{12} + 2\omega_5 - \omega_5^2 - 2\omega_{12})\frac{cs^2v_1\rho\delta_l^3}{\delta_t\omega_5^2\omega_{12}}\frac{\partial^3 v_1}{\partial x_1^2\partial x_2} +$
$(12\omega_{10}\omega_5\omega_{15} - 12\omega_{10}\omega_5^2 - 12\omega_5\omega_{15} + 12\omega_{10}\omega_5 - 12\omega_{10}\omega_{15} - \omega_{10}\omega_5^2\omega_{15} + 12\omega_5^2)\frac{cs^2v_2\rho\delta_l^3}{6\delta_t\omega_{10}\omega_5^2\omega_{15}}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} +$

$$C_4 \frac{v_2 v_1 \delta_l^3}{\delta_t \omega_{10}^2 \omega_5 \omega_{15}} \frac{\partial^3 \rho}{\partial x_1 \partial x_2^2} + C_5 \frac{v_2 \rho \delta_l^3}{12 \delta_t \omega_{10}^2 \omega_5^2 \omega_{15}} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + C_6 \frac{v_1 \rho \delta_l^3}{\delta_t \omega_{10}^2 \omega_5 \omega_{15}} \frac{\partial^3 v_2}{\partial x_1 \partial x_2^2} + C_7 \frac{\delta_l^3}{12 \delta_t \omega_{10}^2} \frac{\partial^3 \rho}{\partial x_2^3} +$$

$$(-24 - 4\omega_{10}^2 + 24\omega_{10} - 60\omega_{10} v_2^2 + 60 v_2^2 - 36 cs^2 \omega_{10} + 11 \omega_{10}^2 v_2^2 + 36 cs^2 + 5 cs^2 \omega_{10}^2) \frac{v_2 \rho \delta_l^3}{6 \delta_t \omega_{10}^2} \frac{\partial^3 v_2}{\partial x_2^3} +$$

$$(-\omega_7 \omega_8 + \omega_7 \omega_5 - \omega_7 \omega_5^2 + \omega_7 \omega_8 \omega_5 + \omega_5^2 - \omega_8 \omega_5) \frac{cs^2 v_3 \rho \delta_l^3}{\delta_t \omega_7 \omega_8 \omega_5^2} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_3} +$$

$$(-6\omega_7 \omega_8 - 6\omega_6 \omega_7 \omega_5 - \omega_6 \omega_7 \omega_8 \omega_5 + 6\omega_7 \omega_8 \omega_5 + 6\omega_6 \omega_5 + 6\omega_6 \omega_7 - 6\omega_8 \omega_5) \frac{cs^2 v_2 \rho \delta_l^3}{6 \omega_6 \delta_t \omega_7 \omega_8 \omega_5} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} +$$

$$(-\omega_7 \omega_8 + \omega_7 \omega_5 - \omega_7 \omega_5^2 + \omega_7 \omega_8 \omega_5 + \omega_5^2 - \omega_8 \omega_5) \frac{cs^2 v_3 \rho \delta_l^3}{\delta_t \omega_7 \omega_8 \omega_5^2} \frac{\partial^3 v_1}{\partial x_1 \partial x_2 \partial x_3} +$$

$$(-\omega_7 \omega_8 + \omega_7 \omega_5 + \omega_7^2 + \omega_7 \omega_8 \omega_5 - \omega_7^2 \omega_5 - \omega_8 \omega_5) \frac{cs^2 v_1 \rho \delta_l^3}{\delta_t \omega_7^2 \omega_8 \omega_5} \frac{\partial^3 v_3}{\partial x_1 \partial x_2 \partial x_3} + C_8 \frac{v_2 v_3 \delta_l^3}{\delta_t \omega_{16} \omega_{10}^2 \omega_7} \frac{\partial^3 \rho}{\partial x_2^2 \partial x_3} + C_9 \frac{v_3 \rho \delta_l^3}{\delta_t \omega_{16} \omega_{10}^2 \omega_7} \frac{\partial^3 v_2}{\partial x_2^2 \partial x_3} +$$

$$+ \ C_{10} \frac{v_2 \rho \delta_l^3}{12 \delta_t \omega_{16} \omega_{10}^2 \omega_7^2} \frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} +$$

$$(-6\omega_7 \omega_8 - 6\omega_6 \omega_7 \omega_5 - \omega_6 \omega_7 \omega_8 \omega_5 + 6\omega_7 \omega_8 \omega_5 + 6\omega_6 \omega_5 + 6\omega_6 \omega_7 - 6\omega_8 \omega_5) \frac{cs^2 v_2 \rho \delta_l^3}{6 \omega_6 \delta_t \omega_7 \omega_8 \omega_5} \frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} +$$

$$(-\omega_7 \omega_8 + \omega_7 \omega_5 + \omega_7^2 + \omega_7 \omega_8 \omega_5 - \omega_7^2 \omega_5 - \omega_8 \omega_5) \frac{cs^2 v_1 \rho \delta_l^3}{\delta_t \omega_7^2 \omega_8 \omega_5} \frac{\partial^3 v_2}{\partial x_1 \partial x_3^2} + (-12 - \omega_7^2 + 12\omega_7) \frac{cs^4 \delta_l^3}{6 \delta_t \omega_7^2} \frac{\partial^3 \rho}{\partial x_2 \partial x_3^2} +$$

$$(-\omega_{16} \omega_{10} \omega_7^2 + 12 \omega_7^2 - 12 \omega_{16} \omega_7 + 12 \omega_{16} \omega_{10} \omega_7 - 12 \omega_{16} \omega_{10} + 12 \omega_{10} \omega_7 - 12 \omega_{10} \omega_7^2) \frac{cs^2 v_2 \rho \delta_l^3}{6 \delta_t \omega_{16} \omega_{10} \omega_7^2} \frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$$

$$(\omega_{19} \omega_7 - 2\omega_{19} - \omega_7^2 + 2\omega_7) \frac{cs^2 v_3 \rho \delta_l^3}{\omega_{19} \delta_t \omega_7^2} \frac{\partial^3 v_3}{\partial x_2 \partial x_3^2} + C_{11} \frac{v_2 v_3 \delta_l^3}{12 \omega_{19} \delta_t \omega_7 \omega_{11}} \frac{\partial^3 \rho}{\partial x_3^3} + C_{12} \frac{v_3 \rho \delta_l^3}{6 \omega_{19} \delta_t \omega_7^2} \frac{\partial^3 v_2}{\partial x_3^3} + C_{13} \frac{v_2 \rho \delta_l^3}{12 \omega_{19} \delta_t \omega_7 \omega_{11}} \frac{\partial^3 v_3}{\partial x_3^3} +$$

$$C_{14} \frac{v_2 \delta_l^4}{24 \delta_t \omega_5^2 \omega_9^2 \omega_{12}^2} \frac{\partial^4 \rho}{\partial x_1^4} + C_{15} \frac{v_2 v_1 \rho \delta_l^4}{12 \delta_t \omega_5^2 \omega_9^2 \omega_{12}^2} \frac{\partial^4 v_1}{\partial x_1^4} + C_{16} \frac{\rho \delta_l^4}{24 \delta_t \omega_5^3 \omega_{12}^2} \frac{\partial^4 v_2}{\partial x_1^4} + C_{17} \frac{v_1 \delta_l^4}{12 \delta_t \omega_{10} \omega_5^3 \omega_{21} \omega_{15} \omega_9^2 \omega_{12}^2} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} +$$

$$C_{18} \frac{\rho \delta_l^4}{12 \delta_t \omega_{10} \omega_5^3 \omega_{21} \omega_{15} \omega_9^2 \omega_{12}^2} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + C_{19} \frac{v_2 v_1 \rho \delta_l^4}{12 \delta_t \omega_{10}^2 \omega_5^3 \omega_{21} \omega_{15} \omega_9^2 \omega_{12}^2} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + C_{20} \frac{v_2 \delta_l^4}{12 \delta_t \omega_{10}^3 \omega_5^3 \omega_{21} \omega_{15} \omega_{12}} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$$

$$C_{21} \frac{v_2 v_1 \rho \delta_l^4}{2 \delta_t \omega_{10}^3 \omega_5^3 \omega_{21} \omega_{15} \omega_9 \omega_{12}^2} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + C_{22} \frac{\rho \delta_l^4}{12 \delta_t \omega_{10}^3 \omega_5^3 \omega_{21} \omega_{15}^2 \omega_{12}} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} + C_{23} \frac{v_1 \delta_l^4}{4 \delta_t \omega_{10}^3 \omega_5^2 \omega_{15}} \frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} +$$

$$C_{24} \frac{\rho \delta_l^4}{12 \delta_t \omega_{10}^3 \omega_5^3 \omega_{15}} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} + C_{25} \frac{v_2 v_1 \rho \delta_l^4}{4 \delta_t \omega_{10}^3 \omega_5^2 \omega_{15}} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} + C_{26} \frac{v_2 \delta_l^4}{12 \delta_t \omega_{10}^3} \frac{\partial^4 \rho}{\partial x_2^4} + C_{27} \frac{\rho \delta_l^4}{12 \delta_t \omega_{10}^3} \frac{\partial^4 v_2}{\partial x_2^4} +$$

$$C_{28} \frac{v_2 v_3 v_1 \delta_l^4}{4 \omega_6 \delta_t \omega_{13} \omega_7 \omega_{14} \omega_8 \omega_5^2 \omega_9^2 \omega_{12}^2} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_3} + C_{29} \frac{v_2 v_3 \rho \delta_l^4}{4 \omega_6 \delta_t \omega_{13} \omega_7 \omega_{14} \omega_8 \omega_5^2 \omega_9^2 \omega_{12}^2} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} + C_{30} \frac{v_3 v_1 \rho \delta_l^4}{2 \delta_t \omega_7^2 \omega_{14} \omega_8^2 \omega_5^3 \omega_{12}^2} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_3} +$$

$$C_{31} \frac{v_2 v_1 \rho \delta_l^4}{12 \omega_6^2 \delta_t \omega_{13} \omega_7^2 \omega_{14} \omega_8^2 \omega_9^2 \omega_{12}^2} \frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} + C_{32} \frac{2 cs^4 v_3 \delta_l^4}{\delta_t \omega_7^2 \omega_8^2 \omega_5^3} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2 \partial x_3} + C_{33} \frac{cs^2 v_3 v_1 \rho \delta_l^4}{\delta_t \omega_7^2 \omega_{14} \omega_8^2 \omega_5^3 \omega_{12}^2} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2 \partial x_3} +$$

$$C_{34} \frac{cs^2 v_2 v_3 \rho \delta_l^4}{2 \omega_6 \delta_t \omega_{16} \omega_{10}^2 \omega_7^2 \omega_{17} \omega_8^2 \omega_5^3 \omega_{15}^2} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} + C_{35} \frac{cs^2 \rho \delta_l^4}{12 \omega_6^2 \delta_t \omega_{16} \omega_{10} \omega_7^3 \omega_{17} \omega_{14} \omega_8^2 \omega_5^3 \omega_{15} \omega_{12}} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} +$$

$$C_{36} \frac{v_2 v_3 v_1 \delta_l^4}{\delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 \omega_{15}^2} \frac{\partial^4 \rho}{\partial x_1 \partial x_2^2 \partial x_3} + C_{37} \frac{v_2 v_3 \rho \delta_l^4}{2 \omega_6 \delta_t \omega_{16} \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8^2 \omega_5^3 \omega_{15}^2} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} + C_{38} \frac{v_3 v_1 \rho \delta_l^4}{\delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 \omega_{15}} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$+ \ C_{39} \frac{v_2 v_1 \rho \delta_l^4}{2 \omega_6 \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8^2 \omega_5^2 \omega_{15}^2} \frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} + C_{40} \frac{v_3 \delta_l^4}{4 \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2} \frac{\partial^4 \rho}{\partial x_2^3 \partial x_3} + C_{41} \frac{v_2 v_3 \rho \delta_l^4}{4 \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2} \frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} +$$

$$C_{42} \frac{\rho \delta_l^4}{12 \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^3} \frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} + C_{43} \frac{\delta_l^4}{12 \omega_6^2 \omega_{19} \delta_t \omega_7^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^3 \omega_{12}} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + C_{44} \frac{\rho \delta_l^4}{4 \omega_6^2 \omega_{19} \delta_t \omega_{13} \omega_7^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 \omega_9 \omega_{12}} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} +$$

$$C_{45} \frac{\rho \delta_l^4}{4 \omega_{19} \delta_t \omega_7^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^3 \omega_{12}} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_3^2} + C_{46} \frac{v_3 \rho \delta_l^4}{2 \omega_6^2 \omega_{19} \delta_t \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 \omega_{18} \omega_{12}} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} +$$

$$C_{47} \frac{\delta_l^4}{2 \omega_{19} \delta_t \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5^2 \omega_{15}} \frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} + C_{48} \frac{\rho \delta_l^4}{12 \omega_6^2 \omega_{19} \delta_t \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5^3 \omega_{15}} \frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C_{49} \frac{v_2 \rho \delta_l^4}{2 \omega_6 \omega_{19} \delta_t \omega_{16}^2 \omega_{10}^2 \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5^2 \omega_{15}} \frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} + C_{50} \frac{\rho \delta_l^4}{2 \omega_{19}^2 \delta_t \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5^2 \omega_{15}} \frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C_{51} \frac{v_2 \delta_l^4}{12 \omega_{19} \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{23}} \frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} + C_{52} \frac{\rho \delta_l^4}{12 \omega_{19} \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{23}} \frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + C_{53} \frac{v_2 v_3 \rho \delta_l^4}{2 \omega_{19}^2 \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{23} \omega_{11}} \frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} +$$

$$C_{54} \frac{v_2 v_3 v_1 \delta_l^4}{4 \omega_6^2 \omega_{19} \delta_t \omega_7^2 \omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18}} \frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} + C_{55} \frac{v_2 v_3 \rho \delta_l^4}{12 \omega_6^2 \omega_{19}^2 \delta_t \omega_7^2 \omega_{20} \omega_{11}^2 \omega_8^2 \omega_5^2 \omega_{18}} \frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + C_{56} \frac{v_3 v_1 \rho \delta_l^4}{2 \omega_{19}^2 \delta_t \omega_7^2 \omega_{20} \omega_{11}^2 \omega_8 \omega_5^2} \frac{\partial^4 v_2}{\partial x_1 \partial x_3^3} +$$

$$C_{57} \frac{v_2 v_1 \rho \delta_l^4}{4 \omega_6^2 \omega_{19} \delta_t \omega_7^2 \omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18}} \frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} + C_{58} \frac{v_3 \delta_l^4}{12 \omega_{19}^2 \delta_t \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{11}^2} \frac{\partial^4 \rho}{\partial x_2 \partial x_3^3} + C_{59} \frac{v_2 v_3 \rho \delta_l^4}{12 \omega_{19}^2 \delta_t \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{23} \omega_{11}^2} \frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$$

$$C_{60} \frac{\rho \delta_l^4}{12 \omega_{19}^2 \delta_t \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{11}^2} \frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} + C_{61} \frac{v_2 \delta_l^4}{24 \omega_{19}^2 \delta_t \omega_7^2 \omega_{11}^2} \frac{\partial^4 \rho}{\partial x_3^4} + C_{62} \frac{\rho \delta_l^4}{24 \omega_{19}^2 \delta_t \omega_7^3} \frac{\partial^4 v_2}{\partial x_3^4} + C_{63} \frac{v_2 v_3 \rho \delta_l^4}{12 \omega_{19}^2 \delta_t \omega_7^2 \omega_{11}^2} \frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 18 cs^2 \omega_5 \omega_9 + 6 \omega_5 \omega_{12} - 6 \omega_5 \omega_9 - 18 cs^2 \omega_5 \omega_{12} - 6 v_1^2 \omega_5 \omega_{12} + 6 v_1^2 \omega_5 \omega_9 + v_1^2 \omega_5 \omega_9 \omega_{12} + 12 v_1^2 \omega_{12} - 12 v_1^2 \omega_9 + 3 cs^2 \omega_5 \omega_9 \omega_{12} + 36 cs^2 \omega_{12} - \omega_5 \omega_9 \omega_{12} + 12 \omega_9 - 36 cs^2 \omega_9 - 12 \omega_{12}$

$C_2 = 6 cs^2 \omega_5 \omega_9 + 6 \omega_5 \omega_{12} - 6 \omega_5 \omega_9 - 6 cs^2 \omega_5 \omega_{12} - 18 v_1^2 \omega_5 \omega_{12} + 18 v_1^2 \omega_5 \omega_9 + 3 v_1^2 \omega_5 \omega_9 \omega_{12} + 36 v_1^2 \omega_{12} - 36 v_1^2 \omega_9 + cs^2 \omega_5 \omega_9 \omega_{12} + 12 cs^2 \omega_{12} - \omega_5 \omega_9 \omega_{12} + 12 \omega_9 - 12 cs^2 \omega_9 - 12 \omega_{12}$

$C_3 = -3\omega_5\omega_{12} + 15cs^2\omega_5\omega_{12} + 3cs^2\omega_5^2 + 3v_1^2\omega_5^2 + 3v_1^2\omega_5\omega_{12} - 6v_1^2\omega_5 - 6cs^2\omega_5 - v_1^2\omega_5^2\omega_{12} + 6\omega_5 + \omega_5^2\omega_{12} - 3\omega_5^2 - 12cs^2\omega_{12} - 3cs^2\omega_5^2\omega_{12}$

$C_4 = \omega_{10}v_2^2\omega_{15} + \omega_{10}\omega_5\omega_{15} + \omega_{10}^2 - \omega_5\omega_{15} - 3cs^2\omega_{10}\omega_5\omega_{15} + 3cs^2\omega_5\omega_{15} + \omega_{10}^2v_2^2\omega_5 - 3cs^2\omega_{10}\omega_5 + \omega_{10}\omega_5 + 3cs^2\omega_{10}^2\omega_5 - \omega_{10}^2v_2^2 - \omega_{10}^2\omega_5 - \omega_{10}v_2^2\omega_5 - \omega_{10}v_2^2\omega_5\omega_{15} + 3cs^2\omega_{10}\omega_{15} - \omega_{10}\omega_{15} + v_2^2\omega_5\omega_{15} - 3cs^2\omega_{10}^2$

$C_5 = 12v_2^2\omega_5^2\omega_{15} - 11cs^2\omega_{10}^2\omega_5\omega_{15} + 12\omega_{10}\omega_5^2 + 12\omega_{10}^2v_2^2\omega_5^2 - 12cs^2\omega_{10}\omega_5^2 - 24cs^2\omega_{10}^2\omega_{15} - 24cs^2\omega_{10}\omega_5\omega_{15} + 3\omega_{10}^2\omega_5\omega_{15} + 6\omega_{10}^2v_2^2\omega_5\omega_{15} - 6\omega_{10}v_2^2\omega_5^2\omega_{15} - 12\omega_{10}^2v_2^2\omega_5 - 12cs^2\omega_{10}^2\omega_5 + 12\omega_{10}^2\omega_5 - 12\omega_5^2\omega_{15} - 18cs^2\omega_{10}\omega_5^2\omega_{15} - 6\omega_{10}^2\omega_5\omega_{15} - 3\omega_{10}^2v_2^2\omega_5^2\omega_{15} + 36cs^2\omega_5^2\omega_{15} - 12\omega_{10}v_2^2\omega_5^2 + 42cs^2\omega_{10}^2\omega_5\omega_{15} + 6\omega_{10}\omega_5^2\omega_{15} - 12\omega_{10}^2\omega_5^2 + 12cs^2\omega_{10}^2\omega_5$

$C_6 = 3\omega_{10}v_2^2\omega_{15} + \omega_{10}\omega_5\omega_{15} + \omega_{10}^2 - \omega_5\omega_{15} - cs^2\omega_{10}\omega_5\omega_{15} + cs^2\omega_5\omega_{15} + 3\omega_{10}^2v_2^2\omega_5 - cs^2\omega_{10}\omega_5 + \omega_{10}\omega_5 + cs^2\omega_{10}^2\omega_5 - 3\omega_{10}^2v_2^2 - \omega_{10}^2\omega_5 - 3\omega_{10}v_2^2\omega_5 - 3\omega_{10}v_2^2\omega_5\omega_{15} + cs^2\omega_{10}\omega_{15} - \omega_{10}\omega_{15} + 3v_2^2\omega_5\omega_{15} - cs^2\omega_{10}^2$

$C_7 = 12cs^4 - 12cs^4\omega_{10} + 36v_2^2 + cs^4\omega_{10}^2 + 7\omega_{10}^2v_2^4 + 144cs^2v_2^2 - 144cs^2\omega_{10}v_2^2 + 36\omega_{10}v_2^2 + 24cs^2\omega_{10}^2v_2^2 - 36v_2^2 + 12cs^2\omega_{10} - 7\omega_{10}^2v_2^2 - 36\omega_{10}v_2^2 - 12cs^2 - cs^2\omega_{10}^2$

$C_8 = -3\omega_{16}cs^2\omega_{10}\omega_7 - \omega_{10}\omega_7v_2^2 + \omega_{10}^2 - \omega_{10}^2\omega_7 + 3\omega_{16}cs^2\omega_{10} + 3cs^2\omega_{10}^2\omega_7 - \omega_{16}\omega_7 + 3\omega_{16}cs^2\omega_7 + \omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_{10} - \omega_{10}^2v_2^2 + \omega_{10}\omega_7 + \omega_{16}\omega_{10}v_2^2 - \omega_{16}\omega_{10}\omega_7v_2^2 - 3cs^2\omega_{10}\omega_7 + \omega_{10}^2\omega_7v_2^2 - 3cs^2\omega_{10}^2 + \omega_{16}\omega_7v_2^2$

$C_9 = -\omega_{16}cs^2\omega_{10}\omega_7 - 3\omega_{10}\omega_7v_2^2 + \omega_{10}^2 - \omega_{10}^2\omega_7 + \omega_{16}cs^2\omega_{10} + cs^2\omega_{10}^2\omega_7 - \omega_{16}\omega_7 + \omega_{16}cs^2\omega_7 + \omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_{10} - 3\omega_{10}^2v_2^2 + \omega_{10}\omega_7 + 3\omega_{16}\omega_{10}v_2^2 - 3\omega_{16}\omega_{10}\omega_7v_2^2 - cs^2\omega_{10}\omega_7 + 3\omega_{10}^2\omega_7v_2^2 - cs^2\omega_{10}^2 + 3\omega_{16}\omega_7v_2^2$

$C_{10} = 6\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{16}\omega_7^2v_2^2 - 24\omega_{16}cs^2\omega_{10}\omega_7 + 36\omega_{16}cs^2\omega_7^2 + 12cs^2\omega_{10}^2\omega_7 - 12\omega_{16}\omega_7^2 - 12\omega_{10}^2\omega_7^2 - 24\omega_{16}cs^2\omega_{10} + 12\omega_{10}^2\omega_7v_2^2 + 12\omega_{10}^2\omega_7 - 6\omega_{16}\omega_{10}\omega_7^2v_2^2 - 12cs^2\omega_{10}^2\omega_7 + 6\omega_{16}\omega_{10}^2\omega_7v_2^2 - 18\omega_{16}cs^2\omega_{10}\omega_7^2 - 3\omega_{16}\omega_{10}^2\omega_7v_2^2 - 11\omega_{16}cs^2\omega_{10}^2\omega_7^2 - 6\omega_{16}\omega_{10}^2\omega_7 - 12cs^2\omega_{10}\omega_7^2 + 12\omega_{10}\omega_7^2 - 12\omega_{10}^2\omega_7v_2^2 + 42\omega_{16}cs^2\omega_{10}^2\omega_7 + 3\omega_{16}\omega_{10}^2\omega_7^2 - 12\omega_{10}\omega_7^2v_2^2$

$C_{11} = -12\omega_{11}v_3^2 + 6\omega_{19}\omega_7 - \omega_{19}\omega_7\omega_{11} - 12\omega_{19} + \omega_{19}\omega_7\omega_{11}v_3^2 - 36cs^2\omega_{11} - 6\omega_{19}\omega_7v_3^2 - 6\omega_7\omega_{11} + 18cs^2\omega_7\omega_{11} + 12\omega_{11} + 6\omega_7\omega_{11}v_3^2 + 36\omega_{19}cs^2 + 12\omega_{19}v_3^2 + 3\omega_{19}cs^2\omega_7\omega_{11} - 18\omega_{19}cs^2\omega_7$

$C_{12} = -3\omega_{19}\omega_7 - 6\omega_7v_3^2 - 3\omega_7^2 + 3\omega_{19}\omega_7v_3^2 + 6\omega_7 + \omega_{19}\omega_7^2 - 3\omega_{19}cs^2\omega_7^2 - \omega_{19}\omega_7^2v_3^2 - 6cs^2\omega_7 - 12\omega_{19}cs^2 + 3cs^2\omega_7^2 + 3\omega_7^2v_3^2 + 15\omega_{19}cs^2\omega_7$

$C_{13} = -36\omega_{11}v_3^2 + 6\omega_{19}\omega_7 - \omega_{19}\omega_7\omega_{11} - 12\omega_{19} + 3\omega_{19}\omega_7\omega_{11}v_3^2 - 12cs^2\omega_{11} - 18\omega_{19}\omega_7v_3^2 - 6\omega_7\omega_{11} + 6cs^2\omega_7\omega_{11} + 12\omega_{11} + 18\omega_7\omega_{11}v_3^2 + 12\omega_{19}cs^2 + 36\omega_{19}v_3^2 + \omega_{19}cs^2\omega_7\omega_{11} - 6\omega_{19}cs^2\omega_7$

$C_{14} = -144cs^2v_1^2\omega_5\omega_9^2 - cs^4\omega_5^2\omega_9^2\omega_{12}^2 - 48v_1^2\omega_9\omega_{12}^2 + 96v_1^4\omega_5\omega_9^2\omega_{12}^2 + 24cs^4\omega_9\omega_{12}^2 + 96v_1^2\omega_5\omega_9\omega_{12}^2 + 288cs^2v_1^2\omega_5\omega_{12}^2 - 126cs^2v_1^2\omega_5^2\omega_9^2\omega_{12}^2 + 216cs^2v_1^2\omega_9\omega_{12}^2 - 48cs^4\omega_5\omega_9\omega_{12}^2 + 24cs^4\omega_5^2\omega_{12}^2 + 24v_1^4\omega_5\omega_9\omega_{12} + 24v_1^2\omega_5\omega_9^2 - 24cs^4\omega_5\omega_9^2 - 144cs^2v_1^2\omega_5\omega_9\omega_{12} + 3v_1^2\omega_5^2\omega_9^2\omega_{12} - 72v_1^2\omega_5\omega_{12}^2 - 48cs^2\omega_5\omega_9^2\omega_{12} - 432cs^2v_1^2\omega_5\omega_9\omega_{12}^2 + 30v_1^2\omega_5^2\omega_9^2\omega_{12} + 48v_1^4\omega_9\omega_{12}^2 + 36v_1^4\omega_5\omega_9^2\omega_{12} - 24cs^2\omega_9\omega_{12}^2 + 48v_1^2\omega_5\omega_9\omega_{12} - 24cs^2\omega_5\omega_{12}^2 - 14cs^2\omega_5^2\omega_9\omega_{12}^2 - 24v_1^4\omega_5\omega_9^2 - 12cs^2v_1^2\omega_5^2\omega_9^2\omega_{12}^2 + 24cs^2\omega_5\omega_9^2 + 72v_1^4\omega_5\omega_{12}^2 - 12cs^4\omega_5^2\omega_{12}^2 + cs^2\omega_5^2\omega_9^2\omega_{12}^2 - 96v_1^2\omega_5\omega_9^2\omega_{12} + 12cs^2\omega_5^2\omega_{12}^2 - 24cs^4\omega_9\omega_{12}^2 + 12v_1^4\omega_5^2\omega_9^2 + 150cs^2v_1^2\omega_5^2\omega_9\omega_{12}^2 - 12cs^2\omega_5^2\omega_9^2 - 96v_1^4\omega_5\omega_9\omega_{12}^2 + 48v_1^2\omega_9^2\omega_{12} - 36v_1^4\omega_5^2\omega_{12}^2 + 48cs^2\omega_5\omega_9\omega_{12}^2 - 24v_1^2\omega_5\omega_9\omega_{12}^2 - 3v_1^4\omega_5^2\omega_9^2\omega_{12} - 216cs^2v_1^2\omega_9\omega_{12}^2 + 48cs^4\omega_5\omega_9\omega_{12}^2 - 30v_1^4\omega_5^2\omega_9\omega_{12}^2 + 24cs^2\omega_9^2\omega_{12} - 12cs^4\omega_5^2\omega_{12}^2 - 12v_1^2\omega_5^2\omega_9^2 + 432cs^2v_1^2\omega_5\omega_9^2\omega_{12} + 12cs^4\omega_5^2\omega_9^2 + 36v_1^2\omega_5^2\omega_{12}^2 - 48v_1^4\omega_9\omega_{12}^2 - 36v_1^2\omega_5\omega_9^2\omega_{12} + 72cs^2v_1^2\omega_5\omega_9^2 - 48v_1^4\omega_5\omega_9\omega_{12} + 14cs^4\omega_5^2\omega_9\omega_{12}^2 + 12cs^2\omega_5^2\omega_9^2\omega_{12} - 144cs^2v_1^2\omega_5^2\omega_{12}^2 + 72cs^2v_1^2\omega_5^2\omega_9\omega_{12}$

$C_{15} = 84v_1^2\omega_9\omega_{12}^2 - 168v_1^2\omega_5\omega_9\omega_{12}^2 + 12cs^2\omega_5^2\omega_9\omega_{12} - 72\omega_5\omega_9^2\omega_{12} - 48v_1^2\omega_5\omega_9^2 - 5v_1^2\omega_5^2\omega_9^2\omega_{12} + 120v_1^2\omega_5\omega_{12}^2 + 120cs^2\omega_5\omega_9^2\omega_{12} - 12\omega_5^2\omega_9\omega_{12} - 36\omega_9\omega_{12}^2 - 51v_1^2\omega_5^2\omega_9\omega_{12} - 25\omega_5^2\omega_9\omega_{12} + 60cs^2\omega_9\omega_{12} - 72v_1^2\omega_5\omega_9\omega_{12} + 72cs^2\omega_5\omega_{12}^2 + 24\omega_5\omega_9^2 + 39cs^2\omega_5^2\omega_9\omega_{12} - 48\omega_5\omega_{12}^2 - 48cs^2\omega_5\omega_9^2 + 72\omega_5\omega_9\omega_{12} - 3cs^2\omega_5^2\omega_9^2\omega_{12} - 12\omega_5^2\omega_9^2 + 168v_1^2\omega_5\omega_9\omega_{12} - 36cs^2\omega_5^2\omega_{12}^2 + 24cs^2\omega_5^2\omega_9^2 + 24\omega_5^2\omega_{12}^2 - 84v_1^2\omega_9\omega_{12} + 2\omega_5^2\omega_9^2\omega_{12} - 120cs^2\omega_5\omega_9\omega_{12} + 36v_1^2\omega_5^2\omega_9\omega_{12} - 60cs^2\omega_9^2\omega_{12} + 24v_1^2\omega_5^2\omega_9^2 + 36\omega_9\omega_{12} - 60v_1^2\omega_5^2\omega_{12}^2 - 24cs^2\omega_5\omega_9\omega_{12} + 21\omega_5^2\omega_9^2\omega_{12} + 61v_1^2\omega_5^2\omega_9\omega_{12}^2 - 33cs^2\omega_5^2\omega_9^2\omega_{12} + 24\omega_5\omega_9\omega_{12}$

$C_{16} = 12cs^2v_1^2\omega_5^3 - 48v_1^4\omega_5\omega_{12} - 12v_1^2\omega_5\omega_5^3 - 24cs^2\omega_5\omega_{12} + 156cs^2v_1^2\omega_5\omega_{12}^2 - 48cs^4\omega_5\omega_{12}^2 - 24cs^2v_1^2\omega_5^2 - 24v_1^2\omega_5\omega_{12}^2 + 24v_1^2\omega_5^2 + 24cs^4\omega_{12}^2 + 48v_1^2\omega_5\omega_{12} + 24cs^4\omega_5\omega_{12} + 12cs^2\omega_5\omega_{12} - 24cs^2v_1^2\omega_5\omega_{12} + 24v_1^4\omega_5\omega_{12}^2 - 3v_1^2\omega_5^3\omega_{12} + 48cs^2v_1^2\omega_5^2\omega_{12} - 8cs^2\omega_5^2\omega_{12} - 3cs^4\omega_5^3\omega_{12} - 24v_1^4\omega_5^2 - 24v_1^4\omega_5^2\omega_{12}^2 - 96cs^2v_1^2\omega_{12}^2 - 72v_1^2\omega_5\omega_{12}^2 + 6cs^2v_1^2\omega_5^3\omega_{12}^2 - 6cs^2\omega_5^3\omega_{12} - 24cs^4\omega_5^2\omega_{12} + 12v_1^4\omega_5^3 - 18v_1^4\omega_5^3\omega_{12} + 24cs^4\omega_5^2\omega_{12} + 3v_1^4\omega_5^3\omega_{12}^2 - 12cs^2v_1^2\omega_5^3\omega_{12} + 24v_1^2\omega_5^2\omega_{12}^2 + cs^2\omega_5^3\omega_{12}^2 + 6cs^4\omega_5^3\omega_{12} + 72v_1^4\omega_5^2\omega_{12}^2 - 72cs^2v_1^2\omega_5^2\omega_{12}^2 + 18v_1^2\omega_5^3\omega_{12} + 24cs^2\omega_5^2\omega_{12}$

$C_{17} = -18cs^2v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 12cs^2\omega_{10}\omega_5^3\omega_9^2\omega_{12}^2 + 12cs^2\omega_{10}v_1^2\omega_5^2\omega_9^2\omega_{12}^2 - 5cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 36cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_9\omega_{12}^2 + 18cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12\omega_{10}v_2^2\omega_5^2v_1^2\omega_5^2\omega_9^3\omega_{12}^2 - 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 18cs^2\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - 72cs^2\omega_{10}v_2^2\omega_5^3v_1^2\omega_5^2\omega_9^2\omega_{12}^2 + 12cs^2\omega_{10}v_2^2v_1^2\omega_5^3\omega_9^2\omega_{12} + 12cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - 18cs^2\omega_{10}v_2^3\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 15cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 36\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 36cs^4\omega_{10}\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 12v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 36cs^4\omega_{10}\omega_5^3\omega_9^2\omega_{12}^2 + 72cs^2v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 18cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 36cs^2\omega_{10}v_2^2\omega_5^2\omega_9^2\omega_{12}^2 + 6cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - 24\omega_{10}v_2^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12cs^2\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^2 - 6\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 12\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_9\omega_{12}^2 + 18cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2 + 9\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12cs^2\omega_5^3\omega_9^2\omega_{12}^2 - 12\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 6cs^2v_1^2\omega_5\omega_{15}\omega_2^2\omega_{12}^2 - 12cs^2\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 144cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 12cs^2\omega_{10}\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 36cs^4\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 24v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 6\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 3cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 18cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - 12cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24\omega_{10}v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 6\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 12cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 36cs^2v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_9\omega_{12}^2 - 12\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 15cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 24v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 54cs^4\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 6cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 3cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 36cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 + 48\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 36cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 36cs^4\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12}^2 -$

$36cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2 + 27cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12cs^2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 36cs^4\omega_{10}\omega_5^2\omega_{21}\omega_9\omega_{12}^2 - 15cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 -$
$12\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 6\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 6v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 48\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$12cs^2v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 156cs^4\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 72cs^2v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6cs^2\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 - 12cs^2\omega_{10}v_1^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} -$
$12cs^2\omega_{10}\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 3cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6cs^2\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12v_2^2\omega_5^3\omega_9^2\omega_{12}^2 - 18cs^2\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12v_2^2v_1^2\omega_5^3\omega_9^2\omega_{12}^2 -$
$12\omega_{10}v_2^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}v_2^2v_1^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 72cs^2\omega_{10}v_2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 12cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} +$
$18cs^4\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 6v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 36cs^4\omega_{10}\omega_5^2\omega_9^2\omega_{12} - 36cs^2\omega_{10}v_2^2\omega_5^3\omega_9^2\omega_{12} - 18cs^2\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 6v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} -$
$108cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 36cs^2v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 12\omega_{10}v_2^2\omega_5^2\omega_9^2\omega_{12} - 96cs^4\omega_{10}\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 6cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 -$
$12cs^2\omega_{10}v_1^2\omega_5^3\omega_9^2\omega_{12}^2 + 24\omega_{10}v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_{10}\omega_5^2\omega_9^2\omega_{12} - 36cs^2\omega_{10}v_2^2\omega_5\omega_{15}\omega_9^2\omega_{12} - 15\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$60cs^4\omega_{10}\omega_2^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 36cs^4\omega_{10}\omega_5\omega_{15}\omega_9^2\omega_{12} + 36cs^4\omega_5^3\omega_9^2\omega_{12} - 12\omega_{10}v_2^2v_1^2\omega_5^3\omega_9^2\omega_{12} - 18cs^2v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} +$
$36cs^2\omega_{10}v_2^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 36cs^2\omega_5^3\omega_9^2\omega_{12}^2 + 24\omega_{10}v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 9\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 42cs^4\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$24v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 36cs^4\omega_{10}\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 18cs^4\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 24v_2^2\omega_5^2\omega_9^2\omega_{12} +$
$12cs^2v_1^2\omega_5^3\omega_9^2\omega_{12} + 18cs^2\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 5cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 36cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 18cs^2\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} -$
$45cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 6cs^2\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_{10}\omega_5^2\omega_{15}\omega_9^2\omega_{12} +$
$6cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12\omega_{10}v_2^2v_1^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 12\omega_{10}v_2^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 18cs^4\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 6\omega_{10}v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} -$
$36\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 6\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12cs^4\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_{10}v_1^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 6cs^2\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12}$

$C_{18} = -6cs^2v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2 + 12cs^2\omega_{10}\omega_5^3\omega_9^2\omega_{12}^2 + 36cs^2\omega_{10}v_1^2\omega_5^2\omega_9^2\omega_{12}^2 - 15cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_9\omega_{12}^2 +$
$6cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2 + 12\omega_{10}v_2^2\omega_5^3\omega_9^2\omega_{12}^2 - 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 18cs^2\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$24cs^2\omega_{10}v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 36\omega_{10}v_2^2v_1^2\omega_5^2\omega_9^2\omega_{12}^2 + 60cs^2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 36v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} +$
$6cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 36\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 12cs^4\omega_{10}\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 36v_2^2v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 12cs^4\omega_{10}\omega_5^3\omega_9^2\omega_{12} +$
$24cs^2v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12v_2^2\omega_5^3\omega_9^2\omega_{12}^2 + 12cs^2\omega_{10}v_2^2\omega_5^2\omega_9^2\omega_{12} - 12cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 -$
$24\omega_{10}v_2^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 18\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 - 36\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_9\omega_{12}^2 + 6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2 +$
$27\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 18\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_5^2\omega_9^2\omega_{12}^2 - 12\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 -$
$18cs^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 15cs^2\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 48cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2 - 36cs^2\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_9\omega_{12}^2 -$
$12cs^2\omega_{10}\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 12cs^4\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 24v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 36\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 -$
$6cs^2\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 102cs^2\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 24cs^2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2 + 36\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2 -$
$72\omega_{10}v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 6v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 12cs^2\omega_{10}\omega_5\omega_{21}\omega_9\omega_{12}^2 + 12cs^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 36cs^2\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 +$
$12cs^2v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_9\omega_{12}^2 - 36\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_9^2 + 15\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 72v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$18\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 18cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 +$
$144\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 - 12cs^4\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2 + 9cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} +$
$60cs^2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^4\omega_{10}\omega_5^2\omega_{21}\omega_9\omega_{12}^2 - 5cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 36\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 6\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} -$
$18\omega_{10}v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 18v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 48\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 36cs^2v_1^2\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 18cs^4\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$24cs^2v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6cs^2\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 36cs^2\omega_{10}v_1^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_{10}\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 30cs^2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$18cs^2\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12v_2^2\omega_5^3\omega_9^2\omega_{12} + 12cs^2\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2 + 36v_2^2v_1^2\omega_5^3\omega_9^2\omega_{12} - 12\omega_{10}v_2^2v_1^2\omega_5^3\omega_9^2\omega_{12} - 36\omega_{10}v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} +$
$24cs^2\omega_{10}v_2^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 6v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 6cs^4\omega_{10}\omega_5\omega_{15}\omega_9^2\omega_{12} - 18v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} +$
$12cs^4\omega_{10}\omega_5^2\omega_9^2\omega_{12} - 12cs^2\omega_{10}v_2^2\omega_5^3\omega_9^2\omega_{12} - 6cs^2\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 6v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 36cs^2\omega_{10}v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 12cs^2v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12} -$
$12\omega_{10}v_2^2\omega_5^2\omega_9^2\omega_{12} - 12cs^4\omega_{10}\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 18cs^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 36cs^2\omega_{10}v_1^2\omega_5^3\omega_9^2\omega_{12} + 24\omega_{10}v_2^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$12cs^2\omega_{10}\omega_5^2\omega_9^2\omega_{12} - 12cs^2\omega_{10}v_2^2\omega_5\omega_{15}\omega_9^2\omega_{12} - 45\omega_{10}v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 5cs^4\omega_{10}\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 6\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$12cs^4\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12cs^4\omega_5^3\omega_9^2\omega_{12} - 36\omega_{10}v_2^2v_1^2\omega_5^3\omega_9^2\omega_{12} - 6cs^2v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 12cs^2\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12cs^2v_2^2\omega_5^3\omega_9^2\omega_{12} +$
$72\omega_{10}v_2^2v_1^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 9\omega_{10}v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 18cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 72v_2^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^4\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} -$
$6cs^4\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 24v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 36cs^2v_1^2\omega_5^3\omega_9^2\omega_{12} + 6cs^2\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 5cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$12cs^2\omega_{10}v_2^2\omega_5^3\omega_9^2\omega_{12} + 54cs^2\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} +$
$18cs^2\omega_{10}v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_{10}\omega_5\omega_9^2\omega_{12} + 6cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 36\omega_{10}v_2^2v_1^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 12\omega_{10}v_2^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} -$
$36cs^2\omega_{10}v_1^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 48cs^2\omega_{10}v_1^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 6cs^4\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 18\omega_{10}v_2^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 108\omega_{10}v_2^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} +$
$6\omega_{10}v_2^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12cs^4\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 36cs^2\omega_{10}v_1^2\omega_5^2\omega_{15}\omega_9^2\omega_{12} + 6cs^2\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12}$

$C_{19} = -12\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 24\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 12cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 6cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 36cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} +$
$24\omega_{10}^2v_1^2\omega_5^2\omega_{15}^2\omega_9^2\omega_{12} + 24\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12\omega_{10}^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} -$
$24cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 72cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 6\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 24\omega_{10}\omega_5\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 4\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} -$
$18\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 84cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}^2\omega_5\omega_{15}^2\omega_9^2\omega_{12} - 24\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_9 + 90cs^2\omega_{10}^2\omega_5\omega_{15}^2\omega_9^2\omega_{12} -$
$84cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_{10}\omega_5^3\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 66cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 12\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} -$
$12\omega_{10}^2v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 36\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}^2v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 6\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + \omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} +$
$24\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2 - 12\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 60cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 24cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 96cs^2\omega_{10}^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} -$
$18\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 66\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}^2v_1^2\omega_5^3\omega_{15}^2\omega_9^2\omega_{12} + 24cs^2\omega_{10}^2\omega_5^2\omega_{15}^2\omega_9^2\omega_{12} +$
$12cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}v_1^2\omega_5^3\omega_{15}^2\omega_9^2\omega_{12} - 12\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 24\omega_{10}^2v_1^2\omega_5^2\omega_{15}^2\omega_9^2\omega_{12} +$
$156cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 24\omega_{10}^2\omega_5^2\omega_{15}^2\omega_9^2\omega_{12} - 12\omega_{10}^2v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} -$
$132cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 24cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_9^2\omega_{12} + 12\omega_{10}^2v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2 + 24cs^2\omega_{10}^2\omega_5\omega_{15}^2\omega_9^2\omega_{12} - 18cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2 -$
$24\omega_{10}^2v_1^2\omega_5^2\omega_{15}^2\omega_9 + 3cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2 + 24cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 12cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} +$
$12\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 42cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12\omega_{10}^2v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 24\omega_{10}^2\omega_5^2\omega_9^2\omega_{12} + 24\omega_{10}^2v_1^2\omega_5\omega_{15}^2\omega_9^2\omega_{12} +$
$72cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} - 24cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 24\omega_{10}v_1^2\omega_5\omega_{15}^2\omega_9^2\omega_{12} + 18\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 4\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} -$
$24\omega_{10}^2\omega_5^2\omega_{15}^2\omega_9^2\omega_{12} - 12\omega_{10}\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 36\omega_{10}^2v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - \omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 6\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} +$
$24cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 24cs^2\omega_{10}\omega_5^3\omega_{21}\omega_9^2\omega_{12} - 24\omega_{10}^2v_1^2\omega_5^3\omega_{15}\omega_9^2\omega_{12} - 12\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} -$
$12cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 12\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 24cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 48cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 24cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} +$
$12\omega_{10}v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 36cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} - 6\omega_{10}^2v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 24cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_9^2\omega_{12} + 12\omega_{10}\omega_5^3\omega_{15}\omega_9^2\omega_{12} +$

$$66\omega_{10}^2 v_1^2 \omega_5^2 \omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 18\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 - 48cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2 - 24cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12} + 12\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2$$

$C_{20} = -24\omega_{10}^3 v_2^2 v_1^2 \omega_5\omega_{21}\omega_{15}\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^3\omega_{15}\omega_{12} + 12cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3\omega_5\omega_{15}\omega_{12} + 36cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{12} + 12cs^2\omega_{10}^3 v_2^2\omega_5\omega_{15}\omega_{12} + 12cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 12cs^2\omega_{10}^2 v_2^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 5cs^4\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}^2 + 12cs^4\omega_{10}^3\omega_5^2\omega_{21}\omega_{12} + 12\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{15} - 36cs^4\omega_{10}^3\omega_5\omega_{15}\omega_{12} - 24\omega_{10}^2 v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 18cs^4\omega_{10}^3\omega_5^3\omega_{15} + 36cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{15} + 12cs^4\omega_{10}^3\omega_5\omega_{15}\omega_{12} + 18cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3 v_2^2\omega_5\omega_{21}\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 6\omega_{10}^3 v_1^2\omega_5^3\omega_{15} - 18cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{12} + 36cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{15}\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^2\omega_{21}\omega_{12} + 12cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15} + 72cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^2 v_2^2\omega_5^2\omega_{21}\omega_{15} - 6\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15} - 84cs^4\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 12cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} - cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 12cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{15}\omega_{12} + 12\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} + 72cs^2\omega_{10}^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 12cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_{12} - 36cs^4\omega_{10}^2\omega_5^2\omega_{21}\omega_{15} - 42cs^4\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_{12} + 12\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{12} + 24\omega_{10}^3 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 36cs^2\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15} + 6\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15} - 36cs^4\omega_{10}^3\omega_5^2\omega_{15} + 12cs^2 v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12\omega_{10}^3 v_2^2\omega_5\omega_{15} - 36cs^2\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 36cs^4\omega_{10}^3\omega_5^2\omega_{15} + cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 18cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{15}\omega_{12} - 36cs^2\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 18cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{15} - 12\omega_{10}\omega_5^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^2\omega_{15}\omega_{12} - 6\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{15} + 12cs^2\omega_{10}^3\omega_5^2\omega_{15}\omega_{12} + 6cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3 v_2^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2 v_2^2 v_1^2\omega_5^2\omega_{21} - 72cs^2\omega_{10}^3 v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 88cs^4\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_{12} - 24\omega_{10}^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{12} + 36cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{15}\omega_{12} + 36cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 6\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10} v_2^3\omega_5\omega_{21}\omega_{15}\omega_{12} + 36cs^4\omega_{10}^2\omega_5^3\omega_{15}\omega_{12} + 6\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 96cs^4\omega_{10}^3\omega_{21}\omega_{15}^2\omega_{12} - 24\omega_{10}^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 42cs^4\omega_{10}^3\omega_5\omega_{15}\omega_{12} - 12\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{12} + 18cs^4\omega_{10}^2\omega_5\omega_{21}\omega_{15} - 12\omega_{10}^3 v_2^2 v_1^2\omega_5\omega_{21}\omega_{12} + 24\omega_{10}^2 v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} + 18cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15} - 6cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{15}\omega_{12} + 6cs^2\omega_{10}^2\omega_5^3 v_1^2\omega_{12} - 48cs^4\omega_{10}^2\omega_{21}\omega_{15}^2\omega_{12} - 18cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{12} - 18cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{15}\omega_{12} + 18cs^2\omega_{10}^2 v_2^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 36cs^2\omega_{10} v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 6cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15} + 6cs^2\omega_{10}^2 v_2^3\omega_5^3\omega_{21}\omega_{15} + 36\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{15} + 6cs^2\omega_{10}^3\omega_5^2\omega_{15} - 6\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12cs^2\omega_{10}\omega_5^3\omega_{15}\omega_{12} - 18cs^4\omega_{10}^2\omega_5^3\omega_{15}\omega_{12} + 24\omega_{10}^2 v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 54cs^2\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 36\omega_{10}^3 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} + 36cs^4\omega_{10}^3\omega_5^2\omega_{15}\omega_{12} - 12\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{12} - 72cs^2\omega_{10}^3 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 18cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{12} - 36cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{12} - 6cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 36cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{21}\omega_{12} - 12cs^2\omega_{10}^3\omega_5^2\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_{10}^3 v_1^2\omega_5^2\omega_{15}\omega_{12} + 36cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 18\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12cs^4\omega_{10}^3\omega_5^3\omega_{21}\omega_{12} + 12cs^2\omega_{10}^3 v_2^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 150cs^4\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 12cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{12} + 6cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{21}\omega_{12} - 6cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{15} + 18cs^2\omega_{10}^3 v_2^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^2\omega_5^2\omega_{15} + 18cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{15}^2\omega_{12} - 6\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 36cs^4\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 6cs^4\omega_{10}^2\omega_5\omega_{21}\omega_{15}\omega_{12} + 2cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 6\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2 + 12cs^4\omega_{10}^2\omega_5^3\omega_{21}\omega_{12} - 12 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12\omega_{10}^2 v_1^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} - 36cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{12} - 6cs^2\omega_{10}^3\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_5^2\omega_{12} + 12 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 36cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 6\omega_{10}^3 v_1^2\omega_5^3\omega_{15}^2\omega_{12} + 30cs^4\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 24\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} - 12\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 18cs^4\omega_{10}^3\omega_5^3\omega_{15}^2\omega_{12} - 12\omega_{10}^2 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} + 108cs^2\omega_{10} v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} + 2cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 18\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 36cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{15}^2\omega_{12} + 180cs^4\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 2cs^2\omega_{10}^3 v_2^2\omega_5\omega_{21}\omega_{15}^2\omega_{12}$

$C_{21} = 7\omega_{10}^2 v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 5\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 + 4\omega_{10}^2 v_2^2\omega_5^2\omega_{15}\omega_9\omega_{12}^2 - 4cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 2\omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 8cs^2\omega_{10}^3 v_2^2\omega_5\omega_9\omega_{12}^2 - 2\omega_{10}^3 v_2^3\omega_5^2\omega_{15}\omega_9\omega_{12} - 5cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 4\omega_{10}^3 v_2^2\omega_5^2\omega_{15}\omega_9\omega_{12} - 15cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 + 4\omega_{10}^3\omega_5^2\omega_{21}\omega_9\omega_{12}^2 - 3\omega_{10} v_2^3\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 8cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 4cs^2\omega_{10}^3\omega_5^2\omega_9\omega_{12}^2 - 2cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 2\omega_{10}^2 v_2^3\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 - \omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 + 26cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 + 4\omega_{10}^3\omega_5^3\omega_{15}\omega_9\omega_{12}^2 - 2cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}^2\omega_9 + 2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2 + 2cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}^2\omega_{12}^2 + 2\omega_{10}^2\omega_5^3\omega_{15}^2\omega_9\omega_{12}^2 + 2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 2cs^2\omega_{10}\omega_5^3\omega_{15}\omega_9\omega_{12} - 4\omega_{10}^3\omega_5^2\omega_{15}\omega_9\omega_{12} + \omega_{10}^3\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 2\omega_{10}^3 v_2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 4cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 2cs^2\omega_{10}^3\omega_5^3\omega_{15}\omega_9\omega_{12} + 5\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 4\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12} + 4 v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 3\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 4cs^2\omega_{10}^3\omega_5^2\omega_{15}^2\omega_9\omega_{12} + 12cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 4cs^2\omega_{10}^3\omega_5^2\omega_{15}\omega_9\omega_{12} + 4cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}\omega_9 - 16cs^2\omega_{10}^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 4\omega_{10}^3 v_2^2\omega_5^2\omega_{15}^2\omega_9\omega_{12} + 2cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 4\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 24cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 3\omega_{10}^3 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 3cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 2\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 4\omega_{10}^3\omega_5^2\omega_{21}\omega_9\omega_{12} - \omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 2\omega_{10}^3 v_2^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 4cs^2\omega_{10}^3\omega_5\omega_5\omega_{15}\omega_9\omega_{12} + 4\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} - 6\omega_{10} v_2^3\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 9\omega_{10}^3\omega_5^2\omega_9\omega_{12}^2 - 4\omega_{10}^3 v_2^2\omega_5^3\omega_{21}\omega_9\omega_{12} + 4\omega_{10}^3\omega_5^2\omega_{15}^2\omega_9\omega_{12} + 2\omega_{10}^3\omega_5^3\omega_{15}\omega_9\omega_{12} - 2\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 2cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 6cs^2\omega_{10}\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 4cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 4\omega_{10}^3\omega_5\omega_{21}\omega_9\omega_{12}^2 - cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 4\omega_{10}^3 v_2^2\omega_5^3\omega_{15}\omega_9\omega_{12} + 8cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 9\omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 13cs^2\omega_{10}^3\omega_5^3\omega_9\omega_{12}^2 + 6\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 8cs^2\omega_{10}^3\omega_5^2\omega_{21}\omega_9\omega_{12} - 2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 4\omega_{10}^2 v_2^3\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 2cs^2\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 12cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 2\omega_{10}^2 v_2^2\omega_5^3\omega_{15}\omega_9\omega_{12} + \omega_{10}^2 v_2^3\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + \omega_{10}^3 v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 11cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 8cs^2\omega_{10}^3\omega_5\omega_{21}\omega_9\omega_{12}^2 - 2\omega_{10}^2 v_2^3\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12} + 8cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 8cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 4\omega_{10}^3 v_2^2\omega_5^2\omega_{15}\omega_9\omega_{12}^2 + 2\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 2\omega_{10}^3\omega_5\omega_5^2\omega_{15}\omega_9\omega_{12} - 7\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 - 6cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 4\omega_{10}^3 v_2^3\omega_5^3\omega_{21}\omega_9\omega_{12}^2 + 4cs^2\omega_{10}^3\omega_5^3\omega_{15}\omega_9\omega_{12}^2 - \omega_{10}^3\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} + 3\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12} - 4\omega_{10}^3\omega_5^3\omega_{15}\omega_9\omega_{12}^2 - 4\omega_{10}^3\omega_5^2\omega_{15}^2\omega_9\omega_{12}$

$C_{22} = -72\omega_{10}^3 v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^3\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3\omega_5\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{12} + 36cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{15}\omega_{12} + 12cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 84cs^2\omega_{10}^2 v_2^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - cs^4\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 36\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{15} - 12cs^4\omega_{10}^3\omega_5^3\omega_{15}\omega_{12} - 72\omega_{10}^2 v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 6cs^4\omega_{10}^3\omega_5^3\omega_{15} + 12cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{15} + 12cs^4\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_{12} - 144cs^2\omega_{10}^2 v_2^3\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 24cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{21}\omega_{12} + 12\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 6\omega_{10}^3 v_1^2\omega_5^3\omega_{15} + 12cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{15}\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^2\omega_{21}\omega_{12} + 12cs^2\omega_{10}^2\omega_5^2\omega_{21}\omega_{15} + 24cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 36cs^2\omega_{10}^2 v_2^2\omega_5^2\omega_{21}\omega_{15} - 6\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15} - 12cs^4\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 42cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 36\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{15}\omega_{12} + 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} + 24cs^2\omega_{10}^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 12cs^2\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_{12} - 12cs^4\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2 - 12cs^4\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{12} + 24\omega_{10}^3 v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15} + 6\omega_{10}^2 v_1^2\omega_5^3\omega_{15}^2\omega_{12} - 12cs^4\omega_{10}^3\omega_5^2\omega_{15} - 12\omega_{10}^3 v_2^2\omega_5\omega_{15} - 12cs^2\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15} + 12cs^4\omega_{10}^3\omega_5\omega_{15} + 6cs^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3 v_2^2\omega_5\omega_{15} - 36\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^2\omega_5^2\omega_{12} - 18\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{15} + 12cs^2\omega_{10}^3\omega_5^2\omega_{15}\omega_{12} + 18cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{15}\omega_{12} + 60cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12cs^4\omega_{10}^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 36\omega_{10}^2 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15} - 24cs^2\omega_{10}^3 v_1^2\omega_5\omega_{21}\omega_{15}\omega_{12} - 4cs^4\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 36cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_{12} - 24\omega_{10}^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{12} + 60cs^2\omega_{10}^2 v_2^2\omega_5\omega_{21}\omega_{15}\omega_{12} + 12cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 12cs^2\omega_{10}^2\omega_5\omega_{21}\omega_{15}\omega_{12} + 12cs^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 18\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{15}^2\omega_{12} + 72cs^2\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 12cs^4\omega_{10}^2\omega_5^3\omega_{15}\omega_{12} + 18\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12cs^4\omega_{10}^3\omega_{21}\omega_{15}^2\omega_{12} - 24\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 24cs^4\omega_{10}^3\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{12} + 6cs^4\omega_{10}^2\omega_5^3\omega_{21}\omega_{15} - 36\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{12} + 72\omega_{10}^2 v_2^2 v_1^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 6cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15} - 18cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{15}^2\omega_{12} + 6cs^2\omega_{10}^2\omega_5^3\omega_{15}\omega_{12} - 12cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 6cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 24cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 180cs^2\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15} - 12cs^3\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} -$

$$6cs^2\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}^2 + 18cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15} + 108\omega_{10}^3 v_2^2 v_1^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} + 36cs^2\omega_{10}^3 v_2^2\omega_2^2\omega_5\omega_{15}^2 + 6cs^2\omega_{10}^3\omega_5^3\omega_{15}^2 - 6\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} +$$

$$18cs^2\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 6cs^4\omega_{10}^2\omega_5^3\omega_{15}^2\omega_{12} + 72\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 36\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 18cs^2\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} +$$

$$12cs^2\omega_{10}\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} - 36\omega_{10}^3 v_2^2\omega_5^2\omega_{15}\omega_{12} + 12cs^4\omega_{10}^3\omega_5^2\omega_{15}\omega_{12} - 12\omega_{10}^3 v_1^2\omega_5^3\omega_{15}\omega_{12} - 24cs^2\omega_{10}^2 v_1^2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12} + 24cs^2\omega_{10}^3\omega_2^2\omega_{21}\omega_{15}\omega_{12} +$$

$$24cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{12} - 12cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{15}\omega_{12} + 78cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3 v_1^2\omega_5^2\omega_{21}\omega_{12} - 12cs^2\omega_{10}^3\omega_2^2\omega_{15}\omega_{12} - 36cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{15}\omega_{12} -$$

$$12\omega_{10}^3 v_1^2\omega_5^3\omega_{15}\omega_{12} - 54\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 84cs^2\omega_{10}^3 v_2^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} + 24cs^4\omega_{10}^2\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 12cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}\omega_{12} +$$

$$24cs^2\omega_{10}^3 v_2^2\omega_5\omega_{21}\omega_{12} - 18cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{15}^2 - 132cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^3\omega_5^2\omega_{15}^2 + 6cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} -$$

$$36\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 18\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{15}\omega_{12} - 6cs^2\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 12cs^2\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 6cs^4\omega_{10}^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 18\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2 -$$

$$12 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12\omega_{10}^2 v_1^2\omega_5^3\omega_{15}\omega_{12} + 36\omega_{10} v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 12cs^2\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{12} - 48cs^2\omega_{10}^3 v_2^2\omega_{21}\omega_{15}\omega_{12} - 6cs^2\omega_{10}^3\omega_5^3\omega_{15}\omega_{12} -$$

$$36cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{15}^2\omega_{12} + 36 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 6cs^4\omega_{10}\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 6\omega_{10}^3 v_1^2\omega_5^3\omega_{15}^2\omega_{12} + 12cs^4\omega_{10}^3\omega_5\omega_{21}\omega_{15}\omega_{12} + 24\omega_{10}^2 v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} -$$

$$36\omega_{10}^3 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} + 6cs^4\omega_{10}^3\omega_5^3\omega_{15}^2\omega_{12} - 36\omega_{10}^2 v_2^2 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} - 108cs^2\omega_{10} v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 36cs^2\omega_{10}^3 v_1^2\omega_5^3\omega_{21}\omega_{15}\omega_{12} +$$

$$6cs^2\omega_{10}^3\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} + 18\omega_{10} v_1^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12} - 12cs^2\omega_{10} v_1^2\omega_5^3\omega_{15}^2\omega_{12} + 18cs^4\omega_{10}^3\omega_5\omega_{21}\omega_{15}^2\omega_{12} - 18cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}$$

$$C_{23} = -20\omega_{10}^2 v_2^4\omega_5\omega_{15}^2 - 8cs^2\omega_{10}^2\omega_5\omega_{15} + 4\omega_{10}^3 v_2^4\omega_5^2 + 84cs^2\omega_{10}^2 v_2^2\omega_5\omega_{15} - 20\omega_{10} v_2^4\omega_5^2\omega_{15} + 4\omega_{10}^2 v_2^2\omega_5^2 - 84cs^2\omega_{10}^2 v_2^2\omega_5\omega_{15} + 4cs^4\omega_{10}^2\omega_{15}^2 -$$

$$8cs^4\omega_{10}^2\omega_5\omega_{15}^2 + 8\omega_{10}^2 v_2^2\omega_{15}^2 + 20\omega_{10}^3 v_2^2\omega_5\omega_{15} - 72cs^2\omega_{10} v_2^2\omega_5^2\omega_{15} - 12cs^4\omega_{10}\omega_5^2\omega_{15} + 24 v_2^4\omega_5^2\omega_{15} + 16\omega_{10}^2 v_2^2\omega_5\omega_{15} - 24cs^2\omega_{10}^2 v_2^2\omega_5 +$$

$$36\omega_{10} v_2^2\omega_5\omega_{15}^2 - 4cs^4\omega_{10}^3\omega_5\omega_{15} - 4cs^4\omega_{10}^3\omega_{15} - 4cs^4\omega_{10}\omega_5\omega_{15}^2 + 20\omega_{10}^2 v_2^2\omega_5\omega_{15}^2 + 20\omega_{10} v_2^2\omega_2^2\omega_{15} - 4cs^2\omega_{10}^2\omega_{15}^2 - 36cs^2\omega_{10}^3 v_2^2\omega_{15} -$$

$$8cs^2\omega_{10}^3\omega_5\omega_{15} + 96cs^2 v_2^2\omega_5^2\omega_{15}^2 - 20\omega_{10}^3 v_2^2\omega_5\omega_{15} - 4cs^2\omega_{10}\omega_5\omega_{15} - 48cs^2\omega_{10}^2 v_2^2\omega_5\omega_{15} - 144cs^2\omega_{10} v_2^2\omega_5^2\omega_{15}^2 - 24 v_2^2\omega_5^2\omega_{15} - 16\omega_{10}^2 v_2^4\omega_5\omega_{15} -$$

$$4cs^2\omega_{10}^2\omega_5\omega_{15}^2 - 4\omega_{10}^3 v_2^4\omega_5 + 4cs^2\omega_{10}^3\omega_{15} + 8\omega_{10}^3 v_2^2\omega_{15} - 36\omega_{10} v_2^2\omega_5^2\omega_{15} + 120cs^2\omega_{10}^2 v_2^2\omega_5\omega_{15} + 72cs^2\omega_{10} v_2^2\omega_5\omega_{15} + 8cs^4\omega_{10}^3\omega_5^2\omega_{15} +$$

$$24cs^2\omega_{10}^3 v_2^2\omega_5^2 + 36cs^2\omega_{10}^2 v_2^2\omega_5 + 8cs^2\omega_{10}^2\omega_5\omega_{15}^2 + 32\omega_{10}^2 v_2^4\omega_5 - 4cs^4\omega_{10}^3\omega_5 + 20\omega_{10}^3 v_2^2\omega_5\omega_{15} - 13\omega_{10}^3 v_2^2\omega_5\omega_{15} - 4cs^2\omega_{10}^3\omega_5 -$$

$$8cs^2\omega_5^2\omega_{15} - 4\omega_{10}^3 v_2^2\omega_5 - 4\omega_{10}^2 v_2^4\omega_5 + 4cs^2\omega_{10}^3\omega_5\omega_{15} + 12cs^2\omega_{10}\omega_5^2\omega_{15} - 8\omega_{10}^2 v_2^2\omega_{15} - 4cs^4\omega_{10}^2\omega_5 + 13\omega_{10}^3 v_2^2\omega_5\omega_{15} + 4cs^2\omega_{10}\omega_5\omega_{15} -$$

$$32\omega_{10}^2 v_2^2\omega_5^2\omega_{15} + 4cs^2\omega_{10}^3\omega_5 + 4cs^4\omega_{10}\omega_5\omega_{15}^2 + 4\omega_{10}^3 v_2^2\omega_5 - 8\omega_{10}^3 v_2^4\omega_{15} - 20\omega_{10} v_2^2\omega_5\omega_{15}^2 + 8cs^4\omega_{10}^3\omega_5\omega_{15} + 8cs^4\omega_5^2\omega_{15} + 13\omega_{10}^2 v_2^4\omega_5\omega_{15}^2 +$$

$$4cs^4\omega_{10}^3\omega_5^2 - 51cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{15} + 51cs^2\omega_{10}^2 v_2^2\omega_5^2\omega_{15} + 4cs^2\omega_{10}^2\omega_5^2 - 13\omega_{10}^3 v_2^4\omega_5^2\omega_{15} - 24cs^2\omega_{10}^3\omega_5 + 4cs^4\omega_{10}^2\omega_5^2\omega_{15}$$

$$C_{24} = 252cs^2 v_2^2\omega_5^3\omega_{15}^2 - 12cs^2\omega_{10}^2\omega_5\omega_{15} - 12\omega_{10}^3 v_2^4\omega_5^2 - 12cs^2\omega_{10}^3 v_2^2\omega_5\omega_{15} + 36\omega_{10} v_2^2\omega_5^3\omega_{15} - cs^4\omega_{10}^3\omega_5\omega_{15}^2 - 48cs^2\omega_{10}^2 v_2^2\omega_5\omega_{15}^2 -$$

$$12cs^2\omega_{10}^2 v_2^2\omega_5^3 - 24\omega_{10}^3 v_2^4\omega_5\omega_{15} - 90\omega_{10} v_2^4\omega_5^3\omega_{15} + 6cs^2\omega_{10}^3\omega_5\omega_{15}^2 - 48cs^2\omega_{10}^3 v_2^2\omega_{15} - 12\omega_{10}^3 v_2^2\omega_5\omega_{15}^2 - 72 v_2^2\omega_5^3\omega_{15} + 12\omega_{10}^3 v_2^4\omega_5^3 -$$

$$cs^2\omega_{10}^2 v_2^2\omega_5^3 - 12cs^4\omega_{10}\omega_5^3\omega_{15} - 306cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{15} - 18cs^4\omega_{10}^3\omega_5^2\omega_{15} + 12\omega_{10}^2 v_2^2\omega_5^3 - 36cs^2\omega_{10}^3 v_2^2\omega_{15} + 6cs^4\omega_{10}^3\omega_5^2 + 12cs^4\omega_{10}^3\omega_5 -$$

$$36\omega_{10} v_2^4\omega_5^3\omega_{15} - 12cs^2\omega_{10}^3\omega_5\omega_{15} + 24\omega_{10}^3 v_2^2\omega_5\omega_{15} + 6cs^2\omega_{10}^2\omega_5\omega_{15} + 90\omega_{10}^2 v_2^3\omega_5^3\omega_{15}^2 + 6cs^4\omega_{10}^3\omega_5^3\omega_{15} - 12cs^4\omega_{10}\omega_5^3\omega_{15} + 12\omega_{10}^4 v_2^4\omega_5\omega_{15} -$$

$$108cs^2\omega_{10} v_2^2\omega_5^2\omega_{15}^2 + 72 v_2^4\omega_5^3\omega_{15} - 6cs^2\omega_{10}^2\omega_5^2\omega_{15} + 102cs^2\omega_{10}^3 v_2^2\omega_5\omega_{15} - 12cs^2\omega_{10}^2 v_2^2\omega_5\omega_{15} - 12\omega_{10}^3 v_2^2\omega_5^3 - 60\omega_{10}^2 v_2^2\omega_5^3\omega_{15} -$$

$$18\omega_{10}^3 v_2^4\omega_5^2\omega_{15} + 12cs^4\omega_{10}^2\omega_5^2\omega_{15} - 12cs^2\omega_{10}^3 v_2^2\omega_5^3 - 24\omega_{10}^2 v_2^4\omega_5^2\omega_{15} - 4\omega_{10}^3 v_2^2\omega_5^3\omega_{15} - 81cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{15} - 12\omega_{10}^2 v_2^4\omega_5^3 - 27\omega_{10}^3 v_2^4\omega_5^3\omega_{15} +$$

$$12cs^2\omega_{10}^3 v_2^2\omega_5^3 - 12\omega_{10}^3 v_2^2\omega_5^2\omega_{15} + 12\omega_{10}^3 v_2^2\omega_5^3 + cs^4\omega_{10}^2\omega_5^3\omega_{15} + 60cs^2\omega_{10}^2 v_2^3\omega_5^3\omega_{15} - 24cs^4\omega_{10}^3\omega_5\omega_{15} - 21cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{15} + 18cs^2\omega_{10}^2\omega_5^3\omega_{15} +$$

$$12cs^2\omega_{10}\omega_5^2\omega_{15} + 12cs^4\omega_5^3\omega_{15} - 48\omega_{10}^3 v_2^2\omega_5^2\omega_{15} + 19\omega_{10}^2 v_2^4\omega_5^3\omega_{15} + 12cs^2\omega_{10}^3 v_2^2\omega_5^3\omega_{15} - 5cs^2\omega_{10}^3\omega_5^2\omega_{15} + 60\omega_{10}^2 v_2^4\omega_5^3\omega_{15} + 18\omega_{10}^3 v_2^2\omega_5^3\omega_{15}^2 +$$

$$24\omega_{10}^2 v_2^2\omega_5^3\omega_{15} + 4\omega_{10}^3 v_2^4\omega_5^3\omega_{15} - 6cs^4\omega_{10}^2\omega_5^3\omega_{15} + 12cs^4\omega_{10}^3\omega_5\omega_{15} + 54cs^2\omega_{10}^2 v_2^3\omega_5^3\omega_{15} + 12cs^2\omega_{10}\omega_5^3\omega_{15} + 27\omega_{10}^3 v_2^2\omega_5\omega_{15} +$$

$$12\omega_{10}^2 v_2^4\omega_5^3\omega_{15} + 30cs^2\omega_{10}^3 v_2^2\omega_5^2\omega_{15} - 6cs^2\omega_{10}^3\omega_5^3\omega_{15} + 162cs^2\omega_{10}^2 v_2^2\omega_5^3\omega_{15} + 48\omega_{10}^3 v_2^4\omega_5^3\omega_{15} - 19\omega_{10}^2 v_2^2\omega_5^3\omega_{15} - 12cs^2\omega_5^3\omega_{15} + 6cs^4\omega_{10}^2\omega_5^3\omega_{15}^2$$

$$C_{25} = 56cs^2\omega_{10}^2\omega_5^2\omega_{15} - 16\omega_{10}^2 v_2^2\omega_5 - 40\omega_{10}^2\omega_5^2\omega_{15} - 48\omega_{10}^2 v_2^2\omega_5\omega_{15} - 120\omega_{10} v_2^2\omega_5^2\omega_{15}^2 - 68\omega_{10}^2 v_2^2\omega_5\omega_{15} - 12\omega_{10}^2\omega_{15} - 64\omega_{10} v_2^2\omega_5\omega_{15} +$$

$$20cs^2\omega_{10}^2\omega_{15} + 44cs^2\omega_{10}^3\omega_5\omega_{15} + 68\omega_{10}^3 v_2^2\omega_5\omega_{15} - 17\omega_{10}^2\omega_5^2\omega_{15} + 32cs^2\omega_{10}\omega_5\omega_{15} + 12\omega_{10}^3\omega_{15} + 80 v_2^2\omega_5^2\omega_{15} - 24\omega_{10}\omega_5\omega_{15} + 25cs^2\omega_{10}^2\omega_5^2\omega_{15} -$$

$$20cs^2\omega_{10}^3\omega_{15} - 28\omega_{10}^3\omega_5\omega_{15} - 28\omega_{10}^3 v_2^2\omega_{15} + 48\omega_{10}\omega_5^2\omega_{15} - 44cs^2\omega_{10}^2\omega_5\omega_{15} + 17\omega_{10}^3\omega_5^2\omega_{15} + 43\omega_{10}^2 v_2^2\omega_5^2\omega_{15} + 16cs^2\omega_{10}^3\omega_5^2 + 48cs^2\omega_5^2\omega_{15}^2 +$$

$$16\omega_{10}^3 v_2^2\omega_5 - 25cs^2\omega_{10}^2\omega_5\omega_{15} - 32\omega_5^2\omega_{15} - 8\omega_{10}^3\omega_5 + 28\omega_{10}^2\omega_5\omega_{15} - 72cs^2\omega_{10}\omega_5\omega_{15} + 28\omega_{10}^2 v_2^2\omega_{15} - 43\omega_{10}^3 v_2^2\omega_5\omega_{15} + 8\omega_{10}^3\omega_5 - 32cs^2\omega_{10}\omega_5\omega_{15} +$$

$$16\omega_{10}^2\omega_5\omega_{15} + 104\omega_{10}^2 v_2^2\omega_5\omega_{15} - 16cs^2\omega_{10}^3\omega_5 - 16\omega_{10}^3 v_2^2\omega_5 + 64\omega_{10} v_2^2\omega_5\omega_{15} - 16cs^2\omega_{10}^2\omega_5\omega_{15} + 24\omega_{10}\omega_5^2\omega_{15} + 8\omega_{10}^2\omega_5 - 16cs^2\omega_{10}^2\omega_5$$

$$C_{26} = 12 - 9\omega_{10}^3 v_2^4 + 8\omega_{10}^2 + 144cs^4 - \omega_{10}^3 - 216cs^4\omega_{10} + 144 v_2^4 - 18\omega_{10} + 82cs^4\omega_{10}^2 + 90\omega_{10}^2 v_2^4 + 672cs^2 v_2^2 - 5cs^4\omega_{10}^3 - 1008cs^2\omega_{10} v_2^2 +$$

$$234\omega_{10} v_2^2 + 404cs^2\omega_{10}^2 v_2^2 - 156 v_2^2 + 198cs^2\omega_{10} - 98\omega_{10}^2 v_2^2 - 216\omega_{10} v_2^4 + 10\omega_{10}^3 v_2^2 + 6cs^2\omega_{10}^3 - 34cs^2\omega_{10}^3 v_2^2 - 132cs^2 - 78cs^2\omega_{10}^2$$

$$C_{27} = 12 - 29\omega_{10}^3 v_2^4 + 8\omega_{10}^2 + 24cs^4 - \omega_{10}^3 - 36cs^4\omega_{10} + 504 v_2^4 - 18\omega_{10} + 14cs^4\omega_{10}^2 + 310\omega_{10}^2 v_2^4 + 432cs^2 v_2^2 - cs^4\omega_{10}^3 - 648cs^2\omega_{10} v_2^2 +$$

$$378\omega_{10} v_2^2 + 252cs^2\omega_{10}^2 v_2^2 - 252 v_2^2 + 54cs^2\omega_{10} - 154\omega_{10}^2 v_2^2 - 756\omega_{10} v_2^4 + 14\omega_{10}^3 v_2^2 + 2cs^2\omega_{10}^3 - 18cs^2\omega_{10}^3 v_2^2 - 36cs^2 - 22cs^2\omega_{10}^2$$

$$C_{28} = 6\omega_6 cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 2\omega_6\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12}^2 + 2\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6 cs^2\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} -$$

$$12\omega_6 cs^2\omega_{13}\omega_{14}\omega_5^2\omega_9\omega_{12}^2 - 4\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 4\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 24\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12}^2 +$$

$$4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_9^2\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 4\omega_6\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 4\omega_6\omega_{13}\omega_7 v_1^2\omega_5^2\omega_9\omega_{12} + 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} +$$

$$3\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12}^2 + 4\omega_6\omega_{13}\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 12cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 + 4\omega_6\omega_{13}\omega_7\omega_8\omega_5\omega_9^3\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9 +$$

$$3\omega_6\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2 + 12\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_9\omega_{12}^2 + 9\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 - 4\omega_6\omega_{13}\omega_7\omega_8\omega_5\omega_9\omega_{12} - 12cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2 -$$

$$4\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 - 4\omega_6\omega_{13}\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12}^2 + 4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 4\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_5\omega_9\omega_{12} -$$

$$12\omega_6 cs^2\omega_{13}\omega_7\omega_5^2\omega_9\omega_{12}^2 - 2\omega_6\omega_{13}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12}^2 + 4\omega_6\omega_{13} v_1^2\omega_5^2\omega_9^2\omega_{12}^2 + 12\omega_6 cs^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 6\omega_6 cs^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 +$$

$$4\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12}^2 - 6\omega_6 cs^2\omega_{13}\omega_8\omega_5^2\omega_9^3\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_5\omega_9^2\omega_{12} + 12\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_5^2\omega_9\omega_{12} - 12\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9 +$$

$$2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_{12}^2 - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12}^2 + 2\omega_6\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} +$$

$$4\omega_6\omega_7\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}^2 + 12\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 + 12\omega_6 cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 6\omega_6 cs^2\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} +$$

$$6\omega_6 cs^2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 + 4\omega_6\omega_{13}\omega_7\omega_{14} v_1^2\omega_5^2\omega_9\omega_{12} + 6\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 - 2\omega_6\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} +$$

$$4\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 12cs^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 + 2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} + 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 + 12\omega_6 cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 6\omega_6 cs^2\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} +$$

$$6\omega_6 cs^2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 + 4\omega_6\omega_{13}\omega_7\omega_{14} v_1^2\omega_5^2\omega_9\omega_{12} + 6\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 - 2\omega_6\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} +$$

$$4\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 12cs^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 + 2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} + 4\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 + 2\omega_6\omega_{13}\omega_7\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} -$$

$$4\omega_6\omega_7\omega_{14}\omega_8\omega_5\omega_5^2\omega_9^2\omega_{12}^2 - 24\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_{12} - 12\omega_6 cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 2\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} -$$

$$6\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_{12} - 6\omega_6 cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9 - 4\omega_6\omega_{13}\omega_5^2\omega_9^2\omega_{12}^2 - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2\omega_9\omega_{12}^2 +$$

$$12\omega_6 cs^2\omega_{13}\omega_7\omega_5\omega_9^2\omega_{12}^2 + 2\omega_6\omega_{13}\omega_8\omega_5^2\omega_9^2\omega_{12}^2 - 2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 - 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} +$$

$$12cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 + 4\omega_6\omega_{13}\omega_7\omega_5^2\omega_9\omega_{12}^2 + 4\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} - 12cs^2\omega_{13}\omega_7\omega_{14}\omega_5\omega_9\omega_{12}^2 - 4\omega_6\omega_{13}\omega_{14} v_1^2\omega_5^2\omega_9^2\omega_{12} -$$

$$4\omega_6\omega_{13}\omega_7\omega_{14} v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6 cs^2\omega_{13}\omega_7\omega_8\omega_5\omega_9^2\omega_{12} - 3\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_9\omega_{12}^2 - 9\omega_6 cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2 -$$

$$12\omega_6 cs^2\omega_{13}\omega_7\omega_8\omega_5\omega_9^2\omega_{12}^2 - 4\omega_6\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12}^2 + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12}^2 - 4\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12}^2 - 12\omega_6 cs^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12} -$$

$$6\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 12\omega_6 cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_9\omega_{12} - 4\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 4\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9 -$$

$$8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 3\omega_6\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} - 12cs^2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 12\omega_6cs^2\omega_{13}\omega_5^2\omega_9^2\omega_{12} - 4\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} -$$
$$2\omega_6\omega_{13}\omega_7\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} + 12cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 + 4\omega_6\omega_{13}\omega_{14}\omega_5^2\omega_9\omega_{12}^2 - 2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2\omega_9\omega_{12}^2 - 4\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 +$$
$$4\omega_6\omega_{13}\omega_7v_1^2\omega_5\omega_9^2\omega_{12}^2 + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_9\omega_{12}^2 - 2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 - 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9\omega_{12}^2$$

$C_{29} = 2\omega_6cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 6\omega_6\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9\omega_{12} + 6\omega_6\omega_{13}\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} + 2\omega_6cs^2\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} -$
$4\omega_6cs^2\omega_{13}\omega_{14}\omega_5^2\omega_9\omega_{12}^2 - 12\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9^2\omega_{12}^2 + 4\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2 + 8\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 6\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9\omega_{12} +$
$4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_9^2\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 12\omega_6\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9^2\omega_{12} - 12\omega_6\omega_{13}\omega_7v_1^2\omega_5^2\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} +$
$9\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9\omega_{12} + 12\omega_6\omega_{13}\omega_7\omega_8v_1^2\omega_5\omega_9^2\omega_{12} - 4cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_8\omega_5\omega_9\omega_9^2\omega_{12} + 6\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9 +$
$3\omega_6\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_9^2 + 4\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_9\omega_9^2 + 3\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_8\omega_5\omega_9\omega_9\omega_{12} - 4cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12} -$
$4\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12} - 12\omega_6\omega_{13}\omega_7\omega_8v_1^2\omega_5\omega_9^2\omega_{12} + 4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 4\omega_6\omega_{13}v_1^2\omega_5\omega_9^2\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_5\omega_9\omega_9^2\omega_{12} -$
$4\omega_6cs^2\omega_{13}\omega_7\omega_5^2\omega_9^2\omega_{12} - 6\omega_6\omega_{13}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}v_1^2\omega_5^2\omega_9^2\omega_{12} + 4\omega_6cs^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 2\omega_6cs^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} +$
$12\omega_6\omega_{13}\omega_{14}\omega_8v_1^2\omega_5\omega_9\omega_{12} - 2\omega_6cs^2\omega_{13}\omega_8\omega_5^2\omega_9^2\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_5\omega_9^2\omega_{12} + 4\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_5^2\omega_9\omega_{12} - 4\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2 +$
$2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2 - 12\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_9\omega_{12} + 24\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9\omega_{12} + 6\omega_6\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} +$
$4\omega_6\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9\omega_{12} + 4\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_{12} + 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 4\omega_6cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 2\omega_6cs^2\omega_{13}\omega_7\omega_8\omega_5^2\omega_9\omega_{12} +$
$2\omega_6cs^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 + 12\omega_6\omega_{13}\omega_7\omega_{14}v_1^2\omega_5^2\omega_9\omega_{12} + 2\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 - 2\omega_6\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} +$
$12\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9\omega_{12} + 4cs^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} + 4\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 6\omega_6\omega_{13}\omega_7\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} -$
$4\omega_6\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 8\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_{12} - 4\omega_6cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 6\omega_6\omega_{13}\omega_{14}\omega_8v_1^2\omega_5^2\omega_9\omega_{12} -$
$2\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_5\omega_9^2\omega_{12} - 2\omega_6cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2 - 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_5\omega_9\omega_{12} +$
$4\omega_6cs^2\omega_{13}\omega_7\omega_5\omega_9^2\omega_{12} + 2\omega_6\omega_{13}\omega_8\omega_5^2\omega_9^2\omega_{12} - 2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 6\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9\omega_{12} +$
$4cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_5^2\omega_9^2\omega_{12} + 12\omega_{13}\omega_{14}\omega_8v_1^2\omega_5^2\omega_9\omega_{12} - 4\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_5\omega_9\omega_{12} - 12\omega_6\omega_{13}\omega_{14}v_1^2\omega_5^2\omega_9\omega_{12} -$
$12\omega_6\omega_{13}\omega_7\omega_{14}v_1^2\omega_5\omega_9\omega_{12} + 4\omega_6cs^2\omega_{13}\omega_7\omega_8\omega_5\omega_9\omega_9^2 - 3\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_9\omega_{12} - 3\omega_6cs^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} -$
$4\omega_6cs^2\omega_{13}\omega_7\omega_8\omega_5\omega_9^2\omega_{12} - 12\omega_6\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9\omega_{12} + 12\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_{12} - 12\omega_6\omega_{13}\omega_{14}\omega_8v_1^2\omega_5\omega_9^2\omega_{12} - 4\omega_6cs^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} -$
$2\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 4\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_9^2\omega_{12} - 4\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 12\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} - 12\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9^2 -$
$8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12} - 9\omega_6\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} - 4cs^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 4\omega_6cs^2\omega_{13}\omega_5^2\omega_9^2\omega_{12} - 12\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} -$
$6\omega_6\omega_{13}\omega_7\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} + 4cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9^2 + 4\omega_6\omega_{13}\omega_{14}\omega_5^2\omega_9\omega_{12}^2 - 2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2\omega_9\omega_{12}^2 - 4\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 +$
$12\omega_6\omega_{13}\omega_7v_1^2\omega_5\omega_9^2\omega_{12}^2 + 12\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_9\omega_{12}^2 - 2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2 - 24\omega_6\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9\omega_{12}^2$

$C_{30} = cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 4cs^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_{12} + 2cs^2\omega_7^2\omega_8\omega_5^2\omega_{12} + 2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 2cs^2\omega_7\omega_{14}\omega_5^3\omega_{12} + \omega_7\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{12} + 2\omega_7\omega_8v_1^2\omega_5^3\omega_{12} -$
$cs^2\omega_7\omega_8^2\omega_5^3\omega_{12} + 13cs^2\omega_7^2\omega_{14}\omega_8\omega_5\omega_{12} + 2\omega_7^2\omega_8\omega_5^3\omega_{12} - 4\omega_7\omega_{14}^2\omega_8\omega_5^2\omega_{12} + 4\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{12} - 2cs^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6cs^2\omega_7\omega_{14}\omega_8\omega_5\omega_{12} -$
$2\omega_7^2\omega_8v_1^2\omega_5^3\omega_{12} + \omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} - 11cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2\omega_{12} - 2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} - 2\omega_7\omega_8\omega_5^2\omega_{12} - 2cs^2\omega_7^2\omega_8\omega_5^3\omega_{12} + \omega_7\omega_8^2\omega_5^3\omega_{12} -$
$\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_{12} - \omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{12} + \omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - \omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 7cs^2\omega_7\omega_{14}\omega_8\omega_5^3\omega_{12} - \omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 2cs^2\omega_{14}\omega_8\omega_5^3\omega_{12} +$
$5cs^2\omega_7^2\omega_{14}\omega_8\omega_5^3\omega_{12} - 2cs^2\omega_7^2\omega_{14}\omega_8\omega_5\omega_{12} + 2\omega_7^2\omega_8v_1^2\omega_5^2\omega_{12} + 2\omega_7^2\omega_{14}\omega_8\omega_5^2 - \omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{12} + \omega_7^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} + cs^2\omega_7^2\omega_8^2\omega_5^3\omega_{12} -$
$\omega_7\omega_8^2v_1^2\omega_5^3\omega_{12} - 2\omega_7\omega_8\omega_5^3\omega_{12} + 2\omega_7^2\omega_8^2\omega_5^2\omega_{12} + 4cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_{12} - 2cs^2\omega_7^2\omega_{14}\omega_5^3\omega_{12} + \omega_7^2\omega_{14}\omega_8v_1^2\omega_5^3\omega_{12} + \omega_7^2\omega_{14}\omega_8\omega_5^3\omega_{12} + 2\omega_7^2\omega_8v_1^2\omega_5^2\omega_{12} -$
$8cs^2\omega_7^2\omega_{14}\omega_8^2 + \omega_7^2\omega_8\omega_5^3\omega_{12} + 2cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_{12} + \omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} - \omega_7^2\omega_{14}\omega_8\omega_5^2\omega_{12} + \omega_7^2\omega_8^2v_1^2\omega_5^3\omega_{12} - 2cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_{12} +$
$2\omega_7^2\omega_{14}\omega_8\omega_5\omega_{12} - 2\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} - \omega_7^2\omega_{14}\omega_8\omega_5^3\omega_{12} - \omega_7^2\omega_8^2v_1^2\omega_5^3\omega_{12} + 7cs^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} - \omega_7^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{12} + 6cs^2\omega_7^2\omega_{14}\omega_8\omega_5\omega_{12} +$
$2cs^2\omega_7\omega_8^2\omega_5^3\omega_{12} - cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} - \omega_7^2\omega_8^2\omega_5^3\omega_{12} + 2cs^2\omega_7^2\omega_{14}\omega_5^2\omega_{12} + \omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^3 - 2cs^2\omega_7^2\omega_8^2\omega_5^2\omega_{12} + cs^2\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_{12} -$
$2\omega_7\omega_8^2v_1^2\omega_5^2\omega_{12} + \omega_7\omega_{14}\omega_8\omega_5^3\omega_{12} - \omega_7\omega_{14}\omega_8v_1^2\omega_5^3\omega_{12} - cs^2\omega_7^2\omega_8\omega_5^3\omega_{12} - 2\omega_7^2\omega_8^2\omega_5^2\omega_{12} - 5cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 2\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^2 - 2cs^2\omega_{14}\omega_8^2\omega_5^2\omega_{12}$

$C_{31} = \omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 9\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_9^2\omega_{12} + 24\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_9^2\omega_{12} -$
$6\omega_6^2cs^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 12\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2 + 12\omega_6^2\omega_{13}\omega_8\omega_5^2\omega_9^2\omega_{12} - 36\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9 + 12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_5\omega_9^2\omega_{12} +$
$12\omega_6^2\omega_{13}\omega_7\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 36\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_{12} + 12\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_9^2\omega_{12} + 12\omega_6\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} +$
$12\omega_6^2cs^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} + 18\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 24cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6\omega_{13}\omega_7\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 12\omega_6cs^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} -$
$12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 54\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5\omega_9^2\omega_{12} - 18\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_9^2 -$
$6\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} + 36\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_9\omega_{12} - 12\omega_6cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} -$
$\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2cs^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2cs^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 42\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} -$
$12\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2\omega_9\omega_{12} + 12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 12\omega_6^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^2\omega_{12} - 24cs^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 12\omega_6cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} +$
$6\omega_6^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9\omega_{12} - 6\omega_6^2cs^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9\omega_{12} + 6\omega_6^2\omega_{13}\omega_7\omega_8^2v_1^2\omega_5\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} -$
$6\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9 + 6\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9 + 12\omega_6^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5\omega_9\omega_9 - 54\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} +$
$6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 36\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 24\omega_6cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_9\omega_{12} + 12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} +$
$6\omega_6^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_{12} - 6\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 3\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 9\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} - 3\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_{12} -$
$12\omega_6^2\omega_{13}\omega_7^2\omega_8v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6\omega_7^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 24cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 12\omega_6^2\omega_{13}\omega_7\omega_8v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6^2cs^2\omega_{13}\omega_7\omega_8\omega_5\omega_9\omega_{12} -$
$12\omega_6cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 18\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 12\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_9\omega_{12} - 9\omega_6^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 42\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} +$
$54\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 6\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12} + 12\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_9\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9\omega_{12} + 12\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} +$
$12\omega_6^2cs^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} + 12\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 6\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 6\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} -$
$12\omega_6^2\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_{12} - 12\omega_6^2cs^2\omega_{13}\omega_7^2\omega_8\omega_5^2\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2cs^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} -$
$12\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9 + 12\omega_6^2\omega_{13}\omega_7\omega_8v_1^2\omega_5\omega_9\omega_9^2\omega_{12} - 12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_{12} + 12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} -$
$36\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_9\omega_{12} + 18\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_{12} - 12\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} - 12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} -$
$6\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 54\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 9\omega_6^2cs^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} -$
$12\omega_6\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 12\omega_6^2\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} + 6\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^2\omega_{12} +$
$24\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 6\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6^2cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} +$
$4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_9\omega_{12} + 30\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 12\omega_6cs^2\omega_{13}\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 18\omega_6^2cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9 -$
$24cs^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 12\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_5\omega_9^2\omega_{12} - 12\omega_6cs^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5^2\omega_9^2\omega_{12} -$
$12\omega_6^2cs^2\omega_{13}\omega_7\omega_8^2\omega_5\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}\omega_7\omega_8^2v_1^2\omega_5\omega_9\omega_{12} - 12\omega_6^2cs^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12} - 18\omega_6^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8v_1^2\omega_5\omega_9\omega_9^2\omega_{12}$

$$C_{32} = -2\omega_7\omega_8\omega_5^3 - \omega_7^2\omega_8^2\omega_5^2 + 3\omega_7^2\omega_8^2\omega_5 - \omega_8^2\omega_5^2 + \omega_7\omega_5^3 + \omega_7^2\omega_8\omega_5 - \omega_7^2\omega_5^3 - 2\omega_7^2\omega_8^2 + \omega_8\omega_5^3 + \omega_7^2\omega_5^2 - \omega_7\omega_8^2\omega_5 + 2\omega_7\omega_8^2\omega_5^2 + \omega_7^2\omega_8\omega_5^3 - 2\omega_7^2\omega_8\omega_5^2$$

$$C_{33} = 2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 2\omega_7^2\omega_8\omega_5^3\omega_{12} - 4\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} + \omega_{14}\omega_8\omega_5^3\omega_{12}^2 + \omega_7\omega_{14}\omega_5^3\omega_{12}^2 - 2\omega_7^2\omega_8\omega_5^2\omega_{12} + \omega_7\omega_8^2\omega_5^3\omega_{12}^2 - \omega_7\omega_{14}\omega_8^2\omega_5^3\omega_{12} - \omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_{12}^2 - \omega_7^2\omega_{14}\omega_5^2\omega_8^3 + 2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 2\omega_7^2\omega_{14}\omega_8^2\omega_5 + \omega_7^2\omega_{14}\omega_8\omega_5^3\omega_{12} + 3\omega_7^2\omega_{14}\omega_8\omega_5\omega_{12} - 3\omega_7\omega_{14}\omega_8^2\omega_5\omega_{12} + \omega_7^2\omega_{14}\omega_5^2\omega_{12} - 2\omega_7\omega_8^2\omega_5^3\omega_{12} + 2\omega_7^2\omega_8\omega_5^2\omega_{12}^2 - 4\omega_7^2\omega_{14}\omega_8\omega_5^2\omega_{12} + \omega_7^2\omega_8\omega_5^3\omega_{12} + 2\omega_7\omega_{14}\omega_8\omega_5^2\omega_{12} - \omega_{14}\omega_8^2\omega_5^2\omega_{12} + 5\omega_7^2\omega_{14}\omega_8\omega_5\omega_{12}^2 + 2\omega_7^2\omega_{14}\omega_8\omega_5\omega_{12} + \omega_7^2\omega_{14}\omega_8\omega_5\omega_{12}^2 - \omega_7^2\omega_8\omega_5^3\omega_{12}^2 - \omega_7^2\omega_{14}\omega_5^3\omega_{12}^2 - 2\omega_7\omega_{14}\omega_8\omega_5^3\omega_{12}^2 - 4\omega_7^2\omega_{14}\omega_8^2\omega_{12}^2 - 2\omega_7^2\omega_8\omega_5^2\omega_{12}$$

$$C_{34} = 2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} - 4\omega_6\omega_{10}^2\omega_7\omega_8^2\omega_5^3\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3\omega_{15} + 5\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_5^3\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^3 - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^3 - 4\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^3\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5^3\omega_{15} - 8\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15}^2 + 4\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_8^2\omega_5^3\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15}^2 - 10\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3\omega_{15} + 2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^3\omega_{15} - 4\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^3\omega_{15}^2 + 6\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 8\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} - 4\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 8\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} - 8\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^3\omega_{15} + 8\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}$$

$$C_{35} = -12\omega_6^2\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} + 6\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8v_1^2\omega_3^3\omega_{15}\omega_{12} +$$
$$24\omega_6^2\omega_{16}\omega_7v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 48\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{14}\omega_8\omega_5^2v_1^2\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} - 36\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^3v_1^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_3^3\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}cs^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 36\omega_6\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12} + 12\omega_6\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}v_1^2\omega_3^3\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 24\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12} + 12\omega_6\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8v_1^2\omega_3^3\omega_{15}\omega_{12} - 24\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8v_1^2\omega_5\omega_{15}\omega_{12} + 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} -$$
$$12\omega_6\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12} + 12\omega_6\omega_{16}cs^2\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^3\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}v_1^2\omega_3^3\omega_{15}\omega_{12} + 36\omega_6\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - 6\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^3\omega_{12} -$$
$$12\omega_6^2\omega_{16}cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} - 12\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_{14}\omega_8^3v_1^2\omega_5^3\omega_{15}\omega_{12} - 6\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^3v_1^2\omega_5\omega_{15} - 18\omega_6\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 12\omega_6\omega_{16}cs^2\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - \omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^3\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_8v_1^2\omega_3^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^3\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} +$$
$$12\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - 48\omega_6\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12} +$$
$$12\omega_6cs^2\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{12} - 6\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_3^3\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8\omega_5\omega_{15}\omega_{12} + 12\omega_6^2cs^2\omega_{10}\omega_7^3\omega_{14}\omega_8^3\omega_5^3\omega_{15}\omega_{12} +$$
$$24\omega_6^2\omega_{16}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} - 24\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8v_1^2\omega_3^3\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2v_1^2\omega_5\omega_{15} - 12\omega_6^2\omega_7^3v_2^2\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{12} - 18\omega_6\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_6cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} -$$
$$24\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_{15}\omega_{12} - 18\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} -$$
$$18\omega_6\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^2cs^2\omega_{10}\omega_7\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6\omega_{16}cs^2\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}\omega_7^3v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8v_1^2\omega_3^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}\omega_7^3v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - 24\omega_6\omega_{16}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^2\omega_{10}\omega_7^2v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12} - 12\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} +$$
$$30\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6\omega_{16}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{12} - 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_{12} -$$
$$24\omega_6^2\omega_{16}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 24\omega_6^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8\omega_5\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8v_1^2\omega_5\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} + 12\omega_6\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} - 12\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{10}\omega_7^3v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^2cs^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 24\omega_6^2\omega_{16}\omega_{10}\omega_3^3\omega_{17}\omega_{14}\omega_8v_1^2\omega_5\omega_{15}\omega_{12} - 24\omega_6^2\omega_{16}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} +$$
$$18\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8v_1^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2v_1^2\omega_3^3\omega_{15} - 24\omega_6\omega_{16}\omega_{10}\omega_7v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} -$$
$$2\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12} + 10\omega_6\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8v_1^2\omega_3^3\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_{12} - 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{12} -$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8v_1^2\omega_5\omega_{15}\omega_{12} - 24\omega_6\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8\omega_5\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}v_1^2\omega_5\omega_{15}\omega_{12} -$$
$$6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} - 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{16}\omega_{10}\omega_7v_2^2\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12} +$$
$$24\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_5\omega_{15}\omega_{12} - 12\omega_6\omega_{10}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}$$

$$C_{36} = \omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8^2\omega_5^2\omega_{15} + 6\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5 - \omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^3\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} + \omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_{15} + \omega_{16}\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^2\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_5^2\omega_{15} + \omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5^2\omega_{15} - \omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}^3v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_5^2\omega_{15} + 6\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_{16}^2cs^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_8\omega_5\omega_{15} - \omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$$

$$2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}\omega_{10}^3\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15}^2 - \omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 - 3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2\omega_{15}^2 - 3\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$3\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$2\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 - 3cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 - 3\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15}^2 - 3\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$$
$$\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 3\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5\omega_{15}^2 +$$
$$3cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 - 2\omega_{16}^2\omega_{10}\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + \omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15}^2 + \omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2 -$$
$$6\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2\omega_{15} - 2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$2\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15} - 2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} -$$
$$3\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$6\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2\omega_{15} + 2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2\omega_{15} + 2\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}\omega_7\omega_{17}v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$6\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_{15} + \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} - \omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 3\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$\omega_{16}\omega_{10}^3\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}\omega_{10}v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$3\omega_{16}cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5 + 3\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 + \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_5^2\omega_{15} -$$
$$\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_5^2\omega_{15} + \omega_{16}\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} - 2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_8\omega_5\omega_{15} + 3\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 -$$
$$3\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7^2\omega_5^2\omega_{15} - 3cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + \omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8\omega_5\omega_{15} + \omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5^2\omega_{15} -$$
$$2\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_{16}\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 9\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_{16}\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}\omega_7\omega_5^2\omega_{15} -$$
$$\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}\omega_7v_2^2\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_5^2\omega_{15} -$$
$$2\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} + 2\omega_{16}^2\omega_7\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15}$$

$C_{37} = -\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 4\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 8\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} +$
$2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15} - 2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - \omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 +$
$4\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5\omega_{15} -$
$8\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15}^2 - \omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 15\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} + 2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 8\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_8^2\omega_5^3\omega_{15} + 6\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 - 5\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2 - 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 11\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} +$
$3\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$4\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} + \omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} -$
$3\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^3\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^2\omega_{15} - 9\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_{16}^2\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^3\omega_{10}^3v_2^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 13\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$3\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8^2\omega_5^3\omega_{15} -$
$2\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} + 9\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$5\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} - \omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 6\omega_6cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$15\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + \omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^3\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 3\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3 - 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 6\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_5^3\omega_{15} - 8\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8^2\omega_5^3\omega_{15} +$
$11\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 8\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_{17}\omega_8\omega_5^3\omega_{15} - 6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^2\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_6\omega_{16}\omega_{10}^3\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^3\omega_{15} + 4\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8^2\omega_5^3\omega_{15} + 6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 3\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} +$
$6\omega_6cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} -$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} - \omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} - 2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} +$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 9\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^2v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6\omega_{16}^2cs^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$
$2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^3\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3\omega_{15} - 6\omega_6cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15}$

$C_{38} = \omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15}^2 + \omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_8\omega_5\omega_{15} + 2\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5 - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} -$
$\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_{15} - \omega_{16}cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 3\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15} + \omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$
$\omega_{16}cs^2\omega_{10}^3\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} + \omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_{15} +$
$3\omega_{16}\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} + \omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5\omega_{15} -$
$3\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_5\omega_{15} - 3\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2cs^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15}^2 -$

$$\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} + 3\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - \omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} +$$
$$3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} - \omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - 3\omega_{16}\omega_{10}^3v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}\omega_7\omega_5^2\omega_{15} +$$
$$2\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_{16}^2cs^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} - 3\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_8\omega_5^2\omega_{15} - 3\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - \omega_{16}^2cs^2\omega_{10}^3v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} + \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$2\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5\omega_{15} +$$
$$cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5\omega_{15} - \omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} - 2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$6\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$$
$$\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}cs^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_5\omega_{15} - \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} + 2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} + 6\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_{16}\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 + 3\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_8\omega_5\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$2\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_{15} + \omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5^2\omega_{15} - 3\omega_{16}\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$$
$$\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_{15} - 9\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2cs^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{16}cs^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} -$$
$$3\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_5^2\omega_{15} + 3\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} - 2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} + \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 -$$
$$\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2\omega_{15} - \omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}\omega_{10}^3\omega_7\omega_5^2\omega_{15} - cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} + \omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5\omega_{15} -$$
$$6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - \omega_{16}\omega_{10}^3\omega_7\omega_5^2\omega_{15} -$$
$$3\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_8\omega_5^2\omega_{15} - \omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 3\omega_{16}^2\omega_{10}^3\omega_7v_2^2\omega_5^2\omega_5 + 3\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_5^2\omega_{15} -$$
$$3\omega_{16}\omega_{10}^3\omega_7v_2^2\omega_8\omega_5^2\omega_{15} + 6\omega_{16}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15}$$

$C_{39} = -\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2^2\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{10}^2\omega_7^3v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{17}\omega_8\omega_5^2 + 2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_{15} + 4\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_8\omega_5^2\omega_{15} -$
$2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8^2\omega_5^2\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{10}^2\omega_7^3\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$2\omega_6\omega_{16}cs^2\omega_{10}\omega_{10}^3\omega_{17}\omega_8^2\omega_5^2\omega_5^2 + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_8^2\omega_5^2\omega_5^2 - 2\omega_6\omega_{16}\omega_{10}^2\omega_7^3\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8\omega_5\omega_{15} - 6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5 + 6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2 +$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 9\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - \omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8\omega_5^2\omega_5^2 -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}cs^2\omega_{10}^2\omega_7\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7v_2\omega_8^2\omega_5\omega_{15} + 2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_8\omega_5\omega_{15} + 2\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$8\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_5 + 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_{15} -$
$4\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_8^2\omega_5^2 - 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_5\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_8\omega_5\omega_{15} -$
$8\omega_6\omega_{16}^2cs^2\omega_{10}\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5\omega_{15} - 3\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15} -$
$4\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_5^2 - 4\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 4\omega_6\omega_{16}\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_5^2 -$
$4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - \omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8\omega_5\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_5\omega_{15} - 13\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7^3v_2\omega_8^2\omega_5^2\omega_{15} - 11\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_8^2\omega_5^2\omega_{15} + 6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 +$
$4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}^2cs^2\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_8^2\omega_5^2\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$
$6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2\omega_6\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2 +$
$11\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5^2\omega_{15} + 6\omega_6\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8\omega_5^2\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 8\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5^2\omega_{15} - \omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_8^2\omega_5\omega_{15} + 9\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15} - 8\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_8\omega_5\omega_{15} - 15\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_7^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15} +$
$2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5\omega_{15} - 2\omega_6cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 15\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5\omega_{15} -$
$4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8^2\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_8\omega_5^2\omega_{15} + 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 +$
$\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2 -$
$2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_5 + 4\omega_6\omega_{16}^2\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_5^2\omega_{15} -$
$6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5^2 - 6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_8^2\omega_5\omega_{15} - 8\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2v_2\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5 - 5\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2\omega_8^2\omega_5^2\omega_{15} - \omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_8^2\omega_5\omega_{15} - \omega_6\omega_{16}\omega_{10}^3\omega_7^2v_2\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_8^2\omega_5\omega_{15} + 2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_5^2\omega_{15} - 2\omega_6\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2\omega_8^2\omega_5\omega_{15} + 9\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$
$2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15} + \omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$
$6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5^2\omega_{15} - 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_8^2\omega_5\omega_{15} +$
$5\omega_6\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} - \omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_6cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$
$2\omega_6\omega_{16}\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3v_2\omega_8^2\omega_5\omega_{15} - 3\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15} + 3\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5\omega_{15}$

$C_{40} = 20\omega_{16}\omega_{10}^3\omega_7v_2^4 - 4\omega_{16}^2cs^2\omega_{10}^2\omega_7 - 36\omega_{16}\omega_{10}\omega_7v_2^4 + 4cs^2\omega_{10}^3\omega_7 + 24\omega_{16}^2\omega_7^2v_2^4 - 24cs^2\omega_{10}^2\omega_7v_2^2 - 13\omega_{16}\omega_{10}^2\omega_7v_2^2 + 4\omega_{16}cs^2\omega_{10}^3 +$
$8_{16}\omega_{10}^3v_2^2 + 4cs^2\omega_{10}^2\omega_7 - 20\omega_{16}^2\omega_{10}^2\omega_7v_2^2 - 20\omega_{16}^2\omega_{10}\omega_7v_2^2 + 13\omega_{16}\omega_{10}^3\omega_7^2v_2^2 - 8_{16}^2cs^4\omega_{10}^2\omega_7 + 4cs^4\omega_{10}^3\omega_7 - 4\omega_{16}cs^4\omega_{10}\omega_7^2 +$

$$84\omega_{16}cs^2\omega_{10}^3\omega_7v_2^2 + 4\omega_{10}^2\omega_7^2v_2^2 + 4\omega_{16}cs^4\omega_{10}^2\omega_7^2 - 24cs^2\omega_{10}^3\omega_7v_2^2 - 4cs^4\omega_{10}^3\omega_7 + 20\omega_{16}\omega_{10}\omega_7^2v_2^2 + 32\omega_{16}\omega_{10}^2\omega_7v_2^4 + 4\omega_{16}^2cs^4\omega_{10} + 4\omega_{10}^3\omega_7^2v_2^4 +$$
$$8\omega_{16}^2\omega_{10}^2v_2^4 + 51\omega_{16}^2cs^2\omega_{10}^2\omega_7^2v_2^2 - 4cs^4\omega_{10}^2\omega_7^2 + 16\omega_{16}cs^2\omega_{10}^2\omega_7v_2^2 + 120\omega_{16}cs^2\omega_{10}^2\omega_7^2v_2^2 + 4\omega_{10}^3\omega_7v_2^2 - 36\omega_{16}cs^2\omega_{10}^3\omega_7 + 8\omega_{16}^2cs^2\omega_{10}\omega_7 +$$
$$72\omega_{16}^2cs^2\omega_{10}\omega_7v_2^2 + 4\omega_{16}cs^4\omega_7^2 + 8\omega_{16}cs^4\omega_7^2 - 4cs^2\omega_{10}^3\omega_7 - 32\omega_{16}\omega_{10}^2\omega_7^2v_2^2 - 4\omega_{16}cs^4\omega_{10}^2\omega_7 - 4\omega_{10}^3\omega_7^2v_2^2 - 48\omega_{16}cs^2\omega_{10}\omega_7^2v_2^2 -$$
$$8\omega_{16}^2\omega_{10}^2v_2^2 - 144\omega_{16}^2cs^2\omega_{10}\omega_7^2v_2^2 - 4\omega_{16}^2cs^2\omega_{10}\omega_7 - 8\omega_{16}cs^2\omega_{10}^2\omega_7^2 - 20\omega_{16}\omega_{10}\omega_7^2v_2^4 - 72\omega_{16}cs^2\omega_{10}\omega_7^2v_2^2 + 24cs^2\omega_{10}^3\omega_7^2v_2^2 - 12\omega_{16}^2cs^4\omega_{10}\omega_7^2 +$$
$$36\omega_{16}^2cs^2\omega_{10}v_2^2 - 8\omega_{16}cs^2\omega_{10}^3\omega_7 - 16\omega_{16}^2\omega_{10}\omega_7v_2^4 - 84\omega_{16}^2cs^2\omega_{10}\omega_7v_2^2 - 4\omega_{16}cs^4\omega_{10}^3 - 4\omega_{10}^3\omega_7v_2^4 + 4\omega_{16}cs^2\omega_{10}\omega_7^2 - 24\omega_{16}^2\omega_7^2v_2^2 +$$
$$13\omega_{16}^2\omega_{10}\omega_7^2v_2^4 - 8\omega_{16}\omega_{10}^3v_2^2 - 20\omega_{16}\omega_{10}^3\omega_7v_2^2 + 4\omega_{16}^2cs^4\omega_{10}\omega_7 + 36\omega_{16}^2\omega_{10}\omega_7^2v_2^2 - 51\omega_{16}^2cs^2\omega_{10}^3\omega_7^2v_2^2 - 8\omega_{16}^2cs^2\omega_7^2 + 8\omega_{16}cs^4\omega_{10}^2\omega_7^2 +$$
$$20\omega_{16}^2\omega_{10}\omega_7v_2^4 + 96\omega_{16}^2cs^2\omega_7^2v_2^2 - 13\omega_{16}^2\omega_{10}^2\omega_7^2v_2^4 + 12\omega_{16}^2cs^2\omega_{10}\omega_7^2 - 4\omega_{10}^2\omega_7^2v_2^4 + 8\omega_{16}cs^4\omega_{10}^3\omega_7 - 4\omega_{16}^2cs^2\omega_{10} + 20\omega_{16}^2\omega_{10}\omega_7v_2^2$$

$C_{41} = 25\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 + 24\omega_{16}\omega_{10}\omega_7^2 - 16cs^2\omega_{10}^3\omega_7 + 8\omega_{10}^3\omega_7 + 43\omega_{16}^2\omega_{10}\omega_7^2v_2^2 - 20\omega_{16}cs^2\omega_{10}^3 - 28\omega_{16}\omega_{10}^3v_2^2 - 17\omega_{16}^2\omega_{10}^2\omega_7^2 + 12\omega_{16}\omega_{10}^3 - 16cs^2\omega_{10}^2\omega_7^2 + 8\omega_{10}^2\omega_7^2 + 64\omega_{16}\omega_{10}\omega_7v_2^2 - 43\omega_{16}\omega_{10}^3\omega_7^2v_2^2 - 16\omega_{10}^2\omega_7^2v_2^2 - 64\omega_{16}\omega_{10}\omega_7^2v_2^2 + 28\omega_{16}^2\omega_{10}^3\omega_7 - 48\omega_{16}^2\omega_{10}^3v_2^2 - 8\omega_{10}^3\omega_7^2 - 16\omega_{10}^3\omega_7v_2^2 - 44\omega_{16}^2cs^2\omega_{10}\omega_7 - 32\omega_{16}cs^2\omega_{10}\omega_7^2 + 16cs^2\omega_{10}^3\omega_7^2 + 104\omega_{16}\omega_{10}\omega_7^2v_2^2 + 16\omega_{10}^3\omega_7^2v_2^2 + 28\omega_{16}^2\omega_{10}^2v_2^2 + 32\omega_{16}^2cs^2\omega_{10}\omega_7 + 56\omega_{16}cs^2\omega_{10}^2\omega_7^2 + 16\omega_{16}\omega_{10}^2\omega_7 + 44\omega_{16}cs^2\omega_{10}^3\omega_7 + 17\omega_{16}\omega_{10}^3\omega_7^2 - 24\omega_{16}^2\omega_{10}\omega_7 - 25\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 48\omega_{16}^2\omega_{10}\omega_7^2 - 28\omega_{16}\omega_{10}^3\omega_7 + 80\omega_{16}^2\omega_7^2v_2^2 - 32\omega_{16}^2\omega_7^2 + 68\omega_{16}\omega_{10}^3\omega_7v_2^2 - 120\omega_{16}^2\omega_{10}\omega_7^2v_2^2 + 48\omega_{16}^2cs^2\omega_7^2 - 72\omega_{16}^2cs^2\omega_{10}\omega_7^2 - 12\omega_{16}^2\omega_{10}^2 - 16\omega_{16}cs^2\omega_{10}^2\omega_7 - 40\omega_{16}\omega_{10}^2\omega_7^2 + 20\omega_{16}^2cs^2\omega_{10}^3 - 68\omega_{16}^2\omega_{10}\omega_7v_2^2$

$C_{42} = -24\omega_{16}\omega_{10}^3\omega_7v_2^4 + 12\omega_{10}^3\omega_7^3v_2^4 - 6\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 + 60\omega_{16}^2cs^2\omega_{10}^2\omega_7^3v_2^2 + 60\omega_{16}\omega_{10}^2\omega_7^3v_2^4 + 102\omega_{16}^2cs^2\omega_{10}\omega_7^3v_2^2 + 36\omega_{16}\omega_{10}\omega_7^3v_2^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2 + 13\omega_{16}^2cs^4\omega_{10}\omega_7^3 + 4\omega_{16}\omega_{10}^3\omega_7v_2^4 + 6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - \omega_{16}^2cs^2\omega_{10}^2\omega_7^3 - 4cs^4\omega_{10}^3\omega_7^3 - 48\omega_{16}\omega_{10}^3\omega_7^3v_2^2 + 54\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2 - 12\omega_{16}^2cs^2\omega_{10}^3\omega_7v_2^2 - 19\omega_{16}^2\omega_{10}\omega_7^3v_2^2 + 6\omega_{16}^2cs^4\omega_{10}^3\omega_7^2 - 12\omega_{16}\omega_{10}^3\omega_7^3v_2^2 - 12cs^2\omega_{10}^3\omega_7^3v_2^2 + 72\omega_{16}^2\omega_7^3v_2^4 - 24\omega_{16}\omega_{10}^2\omega_7^3v_2^4 + 12\omega_{16}^2cs^4\omega_7^3 - 5\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 12\omega_{10}^3\omega_7^3v_2^4 - 90\omega_{16}\omega_{10}\omega_7^3v_2^4 + 162\omega_{16}^2cs^2\omega_{10}^2\omega_7^3v_2^2 + 12\omega_{10}^3\omega_7^3v_2^2 + \omega_{16}^2cs^4\omega_{10}^3\omega_7^3 + 27\omega_{16}\omega_{10}^3\omega_7^3v_2^2 - 12\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2 - 24\omega_{16}^2cs^4\omega_{10}^3\omega_7 + 12\omega_{16}^2cs^4\omega_{10} - 18\omega_{16}^2\omega_{10}^3\omega_7^3v_2^4 - 21\omega_{16}cs^2\omega_{10}^3\omega_7^3v_2^2 + 24\omega_{16}\omega_{10}^2\omega_7^3v_2^2 - 18\omega_{16}cs^4\omega_{10}^3\omega_7^2 + 12\omega_{10}^3\omega_7^3v_2^2 - 12\omega_{16}^2cs^4\omega_{10}\omega_7^3 + 90\omega_{16}\omega_{10}\omega_7^3v_2^2 + 19\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2 - 108\omega_{16}^2cs^2\omega_{10}\omega_7^3v_2^2 - 12\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 12\omega_{16}^2\omega_{10}^3\omega_7v_2^4 - 72\omega_{16}^2\omega_7^3v_2^2 - 12cs^2\omega_{10}^3\omega_7^2v_2^2 - 12\omega_{16}^2cs^4\omega_{10}\omega_7^2 + 6\omega_{16}cs^4\omega_{10}^3\omega_7^3 + 18\omega_{16}^2\omega_{10}^3\omega_7^3v_2^2 - 12\omega_{16}cs^2\omega_{10}^3\omega_7 + 12\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_2^2 + 6\omega_{16}cs^2\omega_{10}^2\omega_7^3 - 12\omega_{10}^3\omega_7^3v_2^4 - 48\omega_{16}^2cs^2\omega_{10}\omega_7^3v_2^2 - 27\omega_{16}\omega_{10}^3\omega_7^3v_2^4 + 252\omega_{16}^2cs^2\omega_7^3v_2^2 + 18\omega_{16}cs^2\omega_{10}^3\omega_7^2 - 36\omega_{16}\omega_{10}\omega_7^3v_2^2 - 306\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_2^2 + 12\omega_{16}^2\omega_{10}\omega_7^3v_2^4 + 12\omega_{16}^2cs^2\omega_{10}\omega_7^3 + 24\omega_{16}\omega_{10}^3\omega_7v_2^2 - 12\omega_{10}^3\omega_7^3v_2^2 + 30\omega_{16}cs^2\omega_{10}^3\omega_7^2v_2^2 - 60\omega_{16}\omega_{10}^3\omega_7^3v_2^2 + 12\omega_{16}cs^4\omega_{10}^2\omega_7 + 48\omega_{16}\omega_{10}^3\omega_7^2v_2^4 + 12\omega_{16}^2cs^2\omega_{10}\omega_7^3 - 81\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_2^2 - 6\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 6\omega_{16}cs^4\omega_{10}^3\omega_7^3 - 12\omega_{16}^2cs^2\omega_7^3 - 48\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 4\omega_{16}^2\omega_{10}^3\omega_7^3v_2^2 + 12\omega_{16}cs^4\omega_{10}^3\omega_7 + 12cs^2\omega_{10}^3\omega_7^3v_2^2 - 36\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2$

$C_{43} = -6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2\omega_5 - 6\omega_6^2\omega_{19}\omega_7^2v_2^2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} + 6\omega_6^2\omega_{19}\omega_7^2v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} - 3\omega_6^2cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} +$
$6\omega_6^2cs^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2^2\omega_8^2v_1\omega_5\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_8^2\omega_5 - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8v_1^2\omega_5\omega_{12} -$
$6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5 + 12\omega_6^2\omega_{19}cs^2\omega_7^2v_2^2\omega_{14}\omega_8v_1\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5\omega_{12} - 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5 -$
$12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_8^2\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3\omega_8v_1\omega_5\omega_{12} - 48\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8\omega_5\omega_{12} + 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} -$
$6\omega_6^2\omega_{19}cs^2\omega_7^2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} - 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8\omega_5\omega_{12} + 24\omega_6^2\omega_{19}cs^4\omega_7\omega_{20}v_2\omega_{14}\omega_5\omega_{12} +$
$12\omega_6^2cs^2\omega_7v_2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2^2\omega_8^2v_1\omega_5\omega_{12} -$
$24\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_{12} - 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_8v_1\omega_5\omega_{12} + 6\omega_6^2cs^2\omega_7^2v_2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5 +$
$12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} + 2\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_{12} - 3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{12} + 3\omega_6^2cs^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} -$
$48\omega_6^2\omega_{19}cs^4\omega_7\omega_{20}v_2\omega_{14}\omega_8\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2v_3^2\omega_8^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8^2v_1^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_8\omega_5^2\omega_{12} +$
$12\omega_6^2\omega_{19}cs^2\omega_7v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_8v_1^2\omega_5\omega_{12} + 12\omega_6^2cs^2\omega_7v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_8^2v_1\omega_5^2\omega_{12} -$
$6\omega_6^2\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{12} +$
$6\omega_6^2\omega_7^2v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7^2v_2v_3^2\omega_{14}\omega_8\omega_5\omega_{12} -$
$12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{12} - 24\omega_{19}cs^4\omega_7\omega_{20}v_2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8v_1\omega_5\omega_{12} +$
$12\omega_6^2\omega_{19}cs^2\omega_7^2v_2v_2\omega_{14}\omega_8v_1^2\omega_5\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} +$
$3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5 - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2v_3^2\omega_8^2\omega_5\omega_{12} - 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} +$
$12\omega_6^2\omega_{19}\omega_7\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5 - 12\omega_6^2\omega_{19}cs^2\omega_7v_2^2\omega_{14}\omega_8v_1\omega_5\omega_{12} - 6\omega_6^2\omega_{19}\omega_7\omega_{20}v_2v_3^2\omega_8^2v_1^2\omega_5\omega_{12} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5\omega_{12} +$
$6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5 + 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_8v_1\omega_5\omega_{12} - 28\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_8v_1^2\omega_5\omega_{12} -$
$12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_8v_1^2\omega_5\omega_{12} + 3\omega_6^2cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2v_2\omega_{14}\omega_8v_1\omega_5\omega_{12} - 3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} -$
$12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{12} - 24\omega_6^2\omega_{19}cs^4\omega_{20}v_2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}\omega_7v_2^2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} +$
$3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2\omega_5 - 24\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8\omega_5\omega_{12} + 12\omega_6^2\omega_{19}\omega_7v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2v_2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{12} -$
$24\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_5\omega_{12} + 12\omega_6^2\omega_{19}\omega_7^2v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} - 12\omega_6^2cs^2\omega_7v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}\omega_7v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{12} +$
$12\omega_6^2\omega_{19}cs^2\omega_7v_2v_3^2\omega_{14}\omega_8\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5\omega_{12} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} +$
$12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8v_1^2\omega_5 - 6\omega_6^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} + 6\omega_6^2cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} + 6\omega_6^2cs^2\omega_7^2\omega_{20}v_2\omega_8v_1^2\omega_5 -$
$3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5^2 - 6\omega_6^2\omega_{19}cs^2\omega_7^2v_2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}\omega_7v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} - 6\omega_6^2cs^2\omega_7v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} +$
$48\omega_6\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_8v_1\omega_5^2\omega_{12} + 6\omega_6^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 24\omega_6^2\omega_{19}cs^4\omega_{20}v_2\omega_{14}\omega_8\omega_5^2\omega_{12} +$
$24\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5 - 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2^2\omega_8v_1\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}\omega_7^2v_2^2v_3^2\omega_{14}\omega_8v_1^2\omega_5\omega_{12} +$
$24\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_5\omega_{12} - 12\omega_6^2\omega_{19}\omega_7^2v_2^2v_3^2\omega_{14}\omega_8v_1\omega_5\omega_{12} + 6\omega_6^2cs^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7v_2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{12} -$
$3\omega_6^2cs^2\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} - 6\omega_6^2cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_8v_1^2\omega_5\omega_{12} -$
$3\omega_6^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} + 48\omega_6\omega_{19}cs^4\omega_7\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_{12} + 3\omega_6^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_8v_1\omega_5 +$
$6\omega_6^2cs^2\omega_7^2v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8v_1\omega_5 - 12\omega_6^2\omega_{19}cs^2\omega_7v_2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2v_2v_3^2\omega_{14}\omega_8\omega_5^2\omega_{12} -$
$6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} - 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5 + 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8v_1\omega_5\omega_{12} -$
$12\omega_6^2\omega_{19}cs^2\omega_7^2v_2\omega_{14}\omega_8v_1^2\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5\omega_{12} - 3\omega_6^2\omega_{19}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5 + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2v_3^2\omega_8v_1\omega_5\omega_{12} -$
$6\omega_6^2\omega_{19}cs^2\omega_7^2v_2\omega_{14}\omega_8^2v_1^2\omega_5\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8v_1\omega_5\omega_{12} + 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5 - 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} +$
$3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8v_1\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3\omega_{14}\omega_8v_1\omega_5^2\omega_{12} +$
$6\omega_6^2\omega_{19}\omega_7\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2\omega_5\omega_{12} - 6\omega_6^2cs^2\omega_7^2v_2v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} -$
$6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7v_2\omega_{14}\omega_8v_1\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2v_3^2\omega_8\omega_5\omega_{12} -$
$12\omega_6^2\omega_7v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_3\omega_8^2v_1\omega_5 - 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_8v_1\omega_5\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8^2v_1^2\omega_5\omega_{12} +$
$12\omega_6^2\omega_7v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}\omega_7^2v_2^2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_5 +$
$24\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7v_2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}\omega_7v_2v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{12} - 12\omega_6^2cs^2\omega_7v_2^2\omega_{14}\omega_8^2v_1\omega_5\omega_{12} -$

$12\omega_6^2\omega_{19}\omega_7 v_2^2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_8^2 v_1^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_8 v_1\omega_5\omega_{12} + 6\omega_6^2\omega_{19}\omega_7\omega_{20}v_2 v_3^2\omega_8 v_1^2\omega_5^2\omega_{12} +$

$6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2 v_3^2\omega_8^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7 v_2^2\omega_{14}\omega_8 v_1\omega_5\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2 v_3^2\omega_8\omega_5^2\omega_{12} - 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_8^2 v_1^2\omega_5^2 +$

$12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8 v_1\omega_5 + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8\omega_5^2\omega_{12} -$

$6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} - 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2^2\omega_8^2 v_1\omega_5 - 6\omega_6^2 cs^2\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2 v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_{12} +$

$3\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_{12} - 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} + 24\omega_6^2\omega_{19}cs^4\omega_7^2\omega_{20}v_2\omega_{14}\omega_8\omega_5^2\omega_{12} + 12\omega_6^2\omega_{19}\omega_7\omega_{20}v_2 v_3^2\omega_8 v_1^2\omega_5^2\omega_{12}$

$C_{44} = 2\omega_6^2 cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2^2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7^2 v_2^2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} -$

$4\omega_6^2\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} - \omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_5\omega_9 + 8\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} +$

$8\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_9 + 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_8^2\omega_5\omega_9 +$

$4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5\omega_9\omega_{12} + 8\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_8^2\omega_5\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2 cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2\omega_5\omega_9 -$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_2^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^2 cs^2\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9 - 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 2\omega_6^2 cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} -$

$8\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} - \omega_6^2 cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 8\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_{12} -$

$8\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} + 8\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} +$

$2\omega_6^2\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 8\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_9 + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2\omega_5\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}v_1\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}v_1\omega_5^2\omega_9\omega_{12} + 12\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} -$

$2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 8\omega_6^2\omega_{19}\omega_{13}\omega_7 v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5\omega_9 + 4\omega_6\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2^2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - \omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_9 - 8\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} +$

$8\omega_6\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9 - 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5\omega_9\omega_{12} - 4\omega_6^2 cs^2\omega_{13}\omega_7 v_3^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} -$

$2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} + \omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} -$

$2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 8\omega_6^2 cs^2\omega_{13}\omega_7 v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} +$

$8\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_7 v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} - 8\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5\omega_9\omega_{12} + 12\omega_6\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 8\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5\omega_9\omega_{12} -$

$8\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_8\omega_5\omega_9\omega_{12} + \omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} +$

$2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2 v_3^2\omega_8^2\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_8\omega_5\omega_9\omega_{12} - 8\omega_6\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_9\omega_{12} +$

$2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_8^2\omega_5^2\omega_9 - 8\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 16\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} + 8\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_9\omega_{12} +$

$8\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} + 8\omega_6\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} - 8\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} - 4\omega_6^2 cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} +$

$2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_8\omega_5\omega_9 - 20\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}v_1\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_3^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_{12} +$

$8\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} -$

$6\omega_6\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} + 2\omega_6^2 cs^2\omega_{13}\omega_7^2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_2^2\omega_5\omega_9\omega_{12} + 4\omega_6\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} + 8\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_8\omega_5\omega_9\omega_{12} - 2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} +$

$4\omega_6\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} + 6\omega_6^2 cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_8\omega_5\omega_9\omega_{12} -$

$4\omega_6\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9 + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_9 - 8\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_8^2\omega_5\omega_9 + 4\omega_6^2\omega_{19}\omega_{13}\omega_7 v_2^2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5^2\omega_9 +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}v_1\omega_5^2\omega_9\omega_{12} - \omega_6^2\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 4\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - \omega_6^2 cs^2\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - \omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9 +$

$2\omega_6^2 cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 8\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} - 8\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9\omega_{12} -$

$8\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_9 + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_8^2\omega_5\omega_9\omega_{12} -$

$4\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_8\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12} +$

$2\omega_6^2\omega_{13}\omega_7\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_8^2\omega_5\omega_9\omega_{12} + 8\omega_6^2\omega_{13}\omega_7 v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} +$

$8\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7 v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2\omega_5\omega_9\omega_{12} - 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} -$

$2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + \omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 8\omega_6\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_9\omega_{12} -$

$4\omega_6^2 cs^2\omega_{13}\omega_7 v_2^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_9 + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2\omega_5\omega_9 +$

$4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_9\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_2^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} +$

$2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_9 - 4\omega_6^2\omega_{19}cs^2\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2 cs^2\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8 v_1\omega_5\omega_9\omega_{12}$

$C_{45} = 2\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 4cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} + 8\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} - 4\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} +$

$8\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^3\omega_{12} + 4cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 2cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}cs^4\omega_7^3\omega_{20}\omega_8^2\omega_5^2\omega_{12} - 4\omega_{19}cs^4\omega_7^3\omega_{20}\omega_8^2\omega_5^2 +$

$4\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} + \omega_{19}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^3 + 4\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12} - 4\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_{12} -$

$4\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}\omega_7^3 v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} - 8\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8^2 v_1\omega_5^3\omega_{12} +$

$4\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2 - 4\omega_{19}\omega_7^3 v_3^2\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} + 8\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8 v_1^2\omega_5\omega_{12} + 8\omega_{19}cs^2\omega_7^2 v_2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} +$

$2\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_8^2 v_1^2\omega_5^3\omega_{12} + 2\omega_{19}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8\omega_5\omega_{12} -$

$4\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_5^3\omega_{12} + 4cs^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^3 v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{12} - 2\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^3 - 4\omega_{19}cs^2\omega_7^3\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} +$

$$8\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} - 4\omega_{19}cs^4\omega_7^2\omega_{14}\omega_8\omega_5^3\omega_{12} + 2cs^4\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{12} - 2\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2 + 4cs^2\omega_7^3 v_2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} +$$
$$2\omega_{19}cs^4\omega_7^3\omega_{20}\omega_8^2\omega_5^3 + 2\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_8^2\omega_5^3\omega_{12} - 2\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} - 4\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} -$$
$$2\omega_{19}cs^4\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{12} + cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} - \omega_{19}cs^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{12} +$$
$$8\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_8^2 v_1\omega_5^2\omega_{12} + 8\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5^2\omega_{12} + 4\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}v_1^2\omega_5^3\omega_{12} - 4\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_8^2 v_1^2\omega_5^2\omega_{12} + 2\omega_{19}cs^4\omega_7^2\omega_{20}\omega_8^2\omega_5^3\omega_{12} -$$
$$2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3 - 2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 8cs^2\omega_7^2 v_2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} - 8\omega_{19}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} + 4\omega_{19}\omega_7^3 v_3^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} +$$
$$4\omega_7^3 v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^2\omega_{20}v_3\omega_8\omega_5^3\omega_{12} + 4\omega_{19}cs^4\omega_7^3\omega_{20}\omega_8\omega_5^3\omega_{12} + 8\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_{12} + 4\omega_{19}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{12} -$$
$$2\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^3 + 8\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 2\omega_{19}cs^4\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 2cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} -$$
$$8\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5^3\omega_{12} + 4\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_8^2 v_1\omega_5^3\omega_{12} + 2\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} -$$
$$2cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5 + 2\omega_{19}cs^4\omega_7^3\omega_{14}\omega_8^2\omega_5^3\omega_{12} + cs^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - \omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} +$$
$$2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_8^2\omega_5^3\omega_{12} - 2cs^4\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5 - 2\omega_{19}\omega_7^2\omega_{20}v_3^2\omega_8^2 v_1^2\omega_5^3\omega_{12} +$$
$$4\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} + 4\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3\omega_{12} +$$
$$4\omega_{19}\omega_7^2 v_3^2\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_8 v_1^2\omega_5^3\omega_{12} + 8\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5^3\omega_{12} - 4\omega_{19}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} +$$
$$4\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 4\omega_{19}cs^4\omega_7^2\omega_{20}\omega_8\omega_5^3\omega_{12} + 2\omega_{19}\omega_7^3 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 8\omega_{19}cs^2\omega_7^2 v_2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} - 8\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} +$$
$$4\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} - 8\omega_{19}cs^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} + 8\omega_{19}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} +$$
$$4\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} - 2cs^2\omega_7^3\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{12} + 4\omega_{19}cs^4\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{12} +$$
$$2\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} - 8\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_8 v_1\omega_5^3\omega_{12} + \omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} +$$
$$2\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} - 2\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^3\omega_{12} + 4\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{19}cs^4\omega_7^3\omega_{20}\omega_8^2\omega_5^3\omega_{12} + 8\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^3\omega_{12} -$$
$$8\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_8 v_1\omega_5^2\omega_{12} + 8\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_{12} - 2\omega_7^3 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}cs^4\omega_7^3\omega_{14}\omega_8\omega_5^2\omega_{12} + 4\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{14}v_1^2\omega_5^2\omega_{12} +$$
$$8\omega_{19}cs^2\omega_7^3\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} + 2\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 8\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} +$$
$$2\omega_{19}cs^2\omega_7^3\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 8\omega_{19}cs^2\omega_7^3 v_2\omega_{14}\omega_8 v_1\omega_5^2\omega_{12} - 2\omega_{19}cs^4\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12} - 4\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} +$$
$$4\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_8\omega_5^2\omega_{12} - 4\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5\omega_{12} - 12\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8 v_1^2\omega_5^3\omega_{12} + 4cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12} +$$
$$4\omega_{19}cs^4\omega_7^3\omega_{20}\omega_8^2\omega_5^3\omega_{12} - \omega_{19}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} + 4\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5^3\omega_{12} - 8\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5^3 - 4\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} +$$
$$4\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_8^2 v_1^2\omega_5^3 + 4\omega_7^3 v_3\omega_{14}\omega_8^2 v_1^2\omega_5^3\omega_{12} - 4\omega_{19}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{12} - 4\omega_{19}cs^4\omega_7^3\omega_{14}\omega_8\omega_5^3\omega_{12} - 16\omega_{19}cs^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^3\omega_{12} -$$
$$8\omega_{19}\omega_7^3 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} - 2\omega_{19}\omega_7^3 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} + 6\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{12} + 8\omega_{19}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_8^2\omega_5^2 -$$
$$2\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 4\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_8^2 v_1\omega_5^3 - 8\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_8 v_1\omega_5^2\omega_{12} + 4\omega_{19}\omega_7^3\omega_{20}v_3^2\omega_8 v_1^2\omega_5^2\omega_{12} - 2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^2 +$$
$$\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^3 - 2cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^3\omega_{12} + 8\omega_{19}cs^2\omega_7^2 v_2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} - 2\omega_{19}cs^2\omega_7^3\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} - 2\omega_{19}\omega_7^2\omega_{20}v_3^2\omega_8^2 v_1^3\omega_5^3 +$$
$$4\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_8^2 v_1\omega_5^3 - 4\omega_{19}cs^2\omega_7^2\omega_{20}v_3\omega_8\omega_5^3\omega_{12} - 2\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5\omega_{12} + \omega_{19}cs^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3 -$$
$$12\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 4\omega_{19}\omega_7^2\omega_{20}v_3\omega_8^2 v_1^3\omega_5^3\omega_{12} - 2\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2 + \omega_{19}cs^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^3 -$$
$$16\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{12} - 8\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_8^2 v_1\omega_5 - 4\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{14}v_1^2\omega_5^3\omega_{12} - 8\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_{14}\omega_8 v_1\omega_5^3\omega_{12} +$$
$$8\omega_{19}cs^2\omega_7^3\omega_{20}v_2\omega_8 v_1\omega_5^3\omega_{12} - 12\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{12} - 2\omega_{19}cs^2\omega_7^3\omega_{20}v_3^2\omega_8^2\omega_5^3 - 4cs^4\omega_7^2\omega_{14}\omega_8^2\omega_5^3\omega_{12} + 4\omega_{19}cs^4\omega_7^3\omega_{14}\omega_8\omega_5^3\omega_{12}$$

$C_{46} = -4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7 v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}\omega_{12} - 3\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} -$

$4\omega_6^2\omega_{19}\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_5^2\omega_{18}\omega_{12} + 3\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{12} +$

$2\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} - 2\omega_6^2\omega_{19}\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2 v_3^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8 v_1\omega_5\omega_{18}\omega_{12} +$

$6\omega_6\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} +$

$\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - 4\omega_6^2 cs^2\omega_7\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} -$

$4\omega_6^2\omega_{19}\omega_7 v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1^2\omega_5\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} -$

$2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2\omega_5^2\omega_{18} - 4\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2 v_1\omega_5^2\omega_{18} +$

$4\omega_6\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 4\omega_6^2\omega_{19}\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} +$

$8\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{12} - 2\omega_6^2\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} -$

$4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{12} +$

$2\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6 cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2\omega_5^2\omega_{12} -$

$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_5\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} +$

$2\omega_6^2\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} - \omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} + 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_5\omega_{18}\omega_{12} -$

$2\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} + \omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12} -$

$4\omega_6\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} - \omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^2 cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} +$

$4\omega_6^2\omega_7 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} - 4\omega_6\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} +$

$\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8 v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} -$

$2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{12} +$

$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_5\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} - 2\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12} - \omega_6^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} +$

$2\omega_6^2\omega_{19}\omega_7\omega_{20}v_2^2\omega_{11}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} + \omega_6^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_5\omega_{18}\omega_{12} -$

$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1^2\omega_5\omega_{18} - 4\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12} -$

$4\omega_6^2\omega_{19}\omega_7\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2 cs^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - 2\omega_6^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} +$

$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{12} -$

$2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} + 2\omega_6\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_{12} -$

$2\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_{12} - \omega_6^2 cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - 2\omega_6^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12} - 4\omega_6\omega_{19}cs^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2\omega_5\omega_{18} -$

$2\omega_6^2\omega_{19}\omega_7\omega_{20}v_2\omega_{11}\omega_8^2 v_1^2\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - 4\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} +$

$4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8 v_1^2\omega_5^2\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2 v_1\omega_5\omega_{18} -$

$$2\omega_6^2\omega_{19}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} +$$
$$4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_8\omega_5\omega_{18}\omega_{12} + \omega_6^2 cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}\omega_{12} +$$
$$2\omega_6^2\omega_{19}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} - 10\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_{12} - 4\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8 v_1\omega_5\omega_{18}\omega_{12} +$$
$$4\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1^2\omega_5\omega_{18}\omega_{12} +$$
$$4\omega_6^2\omega_{19}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}\omega_{12} + 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_5^2\omega_{18} - 2\omega_6\omega_{19}cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12} -$$
$$4\omega_6^2\omega_{19}\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}\omega_{12} - 2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}\omega_{12} +$$
$$2\omega_6^2 cs^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}cs^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_{12} + 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_{12} -$$
$$2\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{12} - 2\omega_6^2 cs^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} + 4\omega_6^2\omega_{19}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}\omega_{12} +$$
$$2\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} + \omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}$$

$$C_{47} = \omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - \omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1\omega_5^2 - \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} -$$
$$\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2\omega_5^2\omega_{15} -$$
$$\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2 + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1\omega_5\omega_{15} -$$
$$2\omega_{19}cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5^2\omega_{15} - \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8 v_1\omega_5 - \omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8 v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^3\omega_8\omega_5 v_1\omega_5^2\omega_{15} + 2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} + 4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - 2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_5\omega_{15} - \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} +$$
$$\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2 - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2 - 4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2 + 2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^3\omega_8^2 v_1\omega_5^2 + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + \omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8 v_1\omega_5^2\omega_{15} + 4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} +$$
$$\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5 + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8 v_1\omega_5\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8 v_1\omega_5 - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8\omega_5^2\omega_{15} +$$
$$\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5^2 +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^3 v_1^2\omega_5^2\omega_{15} + 4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_1\omega_5^2\omega_{15} -$$
$$\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8 v_1\omega_5\omega_{15} +$$
$$\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1\omega_5\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 v_1^2\omega_5\omega_{15} + \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} -$$
$$\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2 + 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^3\omega_8 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} -$$
$$4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_1\omega_5^2\omega_{15} + 2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8\omega_5^2\omega_5 -$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8 v_1^2\omega_5^2\omega_{15} -$$
$$\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} - 2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} - 2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$$
$$\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8 v_1^2\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$$
$$\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_3\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - 4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5 - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2 v_3\omega_8\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5 + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} -$$
$$\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2 - \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5 + 2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2 + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2 + 4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} - 8\omega_{19}\omega_{16}cs^4\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} -$$
$$\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8 v_1\omega_5 - 2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$$
$$2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3^2\omega_8 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5 + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1^2\omega_5\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8\omega_5\omega_{15} + \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5 - 2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$$
$$\omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8 v_1\omega_5^2 +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8 v_1\omega_5\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5\omega_{15} + 2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1^2\omega_5\omega_{15} +$$
$$2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} + \omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2 - 2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} +$$
$$\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5\omega_{15} + 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - 4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5 -$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2 - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_3\omega_8\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} -$$

$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_3^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{15} + 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8^2v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5\omega_{15} - \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2 -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8v_1^2\omega_5\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5 + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2v_1\omega_5^2\omega_{15} +$$
$$4\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_1\omega_5\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} +$$
$$\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2v_1\omega_5\omega_{15} + \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8v_1^2\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5\omega_{15} -$$
$$2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1^2\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1^2\omega_5^2 +$$
$$\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8\omega_5\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^2 - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} + 8\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2v_1\omega_5\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{15} + 2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8v_1\omega_5\omega_{15} + 2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} + \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{15} +$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5 +$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1^2\omega_5 - 2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^2\omega_{15} +$$
$$\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8\omega_5 +$$
$$12\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8v_1^2\omega_5\omega_{15} -$$
$$8\omega_{19}\omega_{16}cs^4\omega_{10}\omega_{7}\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^2 + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8v_1^2\omega_5\omega_{15} - 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2v_1\omega_5^2 + 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2 + 2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_5\omega_{15} +$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8v_1\omega_5\omega_{15} -$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2 -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2 +$$
$$\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{8}v_1\omega_5\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8v_1\omega_5^2\omega_{15} - 2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8v_1\omega_5\omega_{15} +$$
$$2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8v_1^2\omega_5\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8v_1^2\omega_5^2\omega_{15} + \omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5\omega_{15} +$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5\omega_{15} + 2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1^2 - 8\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8v_1\omega_5\omega_{15} +$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} -$$
$$2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5 - 2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2v_1^2\omega_5\omega_{15} +$$
$$2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5\omega_{15} + \omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2v_1\omega_5^2\omega_{15} - \omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} + \omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15}$$

$C_{48} = -12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^3\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} +$

$24\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8\omega_5^3\omega_{15} +$

$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_5^3\omega_{15} -$

$6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_{15} - 12\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} +$

$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$

$12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} + 24\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{15} -$

$6\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^3\omega_{15} + 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$

$24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^3\omega_{15} -$

$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{15} - 48\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8\omega_5^3\omega_{15} + 12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} -$

$6\omega_6^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 24\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^3\omega_5^3\omega_{5} +$

$12\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^3\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^3\omega_5^3\omega_{15} -$

$6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} - 12\omega_6\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$

$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^3\omega_5^3\omega_{15} + 12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$

$6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6\omega_{19}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$

$6\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15} - 24\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} +$

$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3^2\omega_8\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$

$24\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} -$

$12\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$

$24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3\omega_{15} +$

$6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$

$24\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$

$24\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$

$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$

$12\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^3\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2 - 12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} +$

$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8\omega_5^2\omega_{15} - 12\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} -$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3 + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} -$$
$$6\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^2\omega_{15} + 12\omega_6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$$
$$24\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2v_1\omega_5^2 + 6\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 36\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2 +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 24\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 60\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^2\omega_{15} +$$
$$12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^3\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{15} + 24\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$$
$$24\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^3v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2v_1\omega_5^3 +$$
$$6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15} + 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5\omega_{15} + 6\omega_6^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2v_1\omega_5^2\omega_{15} + 6\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3 +$$
$$6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3 + 6\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3 - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2\omega_8\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$$
$$6\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8v_1\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8v_1\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8\omega_5\omega_{15} + 12\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^3 -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6\omega_{19}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3 + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_5^2\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} +$$
$$42\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3\omega_8v_1\omega_5^3\omega_{15} -$$
$$18\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^3\omega_{15} - 24\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{15} - 24\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3\omega_{15} + 12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2 +$$
$$6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2\omega_5^3\omega_{15} + 10\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$$
$$24\omega_6\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8v_1\omega_5^3 + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3 +$$
$$12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 2\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 36\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8\omega_5^2\omega_{15} +$$
$$6\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 6\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8v_1\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3 + 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3^2\omega_8\omega_5^3\omega_{15} + 12\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^3\omega_{15} + 18\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8\omega_5\omega_{15} -$$
$$12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 24\omega_6\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^3 - 12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3 - 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8\omega_5^3\omega_{15} - 18\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3 - 24\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8v_1\omega_5^2\omega_{15} -$$
$$18\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3\omega_8^2v_1\omega_5^3\omega_{15} +$$
$$6\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_7^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_7^2v_3\omega_8v_1\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^3\omega_{15} + 24\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$$
$$24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8\omega_5^3 + 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2 -$$
$$24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2v_3\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8v_1^2 + 12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 36\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$$
$$12\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3^2\omega_8^2\omega_5^3 - 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2v_3\omega_8v_1\omega_5^2 +$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3 - 12\omega_6^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3 -$$
$$60\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3 - 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3 + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3 -$$
$$24\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^3 - 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_7^2\omega_{17}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 24\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8v_1\omega_5^3\omega_{15} +$$
$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2v_1\omega_5^3\omega_{15} + 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8v_1\omega_5^3\omega_{15} -$$

$$24\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1\omega_5^2\omega_{15} + 24\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^3 + 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$12\omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} - \omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3^2\omega_8^2\omega_5^3\omega_{15} +$$
$$12\omega_6^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2 - 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$24\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^3\omega_{15} -$$
$$24\omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^3\omega_{15} - 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} - 12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^3 +$$
$$24\omega_6^3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^3\omega_{15} - 6\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_3^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{15} -$$
$$12\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{15} - 18\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15} - 12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2\omega_5^3\omega_{15} -$$
$$12\omega_6^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3\omega_{15} + 12\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^3\omega_{15} + 6\omega_6^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^3$$

$C_{49} = -2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_1\omega_5^2\omega_{15} - 2\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1^2\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2 + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2 v_1\omega_5 - 2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} -$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5 - 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8 v_1^2\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2 -$
$4\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2 + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8 v_1\omega_5\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5 - 8\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5\omega_{15} +$
$4\omega_6\omega_{19}cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1^2\omega_5^2\omega_{15} -$
$4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2 - 8\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^2\omega_{15} -$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} + 8\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} -$
$2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2 - 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} -$
$2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1^2\omega_5\omega_{15} - 4\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_5\omega_{15} +$
$12\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}v_3^2\omega_8 v_1\omega_5^2\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5 - 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8\omega_5^2\omega_{15} - 14\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}v_3\omega_8 v_1^2\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} -$
$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^2 + 4\omega_6\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} -$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2 v_1\omega_5^2 + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1^2\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}v_3\omega_8\omega_5^2\omega_{15} +$
$4\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5 + 2\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5 -$
$12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8 v_1\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1^2\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} - 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8 v_1\omega_5 +$
$2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8\omega_5^2\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2 + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_{15} +$
$4\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_1\omega_5^2\omega_{15} -$
$12\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 v_1^2\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} -$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5 +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8 v_1\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1^2\omega_5\omega_{15} -$
$2\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5 + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1\omega_5^2\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5 - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1^2\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8\omega_5^2\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 12\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5 -$
$9\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5^2\omega_{15} - 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5\omega_{15} -$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} + 2\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2\omega_5\omega_{15} +$
$2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} -$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8 v_1\omega_5\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_5\omega_{15} - 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5 - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1\omega_5\omega_{15} -$
$2\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1^2\omega_5\omega_{15} + 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8\omega_5\omega_{15} -$
$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1\omega_5\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} +$
$4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 8\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} +$
$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2\omega_5 - 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5\omega_{15} - 4\omega_6\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} +$
$2\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15} - 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} -$
$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} +$
$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - \omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}v_3\omega_8 v_1^2\omega_5^2\omega_{15} +$

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$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} -$

$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}v_3\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} +$

$6\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} -$

$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2 v_1\omega_5\omega_{15} -$

$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_1\omega_5\omega_{15} + 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5\omega_{15} -$

$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8 v_1^2\omega_5\omega_{15} + 4\omega_6\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8\omega_5^2\omega_{15} -$

$2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5 + 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{20}v_3^2\omega_8^2 v_1\omega_5^2 - 4\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2\omega_5^2\omega_{15} -$

$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} -$

$4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5 - 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2\omega_5^2\omega_{15} -$

$2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8\omega_5^2\omega_{15} - 4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8 v_1\omega_5^2\omega_{15} -$

$4\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1^2\omega_5^2\omega_{15} + 8\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5\omega_{15}$

$C_{50} = \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} -$

$2\omega_{19}^2 cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5 +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3 v_1\omega_5^2\omega_{15} - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$

$\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5\omega_{15} - \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5 + 4\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$

$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$

$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2\omega_8\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} - 2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$

$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_1^2\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2 v_3\omega_8 v_1\omega_5^2\omega_{15} +$

$6\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} -$

$2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 10\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$

$4\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2\omega_8^2\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2\omega_8 v_1^2\omega_5^2\omega_{15} - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2\omega_8 v_1^2\omega_5^2\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2 -$

$2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$

$4\omega_{19}^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2\omega_{15} +$

$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3 v_1\omega_5\omega_{15} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2 v_3\omega_8 v_1\omega_5\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8 v_1^2\omega_5\omega_{15} - 4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2 -$

$\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$

$4\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$

$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} - 2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} +$

$\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8 v_1\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} -$

$\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5^2\omega_{15} -$

$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1\omega_5\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1^2\omega_5\omega_{15} +$

$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$

$4\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} - 4\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8 v_1^2\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} - 2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$

$\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5^2\omega_{15} -$

$2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8 v_1\omega_5\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1^2\omega_5\omega_{15} +$

$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$

$4\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$

$2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2 v_1^2\omega_5\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$

$2\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2 cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$

$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} + 2\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 4\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$

$4\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2\omega_8^2\omega_5^2 +$

$4\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1^2\omega_5\omega_{15} -$

$2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2 v_1^2\omega_5 + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5 -$

$8\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2 -$

$\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2 - 12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} - \omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} + 2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8 v_1^2\omega_5^2\omega_{15} +$

$2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5 +$

$4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8 v_1\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} +$

$4\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2 v_1^2\omega_5^2 - \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} +$

$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 v_1^2\omega_5^2\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2 +$

$2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} +$

$$6\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} + 4\omega_{19}^2\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} - \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$$
$$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8 v_1^2\omega_5\omega_{15} + \omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$$
$$\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_2^2\omega_8^2\omega_5 + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5^2\omega_{15} + \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5\omega_{15} +$$
$$2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$$
$$12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 8\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8 v_1\omega_5\omega_{15} - 4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$$
$$4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} -$$
$$\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} + \omega_{19}^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^3 v_1\omega_5^2\omega_{15} - \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$$
$$6\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8 v_1^2\omega_5^2\omega_{15} + \omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} -$$
$$2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2 - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8 v_1^2\omega_5\omega_{15} +$$
$$2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^3 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5 -$$
$$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3 v_1\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5^2 -$$
$$2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5 + 2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} +$$
$$4\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8 v_1^2\omega_5\omega_{15} +$$
$$4\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5 + 2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} +$$
$$4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} -$$
$$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5 + 2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2 v_3\omega_8^2 v_1\omega_5 -$$
$$2\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8 v_1^2\omega_5 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8 v_1\omega_5^2\omega_{15} +$$
$$\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 4\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5\omega_{15} -$$
$$2\omega_{19}^2\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8 v_1^2\omega_5^2\omega_{15} + \omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5 -$$
$$2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5 - 2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_8^2\omega_5\omega_{15} -$$
$$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8 v_1^2\omega_5\omega_{15} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} - 2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} -$$
$$2\omega_{19}^2\omega_{10}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1^2\omega_5^2\omega_{15} - 2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{15} + 2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8^2 v_1^2\omega_5^2 -$$
$$2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_8\omega_5\omega_{15} - 4\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}v_3\omega_8^2 v_1\omega_5\omega_{15}$$

$C_{51} = -12\omega_{19}\omega_{16}^2 cs^2\omega_7^3\omega_{23} - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2 v_3^2 - \omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} +$
$18\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} - 12\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}v_2^2 v_3^2 - 42\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^3\omega_{23} - 96\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7\omega_{23} - 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3 v_2^2 +$
$18\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 v_3^2 + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2 + 36\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3 v_3^2 - 36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 -$
$36\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3 + 12\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 v_2^2 v_3^2 + 12\omega_{19}cs^2\omega_{10}^3\omega_7^2\omega_{23} + 36\omega_{16}^2 cs^4\omega_{10}^3\omega_7^2 + 6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}v_2^2 +$
$12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23}v_2^2 + 6\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2 v_3^2 + 12\omega_{16}^2\omega_{10}\omega_7^3 v_2^2 v_3^2 + 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3 - 18\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3 v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_3^2 -$
$12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 v_3^2 + 6\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}v_3^2 - 18\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3 + 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 v_3^2 - 2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 +$
$180\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7\omega_{23} + 18\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3\omega_{23} + 18\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2 v_3^2 -$
$6\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2 v_2^2 - 6\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3\omega_{23} + 36\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23}v_3^2 -$
$36\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 36\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23}v_2^2 - 12\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 v_3^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} +$
$12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 v_3^2 - 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7\omega_{23}v_2^2 + 18\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 + 12\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}v_2^2 v_3^2 + 24\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}v_2^2 v_3^2 +$
$\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23} - 12\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2 + 12\omega_{19}\omega_{16}^2 cs^2\omega_7^3\omega_{23}v_2^2 - 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2 v_3^2 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2 -$
$12\omega_{19}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 + 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 v_3^2 - 72\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23}v_3^2 + 150\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2 v_3^2 +$
$12\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}v_2^2 v_3^2 - 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}v_3^2 + 72\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7\omega_{23}v_3^2 - 18\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2 v_3^2 -$
$18\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3 - 36\omega_{16}^2 cs^4\omega_{10}^3\omega_7\omega_{23} - 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 + 72\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23}v_3^2 + 6\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 + 12\omega_{19}cs^4\omega_{10}^3\omega_7^3\omega_{23} +$
$12\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 36\omega_{19}\omega_{16}^2 cs^2\omega_7^3\omega_{23}v_3^2 - 24\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}v_2^2 v_3^2 - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}v_3^2 - 84\omega_{19}\omega_{16}^2 cs^4\omega_{10}^2\omega_7\omega_{23} +$
$18\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 + 36\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3 - 18\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} + 5\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3\omega_{23} - 54\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}v_3^2 +$
$18\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 - 12\omega_{16}^2\omega_{10}\omega_7^3 v_3^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}v_2^2 v_3^2 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2 +$
$12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 v_3^2 - 6\omega_{16}^2\omega_{10}^3\omega_7^3 v_2^2 v_3^2 + 12\omega_{19}cs^4\omega_{10}^3\omega_7^2\omega_{23} - 12\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 - 18\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_3^2 + 6\omega_{19}\omega_{10}^3\omega_7^2 v_3^2 +$
$18\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_3^2 - 36\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 24\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}v_3^2 - 72\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 - 48\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} -$
$12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 v_2^2 v_3^2 - 12\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2 - 36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 v_3^2 + 108\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 -$
$36\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 36\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 - 6\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_2^2 - 24\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}v_3^2 +$
$2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23} + 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_2^2 + 30\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3\omega_{23} - 12\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 - 12\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}v_2^2 v_3^2 - 6\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23} -$
$12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3\omega_{23} - 36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 v_3^2 +$
$12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 24\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}v_2^2 v_3^2 - 36\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_3^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2 + 36\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_3^2 - 12\omega_{19}cs^4\omega_{10}^3\omega_7^3\omega_{23} +$
$6\omega_{16}^2\omega_{10}^3\omega_7^3 v_3^2 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_2^2 - 88\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 v_3^2 + 12\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_3^2 -$
$42\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2\omega_{23} + 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}v_2^2 v_3^2 - 12\omega_{19}cs^2\omega_{10}^3\omega_7^2 v_2^2 + 12\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23} + 12\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 -$
$36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 - 18\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 + 36\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 12\omega_{19}cs^2\omega_{10}^3\omega_7\omega_{23} -$
$36\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 v_3^2 + 36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 v_3^2 + 36\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^3 - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 v_3^2$

$C_{52} = -54\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2 v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} + 6\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23} -$
$36\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}v_2^2 v_3^2 - 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} - 12\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_{23} - 18\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2 v_2^2 + 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 v_3^2 +$
$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 v_3^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3 v_3^2 - 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3 - 108\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23}v_2^2 +$
$12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}v_3^2 + 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 v_2^2 v_3^2 + 12\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23} + 18\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23}v_2^2 + 84\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23}v_2^2 +$
$18\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2 v_3^2 + 36\omega_{16}^2\omega_{10}^3\omega_7^2 v_2^2 v_3^2 + 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 - 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_3^2 - 36\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 v_3^2 -$
$12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}v_3^2 - 6\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3 + 18\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 v_3^2 - 18\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7\omega_{23}v_2^2 + 18\omega_{16}^2 cs^4\omega_{10}^3\omega_7\omega_{23} +$
$6\omega_{16}^2 cs^4\omega_{10}^3\omega_7\omega_{23} + 6\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7^3 + 24\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 - 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}v_2^2 v_3^2 + 78\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 + 12\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 +$
$36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2 v_2^2 - 6\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23}v_3^2 - 12\omega_{19}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 + 60\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23}v_2^2 -$
$36\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 v_3^2 - 84\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23}v_2^2 - 144\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 + 36\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}v_2^2 v_3^2 +$
$72\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}v_2^2 v_3^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2\omega_{23} - 12\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 - 72\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 v_3^2 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 + 24\omega_{19}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 +$

$$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2 - 24\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23}v_3^2 + 24\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2 + 36\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}v_2^2v_3^2 -$$
$$36\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_3^2 + 24\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{23}v_3^2 + 24\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23} + 36\omega_{19}\omega_{16}^2 - 6\omega_{19}\omega_{16}^2cs^4\omega_{10}^2\omega_7^3 -$$
$$12\omega_{16}^2cs^4\omega_{10}^2\omega_7^2\omega_{23} - 6\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 24\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}v_3^2 + 6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 6\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}^2cs^2\omega_7^3\omega_{23}v_3^2 -$$
$$72\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}v_2^2v_3^2 - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}^2cs^4\omega_{10}^2\omega_7\omega_{23} + 180\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2 +$$
$$12\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - \omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^3\omega_{23} - 18\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23}v_3^2 - 132\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 - 12\omega_{16}^2\omega_{10}^3\omega_7^3v_3^2 - 6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}v_3^2 -$$
$$36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3v_2^2 - 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}v_2^2v_3^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2 - 18\omega_{16}^2\omega_{10}^3\omega_7^2v_3^2 - 36\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2 -$$
$$6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_2^2 + 18\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3v_2^2v_3^2 + 6\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_3^2 - 12\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23}v_3^2 + 24\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}v_3^2 - 24\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}v_3^2 -$$
$$12\omega_{19}\omega_{16}^2cs^4\omega_{10}\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3v_2^2v_3^2 - 12\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 18\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3v_3^2 +$$
$$36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3 - 12\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}v_3^2 - 18\omega_{16}^2cs^2\omega_{10}\omega_7^3v_2^2 -$$
$$24\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 + 6\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}v_3^2 + 18\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_2^2 + 12\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^2\omega_{23} + 24\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23}v_3^2 - 36\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}v_2^2v_3^2 -$$
$$6\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}v_3^2 + 36\omega_{19}\omega_{16}\omega_{10}\omega_7^3v_2^2v_3^2 + 12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23}v_3^2 + 72\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2v_3^2 -$$
$$12\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7v_3^2 + 72\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2 - 48\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_{23}v_2^2 + 12\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_3^2 + 6\omega_{16}^2\omega_{10}^3\omega_7^3v_3^2 + 36\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2v_2^2 -$$
$$4\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^2\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3v_3^2 - 24\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}v_3^2 - 24\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2\omega_{23} +$$
$$108\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}v_2^2v_3^2 - 36\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3v_2^2 + 12\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} + 60\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23}v_2^2 + 36\omega_{16}^2cs^2\omega_{10}^3\omega_7^2v_2^2 +$$
$$12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_3^2 - 24\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} - 42\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2 + 12\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}v_3^2 +$$
$$6\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7\omega_{23} - 18\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3v_2^2v_3^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3v_3^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3 - 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3v_3^2$$

$C_{53} = -2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{23} + 4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2v_2^3\omega_{11} + 4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} + 8\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{11} +$
$5\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 2\omega_7^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 11\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 4\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2\omega_{11} -$
$\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 3\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 15\omega_{19}^2\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$3\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}v_2^2\omega_{11} - 4\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{11} - \omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2\omega_{11} + 2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} -$
$2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{11} + 4\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23}v_2^2\omega_{11} + \omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 8\omega_{19}^2cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 8\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} + 9\omega_{19}^2\omega_{16}\omega_{10}\omega_{10}^3\omega_7^2\omega_{23}v_2^2\omega_{11} + 4\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} + 4\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2v_2^2\omega_{11} + 4\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} -$
$4\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}v_2^2\omega_{11} - 4\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 8\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} +$
$12\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11} - 9\omega_{19}^2\omega_{16}\omega_{10}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} -$
$2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11} + 2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 8\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23}v_2^2\omega_{11} +$
$2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{11} + 2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3v_2^2\omega_{11} - 2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - \omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + \omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2\omega_{11} - \omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} -$
$5\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 7\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}v_2^2\omega_{11} + 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} + 3\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} -$
$4\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2\omega_{11} + 4\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 6\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} + 4\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{11} - 5\omega_{19}^2\omega_{16}\omega_{10}\omega_{10}^3\omega_{23}v_2^2\omega_{11} -$
$2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 24\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 4\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{11} - 4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} - 4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3v_2^2\omega_{11} +$
$26\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}v_2^2\omega_{11} + 3\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 13\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} -$
$4\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{11} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11} - 6\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 8\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} -$
$4\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23} - 6\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 4\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{11} - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11} +$
$8\omega_{19}^2cs^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 3\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11} - 4\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3v_2^2\omega_{11} - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{11} + 7\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}v_2^2\omega_{11} - 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}v_2^2\omega_{11} - 16\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_{23}\omega_{11} - 4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{11}$

$C_{54} = -12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{18} - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^3\omega_8\omega_5 + 12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_5\omega_{18} + 6\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_5\omega_{18} +$
$2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} - 12\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_5\omega_{18} -$
$4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_6\omega_{19}\omega_7\omega_7\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} - 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^3\omega_8\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}v_3^3\omega_8\omega_5\omega_{18} -$
$6\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{11}^2\omega_8\omega_{18} - 4\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{11}^2\omega_5\omega_{18} - 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 2\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} -$
$12\omega_6\omega_{19}^2cs^2\omega_7\omega_{11}^2\omega_5\omega_8\omega_{18} + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8 + 3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^3\omega_8\omega_5\omega_{18} -$
$4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} + 12\omega_6^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + 12\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} - 12\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$
$2\omega_6\omega_{19}\omega_7^2\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2v_3^3\omega_{18} + 4\omega_6\omega_{19}^2\omega_7\omega_{20}v_3^3\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_{18} + 12\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$
$12\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 6\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 12\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^3\omega_8\omega_5 +$
$2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_{18} - 9\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18} + 6\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} +$
$4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_{18} + 2\omega_6\omega_7^2\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}\omega_7\omega_7^2v_3^3\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5\omega_{18} - 12\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 -$
$8\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^3\omega_8\omega_5\omega_{18} + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_6\omega_{19}^2\omega_{20}\omega_{11}v_3^3\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}cs^2\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5\omega_{18} -$
$12\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^3\omega_8\omega_5 + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5 - 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5\omega_{18} -$
$4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_{18} + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} - 3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} -$
$6\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 6\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} -$
$2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^3\omega_8\omega_{18} - 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5 + 12\omega_6\omega_{19}cs^2\omega_7^2\omega_{11}^2\omega_{18} + 2\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_{18} - 12\omega_6\omega_{19}cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} +$
$24\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2v_3^3\omega_5\omega_{18} + 6\omega_6cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^3\omega_5\omega_{18} -$
$24\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 6\omega_6\omega_{19}cs^2\omega_7^2\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} -$
$2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2v_3^3\omega_8\omega_{18} + 8\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^3\omega_8\omega_5 + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5 +$
$3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^3\omega_8 - 6\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 9\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + 12\omega_6\omega_{19}^2cs^2\omega_7\omega_{11}^2\omega_5\omega_{18} +$
$2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + 4\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^3\omega_5\omega_{18} - 12\omega_6cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^3\omega_{18} -$
$2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^3\omega_8\omega_5 + 2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2v_3^3\omega_8\omega_{18} -$
$4\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2\omega_7\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^3\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}^2cs^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}$

$C_{55} = -12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8^2\omega_5 - 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{11}^2\omega_8^2\omega_5\omega_{18} +$
$18\omega_6^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^2v_3^3\omega_8\omega_5\omega_{18} - 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8^2\omega_5^2 +$
$54\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} + 6\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 36\omega_6^2\omega_{19}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} + 24\omega_6^2\omega_{19}cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18} -$
$12\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^3\omega_8^2\omega_5 + 24\omega_7^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 4\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18} - 18\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8^2\omega_5^2\omega_{18} +$
$6\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_6^2\omega_{19}\omega_7\omega_{11}^2v_3^3\omega_8^2\omega_5^2\omega_{18} + 18\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^3\omega_8^2\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 18\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} +$

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$$36\omega_6^2\omega_{19}^2cs^2\omega_7\omega_{20}\omega_8^2\omega_5^2\omega_{18} + 6\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} +$$
$$12\omega_6^2\omega_{19}cs^2\omega_7\omega_{11}^2\omega_8\omega_5^2\omega_{18} + 12\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_6^2\omega_{19}^2cs^2\omega_7\omega_{11}^2\omega_8\omega_5^2\omega_{18} + 6\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18} +$$
$$12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 36\omega_6^2\omega_{19}^2cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} + 3\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} -$$
$$12\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 12\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2v_3^2\omega_8^2\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 4\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} -$$
$$12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_{18} + 6\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_5\omega_{18} - 24\omega_6\omega_{19}^2cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} +$$
$$3\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} - 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} +$$
$$12\omega_6^2\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 36\omega_6^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5^2 - 36\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} +$$
$$6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2 - 42\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 9\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 24\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} +$$
$$12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} - 6\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 18\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} + \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} -$$
$$12\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} + 6\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5 - 18\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} -$$
$$\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_6^2\omega_{19}^2\omega_7\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} + 30\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18} +$$
$$42\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 9\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2 + 12\omega_6^2\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} -$$
$$12\omega_6^2\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{21}^2v_3^2\omega_8^2\omega_5^2 - 24\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} + 24\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} +$$
$$12\omega_6^2\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_5\omega_{18} + 6\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5^2\omega_{18} + 6\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} -$$
$$6\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_5\omega_{18} + 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} +$$
$$6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} + 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5^2\omega_{18} + 54\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 54\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} -$$
$$12\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5^2 + 12\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$12\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 6\omega_6^2\omega_{19}cs^2\omega_7\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8^2\omega_5^2\omega_{18} + 6\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5\omega_{18} -$$
$$9\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}cs^2\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18} +$$
$$12\omega_6^2\omega_{19}^2\omega_7\omega_{11}\omega_8\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 12\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_6^2\omega_{19}\omega_7\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18} -$$
$$3\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5^2\omega_{18} - 54\omega_6^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} - 24\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} -$$
$$12\omega_6^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18} - 9\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5^2 - 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} +$$
$$12\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 12\omega_6^2\omega_{19}^2cs^2\omega_7\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5^2\omega_{18}$$

$C_{56} = -2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2\omega_{19}^2cs^2\omega_7^2\omega_8^2\omega_5^2 + 2\omega_{19}\omega_7^3v_3^2\omega_8\omega_5 + 2\omega_{19}^2\omega_7^2\omega_8^2\omega_5^2 - 2\omega_{19}^2cs^2\omega_7^3\omega_{20}\omega_5^2 + \omega_{19}\omega_7^3\omega_{20}v_3^2\omega_8^2\omega_5 + 2\omega_{19}^2\omega_7^2v_3^2\omega_8\omega_5^2 -$
$5\omega_{19}^2cs^2\omega_7\omega_{20}\omega_8^2\omega_5^2 + cs^2\omega_7^3\omega_{20}\omega_8^2\omega_5^2 + \omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - \omega_{19}cs^2\omega_7^3\omega_{20}\omega_8^2\omega_5^2 + \omega_{19}\omega_7^3\omega_8^2\omega_5^2 - 4\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{19}^2cs^2\omega_7^3\omega_{20}\omega_5 +$
$2\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{19}^2\omega_7^3\omega_8\omega_5 - \omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5 - \omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8\omega_5^2 + 2\omega_{19}cs^2\omega_7^2\omega_8^2\omega_5 - \omega_7^3\omega_{20}\omega_8^2\omega_5^2 + \omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{19}^2cs^2\omega_7^3\omega_{20}\omega_8 -$
$2\omega_{19}^2cs^2\omega_7^3\omega_8\omega_5^2 + 2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{19}^2\omega_7^3\omega_8\omega_5^2 + 2\omega_{19}^2cs^2\omega_7^3\omega_{20}\omega_5 - \omega_{19}\omega_7^3\omega_{20}v_3^2\omega_8^2\omega_5^2 + 7\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + \omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^2 -$
$\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + 6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + \omega_{19}cs^2\omega_7^3\omega_{20}\omega_8\omega_5^2 + 4\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2cs^2\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{19}\omega_7^3v_3^2\omega_8\omega_5^2 + 4\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_8\omega_5 -$
$\omega_{19}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{19}\omega_7\omega_{20}v_3^2\omega_8^2\omega_5^2 - \omega_{19}cs^2\omega_7^3\omega_8^2\omega_5^2 + 13\omega_{19}^2cs^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - \omega_{19}^2\omega_7^3\omega_{20}\omega_8\omega_5^2 - \omega_{19}^2\omega_7^3\omega_{20}v_3^2\omega_8\omega_5 - 2\omega_{19}\omega_7^2\omega_8^2\omega_5^2 +$
$\omega_{19}^2\omega_7^3v_3^2\omega_8^2\omega_5^2 - 2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_8 + 5\omega_{19}^2cs^2\omega_7^3\omega_{20}\omega_8\omega_5^2 + 2\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_5^2 - \omega_{19}\omega_7^3v_3^2\omega_8^2\omega_5 + \omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5 + 2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5^2 -$
$2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^2 - \omega_{19}^2\omega_7\omega_8^2\omega_5^2 + 4\omega_{19}\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^2 + \omega_{19}^2cs^2\omega_7^3\omega_8^2\omega_5^2 + 2\omega_{19}\omega_7^2v_3^2\omega_8^2\omega_5^2 - 2\omega_{19}\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5 + \omega_{19}^2\omega_7^4\omega_8^2\omega_5 - \omega_{19}cs^2\omega_7^3\omega_8^2\omega_5 -$
$8\omega_{19}^2cs^2\omega_{20}\omega_8^2\omega_5^2 - \omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^2 + \omega_{19}^2\omega_7^3\omega_{20}v_3^2\omega_8\omega_5^2 + \omega_{19}^2\omega_{20}\omega_8\omega_5 - 2\omega_{19}cs^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{19}^2\omega_7^3\omega_8\omega_5^2 - \omega_{19}^2\omega_7^3v_3^2\omega_8\omega_5 -$
$7\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_8\omega_5 + \omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5^2 + 2\omega_{19}^2cs^2\omega_7^2\omega_8^2\omega_5 - 11\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_8\omega_5 - 2\omega_{19}^2\omega_7^2v_3^2\omega_8^2\omega_5^2 + \omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_8^2\omega_5$

$C_{57} = -4\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_{18} - 12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5 + 4\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_5\omega_{18} + 2\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + 4\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_5\omega_{18} +$
$2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} + 24\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_5\omega_{18} -$
$4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_6\omega_{19}\omega_7\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} - 12\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} - 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8\omega_5\omega_{18} -$
$2\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{11}^2\omega_8\omega_{18} - 4\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{11}^2\omega_5\omega_{18} - 4\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 2\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} -$
$4\omega_6\omega_{19}^2cs^2\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 12\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8 + 9\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} -$
$4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 -$
$6\omega_6\omega_{19}\omega_7^2\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}^2\omega_7\omega_{11}^2v_3^2\omega_8 + 12\omega_6\omega_7\omega_{20}v_3^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_{18} + 4\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$
$4\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 2\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 4\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} + 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5 +$
$2\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_{18} - 3\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} + 2\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18} - 12\omega_6\omega_{19}\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} +$
$4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_{18} + 6\omega_6\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} + 12\omega_6\omega_{19}^2\omega_7\omega_{11}^2v_3^2\omega_5\omega_{18} - 4\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_5\omega_{18} -$
$4\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 24\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_6\omega_{19}^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}cs^2\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} +$
$4\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18} + 12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5 - 8\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} +$
$4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5\omega_{18} - 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 6\omega_6\omega_{19}^2\omega_7^2v_3^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} -$
$3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 2\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_8\omega_5\omega_{18} + 2\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_5\omega_{18} - 4\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_5\omega_{18} - 4\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5\omega_{18} -$
$6\omega_6\omega_{19}\omega_7^2\omega_{11}v_3^2\omega_8\omega_{18} - 12\omega_6\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5 + 4\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{11}\omega_{18} + 2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}cs^2\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} +$
$8\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 12\omega_6\omega_{19}^2\omega_7^2\omega_{11}v_3^2\omega_5\omega_{18} + 2\omega_6cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_5\omega_{18} -$
$8\omega_6\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 2\omega_6\omega_{19}cs^2\omega_7^2\omega_{11}^2\omega_8\omega_5\omega_{18} + 4\omega_{19}^2cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 6\omega_6\omega_{19}\omega_7^2\omega_{11}v_3^2\omega_8\omega_{18} +$
$8\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_5\omega_{18} + 12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18} + 12\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5 + 3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$
$6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8 - 2\omega_6\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 3\omega_6\omega_{19}^2cs^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2cs^2\omega_7\omega_{11}^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} +$
$12\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_5\omega_{18} - 4\omega_6cs^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18} - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{18} - 6\omega_6\omega_{19}\omega_7^2\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} -$
$4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} - 9\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_5 + 2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} + 6\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} - 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18} -$
$12\omega_6\omega_{19}\omega_7^2\omega_{11}^2v_3^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5\omega_{18} + 12\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} + 4\omega_6\omega_{19}^2cs^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}$

$C_{58} = -18\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2 + 36\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{11}^2 + 36\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 48\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 + 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 +$
$27\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11}^2v_3^2 - 6\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{11}^2v_3^2 - 12\omega_{19}^2cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} -$
$36\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2\omega_{11} + 12\omega_{19}^2\omega_{10}\omega_7^3v_2^2\omega_{11} - 36\omega_{19}cs^4\omega_{10}\omega_7^3\omega_{11}^2 + 6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2v_3^2 - 36\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 -$
$24\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{23}v_2^2\omega_{11} - 72\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}^2 + 12\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 - 18\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}v_2^2\omega_{11} - 12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}v_3^2 -$
$\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 12\omega_{19}^2\omega_{10}\omega_7^3v_2^2\omega_{11}^2v_3^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11} + 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}v_3^2 + 36\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2\omega_{11} +$
$12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11} + 3\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}^2cs^2\omega_7^2\omega_{11}^2v_3^2 + 6\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{11}^2 + \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2v_3^2 -$

$$12\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 36\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11}^2 + 18\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{11}^2 + 36\omega_{19}^2 cs^4\omega_{10}\omega_7\omega_{11}^2 -$$
$$15\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 - 96\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{10}\omega_7^3v_2^2\omega_{11}^2 v_3^2 + 156\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11}^2 +$$
$$12\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{19}^2\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 - 42\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 18\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2\omega_{11}^2 +$$
$$6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 5\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11} - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 v_3^2 - 12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 +$$
$$12\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 18\omega_{19}\omega_{16}cs^2\omega_7^3v_2^2\omega_{11}^2 - 36\omega_{19}^2 cs^2\omega_7^3\omega_{23}v_2^2\omega_{11} - 24\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}^2 v_3^2 - 18\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$12\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 6\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{11}^2 v_3^2 - 18\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{11}^2 +$$
$$6\omega_{19}\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11}^2 - 108\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} - 36\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 - 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 -$$
$$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{11}^2 v_3^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{11}^2 v_3^2 + 15\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 + 48\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2 -$$
$$18\omega_{19}^2\omega_{16}cs^4\omega_7^3\omega_{11}^2 + 72\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{23}\omega_7^2\omega_{11} - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} + 36\omega_{19}^2 cs^2\omega_7^3v_2^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} +$$
$$12\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_7^3v_2^2\omega_{11}^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 36\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} - 12\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{11}v_3^2 +$$
$$144\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 + 12\omega_{19}^2v_2^2\omega_{11}^2 v_3^2 - 60\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11}^2 v_3^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11}^2 -$$
$$12\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 24\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}^2 +$$
$$12\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{11}^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 - 18\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2\omega_{11} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} +$$
$$18\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 36\omega_{19}^2 cs^2\omega_{10}\omega_7^2v_2^2\omega_{11}^2 - 3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 - 6\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}^2 v_3^2 -$$
$$12\omega_{19}^2 cs^2\omega_7^3\omega_{11}^2 + 12\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 36\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}v_2^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{11}^2 v_3^2 - 36\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 -$$
$$12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{11}^2 v_3^2 - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2 - 12\omega_{19}^2\omega_{10}\omega_7^2v_2^2\omega_{11}^2 - 6\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2 + 36\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} -$$
$$36\omega_{19}^2 cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 15\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 36\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 18\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 +$$
$$12\omega_{19}^2 cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 v_3^2 + 6\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{11}v_3^2 + 9\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2v_3^2 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{11}^2 v_3^2 +$$
$$18\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 - 12\omega_{16}cs^2\omega_{10}\omega_7^2v_2^2\omega_{11}^2 - 72\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 - 5\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 -$$
$$6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2 v_3^2 - 12\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2 + 18\omega_{19}^2\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{11} - 9\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2 - 12\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 + 36\omega_{19}^2 cs^4\omega_7^3\omega_{11}^2 - 18\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2v_2^2\omega_{11} -$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{11}^2 - 45\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} - 36\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 12\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{11}^2 v_3^2 + 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{11}^2 -$$
$$6\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11} + 12\omega_{19}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} - 36\omega_{19}^2 cs^4\omega_7^3\omega_{23}\omega_{11} +$$
$$54\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 36\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 72\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11} - 6\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 15\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11}$$

$C_{59} = -24\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 24\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 v_3^2 - 132\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$
$24\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^2 - 24\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 66\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 - 24\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 -$
$42\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 84\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{11} - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 -$
$12\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{11}^2 + 24\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{11}^2 - 66\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 18\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 -$
$72\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 96\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 24\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 v_3^2 +$
$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 + 24\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$
$12\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_3^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 +$
$24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 24\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 -$
$36\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 66\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11}^2 v_3^2 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 + 24\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{11}^2 v_3^2 +$
$24\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 v_3^2 - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 - 24\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2 + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2 +$
$12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 36\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 + 48\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 -$
$24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 +$
$156\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}v_3^2 + 90\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 24\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{23}\omega_{11}^2 +$
$24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 48\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2 + \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 +$
$60\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 v_3^2 + 72\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 +$
$6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 18\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 -$
$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 v_3^2 + 3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 -$
$6\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 v_3^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 -$
$12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 84\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 24\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}$

$C_{60} = -6\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{11}^2 + 12\omega_{19}^2 cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 48\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 + 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 +$
$9\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11}^2 v_3^2 - 18\omega_{19}^2 cs^2\omega_7^3\omega_{11}^2 v_3^2 - 12\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} -$
$12\omega_{19}^2 cs^2\omega_{10}\omega_7^3v_2^2\omega_{11} + 12\omega_{19}^2\omega_{10}\omega_7^3v_2^2\omega_{11} - 12\omega_{19}^2 cs^4\omega_{10}\omega_7^3\omega_{11} + 18\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{11}^2 v_3^2 - 108\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 -$
$24\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} - 24\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} - 6\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23}v_2^2\omega_{11} - 36\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 v_3^2 +$
$36\omega_{19}^2\omega_{10}\omega_7^2v_2^2\omega_{11}^2 v_3^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11} + 72\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} - 12\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 -$
$\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 36\omega_{19}^2 cs^2\omega_7^3\omega_7^2\omega_{11}v_3^2 + 6\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{11}^2 - 36\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 - 12\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11} -$
$6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11}^2 + 6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{11}^2 + 12\omega_{19}^2 cs^4\omega_{10}\omega_7^2\omega_{11}^2 - 5\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 36\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 -$
$12\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_{23}\omega_{11}^2 - 36\omega_{19}^2\omega_{10}\omega_7^3v_2^2\omega_{11}^2 v_3^2 + 18\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 36\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 72\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 -$
$18\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 6\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2\omega_{11} + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 5\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11} +$
$60\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 - 15\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 v_3^2 - 6\omega_{19}^2\omega_{16}cs^2\omega_7^3v_2^2\omega_{11} - 12\omega_{19}^2 cs^2\omega_7^3\omega_{23}v_2^2\omega_{11} - 72\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 +$
$18\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 36\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 6\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23}\omega_{11} - 36\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{11}^2 v_3^2 - 6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{11}^2 +$
$6\omega_{19}\omega_{16}\omega_{10}\omega_7^3v_2^2\omega_{11}^2 - 36\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} - 12\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 - 72\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 -$
$36\omega_{19}^2\omega_{16}\omega_7^2v_2^2\omega_{11}^2 v_3^2 + 36\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} + 15\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 + 144\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2 -$
$6\omega_{19}^2\omega_{16}cs^4\omega_7^3\omega_{11}^2 + 24\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{23}v_2^2\omega_{11} - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} + 12\omega_{19}^2 cs^2\omega_7^3v_2^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} +$
$12\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_7^3v_2^2\omega_{11}^2 + 12\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} - 36\omega_{19}^2 cs^2\omega_7^3\omega_{23}\omega_{11}v_3^2 +$
$48\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 + 36\omega_{19}^2v_2^2\omega_{11}^2 v_3^2 - 5\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2v_2^2\omega_{11}^2 -$
$12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{11}^2 - 36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 v_3^2 + \omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 36\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 24\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}^2 +$
$12\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{11}^2 - 12\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 18\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 v_3^2 - 6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3v_2^2\omega_{11} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} +$
$6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 18\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 v_3^2 + 12\omega_{19}^2 cs^2\omega_{10}\omega_7^3v_2^2\omega_{11}^2 + 30\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 v_3^2 - 18\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}^2 v_3^2 -$

$$12\omega_{19}^2 cs^2 \omega_7^3 \omega_{11}^2 + 12\omega_{19}^2 cs^2 \omega_{10}\omega_7^2 \omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}cs^2 \omega_7^3 \omega_{23}v_2^2 \omega_{11}^2 + 36\omega_{19}\omega_{16}\omega_{10}\omega_7^2 v_2^2 \omega_{11}^2 v_3^2 - 12\omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{23}v_2^2 \omega_{11}^2 -$$
$$36\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{11}^2 v_3^2 - 18\omega_{19}^2 \omega_{16}\omega_{10}\omega_7^3 \omega_{23}v_2^2 v_3^2 - 12\omega_{19}^2 \omega_{10}\omega_7^2 v_2^2 \omega_{11}^2 - 6\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{11}^2 + 36\omega_{19}^2 \omega_{16}\omega_{10}\omega_7^2 \omega_{23}v_2^2 v_3^2 -$$
$$12\omega_{19}^2 cs^4 \omega_{10}\omega_7^2 \omega_{23}\omega_{11} - 45\omega_{19}\omega_{16}\omega_{10}\omega_7^3 \omega_{23}v_2^2 \omega_{11}^2 v_3^2 + 12\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{23}v_2^2 + 36\omega_{19}\omega_{16}\omega_7^3 \omega_{23}v_2^2 \omega_{11}^2 v_3^2 + 54\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{23}\omega_{11}v_3^2 +$$
$$60\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7\omega_{23}\omega_{11}^2 v_3^2 + 18\omega_{19}^2 \omega_{16}cs^2 \omega_7^3 \omega_{23}\omega_{11}v_3^2 + 27\omega_{19}^2 \omega_{16}\omega_{10}\omega_7^3 \omega_{23}v_2^2 \omega_{11}v_3^2 + 36\omega_{19}^2 \omega_{16}\omega_{10}\omega_7^2 \omega_{23}v_2^2 v_3^2 - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3 v_2^2 \omega_{11}^2 v_3^2 +$$
$$6\omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{23}v_2^2 \omega_{11}^2 - 12\omega_{19}^2 cs^2 \omega_{10}\omega_7^2 \omega_{11}^2 - 24\omega_{19}\omega_{16}cs^2 \omega_7^2 \omega_{23}v_2^2 \omega_{11}^2 - 102\omega_{19}\omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{23}\omega_{11}^2 v_3^2 - 15\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{23}\omega_{11}v_3^2 -$$
$$18\omega_{19}\omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{11}^2 v_3^2 - 36\omega_{19}^2 \omega_7^3 \omega_{23}\omega_7 \omega_{11}v_3^2 + 6\omega_{19}\omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{11}^2 + 6\omega_{19}^2 \omega_{16}cs^4 \omega_7^3 \omega_{23}\omega_{11} - 9\omega_{19}^2 \omega_{16}\omega_{10}\omega_7^3 \omega_{23}v_2^2 \omega_{11} -$$
$$12\omega_{19}^2 \omega_{16}\omega_{10}\omega_7^2 \omega_{23}v_2^2 + 24\omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{23}\omega_{11}^2 v_3^2 + 12\omega_{19}^2 cs^4 \omega_7^3 \omega_{11}^2 - 18\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{23}\omega_{11} - 12\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7^3 v_2^2 \omega_{11}^2 -$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^2 v_2^2 \omega_{11}^2 - 15\omega_{19}\omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{23}v_2^2 \omega_{11}^2 - 12\omega_{19}^2 cs^2 \omega_{10}\omega_7^2 \omega_{23}v_2^2 \omega_{11} + 36\omega_{19}^2 cs^2 \omega_{10}\omega_7^2 \omega_{11}^2 v_3^2 + 12\omega_{19}\omega_{16}cs^2 \omega_{10}\omega_7^2 \omega_{11}^2 +$$
$$6\omega_{19}\omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{23}\omega_{11}^2 + 6\omega_{19}^2 \omega_{16}\omega_7^3 v_2^2 \omega_{11}^2 + 12\omega_{19}^2 \omega_{10}\omega_7^2 \omega_{23}v_2^2 \omega_{11} - 12\omega_{19}^2 cs^4 \omega_7^3 \omega_{23}\omega_{11} + 18\omega_{19}^2 \omega_{16}cs^4 \omega_{10}\omega_7^2 \omega_{23}\omega_{11} -$$
$$12\omega_{19}\omega_{16}cs^2 \omega_{10}\omega_7^3 \omega_{23}v_2^2 \omega_{11} + 24\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_7\omega_{23}v_2^2 \omega_{11} + 6\omega_{19}\omega_{16}cs^4 \omega_{10}\omega_7^3 \omega_{23}\omega_{11} - 48\omega_{19}^2 \omega_{16}cs^2 \omega_{10}\omega_{23}\omega_{11}^2 v_3^2$$

$C_{61} = 24cs^2 \omega_7\omega_{11}^2 + 24\omega_{19}cs^2 \omega_{11}^2 + 96\omega_{19}\omega_7\omega_{11}^2 v_3^4 + 216\omega_{19}^2 cs^2 \omega_{11}v_3^2 + 288\omega_{19}^2 cs^2 \omega_7 v_3^2 + 24\omega_{19}^2 cs^4 \omega_{11} + 30\omega_{19}\omega_7^2 \omega_{11}^2 v_3^2 - 12\omega_{19}cs^4 \omega_7^2 \omega_{11}^2 + 24\omega_{19}\omega_7^2 \omega_{11}^2 v_3^4 - 48\omega_{19}^2 cs^4 \omega_7\omega_{11} - 24\omega_{19}^2 cs^2 \omega_7 + 48\omega_{19}\omega_7\omega_{11}v_3^2 + 12\omega_{19}^2 cs^2 \omega_7^2 - 24cs^4 \omega_7\omega_{11} + 12\omega_7^2 \omega_{11}^2 v_3^4 + 72\omega_{19}^2 \omega_7 v_3^2 + 72\omega_{19}cs^2 \omega_7^2 \omega_{11}v_3^2 - 3\omega_{19}^2 \omega_7^2 \omega_{11}^2 v_3^4 + 24\omega_7\omega_{11}^2 v_3^2 + 48\omega_{19}^2 \omega_{11}v_3^4 + 150\omega_{19}^2 cs^2 \omega_7^2 \omega_{11}v_3^2 - 36\omega_{19}^2 \omega_7^2 \omega_{11}v_3^2 + 12\omega_{19}cs^2 \omega_7^2 \omega_{11}^2 + 48\omega_{19}^2 cs^2 \omega_7\omega_{11} - 216\omega_{19}cs^2 \omega_{11}^2 v_3^2 - 48\omega_{19}\omega_{11}^2 v_3^4 - 96\omega_{19}^2 \omega_7\omega_{11}v_3^4 + 432\omega_{19}cs^2 \omega_7\omega_{11}^2 v_3^2 + 36\omega_{19}^2 \omega_7^2 v_3^2 - 144cs^2 \omega_7\omega_{11}^2 v_3^2 - 48\omega_{19}cs^2 \omega_7\omega_{11} + 3\omega_{19}^2 \omega_7^2 \omega_{11}^2 v_3^2 - 12\omega_{19}^2 cs^2 \omega_7^2 \omega_{11}^2 v_3^2 - 24\omega_7\omega_{11}^2 v_3^4 - 48\omega_{19}^2 \omega_{11}v_3^2 - 14\omega_{19}^2 cs^2 \omega_7^2 \omega_{11} + 24\omega_{19}^2 cs^4 \omega_7 - 12\omega_7^2 \omega_{11}^2 v_3^2 - 72\omega_{19}^2 \omega_7 v_3^2 - 144\omega_{19}cs^2 \omega_7\omega_{11}v_3^2 + 12cs^4 \omega_7^2 \omega_{11} - 24\omega_{19}cs^4 \omega_{11}^2 + 48\omega_{19}\omega_{11}^2 v_3^2 + 96\omega_{19}^2 \omega_7\omega_{11}v_3^2 - 36\omega_{19}^2 \omega_7 v_3^4 - 432\omega_{19}^2 cs^2 \omega_7\omega_{11}v_3^2 + 72cs^2 \omega_7^2 \omega_{11}v_3^2 + 36\omega_{19}^2 \omega_7\omega_{11}v_3^2 - 126\omega_{19}cs^2 \omega_7^2 \omega_{11}^2 v_3^2 - 24\omega_{19}cs^2 \omega_{11} - \omega_{19}cs^4 \omega_7^2 \omega_{11}^2 + 48\omega_{19}cs^4 \omega_7\omega_{11}^2 + 14\omega_{19}^2 cs^4 \omega_7^2 \omega_{11} - 30\omega_{19}\omega_7^2 \omega_{11}v_3^4 - 96\omega_{19}\omega_7\omega_{11}^2 v_3^2 - 12\omega_{19}^2 cs^4 \omega_7^2 - 48\omega_{19}\omega_7\omega_{11}v_3^4 - 12cs^2 \omega_7^2 \omega_{11}^2 - 24\omega_{19}^2 \omega_7\omega_{11}v_3^2 + \omega_{19}^2 cs^2 \omega_7^2 \omega_{11}^2 - 144\omega_{19}^2 cs^2 \omega_7^2 v_3^2$

$C_{62} = 6\omega_{19}cs^4 \omega_7^3 + 156\omega_{19}^2 cs^2 \omega_7 v_3^2 - 24\omega_7^2 v_3^4 - 3\omega_{19}^2 \omega_7^3 v_3^2 - 24\omega_{19}cs^4 \omega_7^2 + 12\omega_{19}^2 cs^2 \omega_7 - 18\omega_{19}\omega_7^3 v_3^4 - 12\omega_{19}cs^2 \omega_7^3 v_3^2 - 8\omega_{19}^2 cs^2 \omega_7^2 + 24\omega_{19}^2 \omega_7 v_3^4 + 48\omega_{19}\omega_7 v_3^2 + 24\omega_{19}cs^4 \omega_7 + 72\omega_{19}\omega_7^2 v_3^4 + 48\omega_{19}cs^2 \omega_7^2 v_3^2 + \omega_{19}^2 cs^2 \omega_7^3 + 12\omega_7^3 v_3^4 + 24\omega_{19}^2 v_3^2 - 24\omega_{19}cs^2 \omega_7 v_3^2 - 48\omega_{19}\omega_7 v_3^4 + 24\omega_{19}^2 cs^4 + 24\omega_{19}cs^2 \omega_7^2 - 48\omega_{19}^2 cs^4 \omega_7 - 24\omega_{19}^2 \omega_7 v_3^2 - 6\omega_{19}cs^2 \omega_7^3 + 6\omega_7^2 cs^2 \omega_7^3 v_3^2 - 12\omega_7^3 v_3^2 - 24\omega_{19}^2 \omega_7^2 v_3^2 - 72\omega_{19}\omega_7^2 v_3^2 + 12cs^2 \omega_7^3 v_3^2 - 96\omega_{19}^2 cs^2 v_3^2 - 3\omega_{19}^2 cs^4 \omega_7^3 + 24\omega_{19}^2 cs^4 \omega_7^2 - 24cs^2 \omega_7^2 v_3^2 + 18\omega_{19}\omega_7^3 v_3^2 + 24\omega_7^2 v_3^2 + 3\omega_{19}^2 \omega_7^3 v_3^4 - 24\omega_{19}cs^2 \omega_7 - 72\omega_{19}^2 cs^2 \omega_7^2 v_3^2$

$C_{63} = -48cs^2 \omega_7\omega_{11}^2 - 60\omega_{19}cs^2 \omega_{11}^2 - 25\omega_{19}^2 \omega_7^2 \omega_{11} + 12\omega_{19}cs^2 \omega_7^2 \omega_{11} + 24\omega_7\omega_{11}^2 - 51\omega_{19}\omega_7^2 \omega_{11}^2 v_3^2 + 24\omega_{19}\omega_7\omega_{11} + 72\omega_{19}^2 cs^2 \omega_7 - 72\omega_{19}\omega_7\omega_{11}v_3^2 - 36\omega_{19}^2 cs^2 \omega_7^2 - 48\omega_7^2 \omega_{11}v_3^2 - 72\omega_{19}\omega_7\omega_{11}^2 + 61\omega_{19}^2 \omega_7^2 \omega_{11}v_3^2 - 33\omega_{19}cs^2 \omega_7^2 \omega_{11} - 120\omega_{19}^2 cs^2 \omega_7\omega_{11} - 36\omega_{19}^2 \omega_{11} - 60\omega_{19}^2 \omega_7^2 v_3^2 + 2\omega_{19}^2 \omega_7^2 \omega_{11} + 120\omega_{19}cs^2 \omega_7\omega_{11} + 24\omega_{19}^2 \omega_7^2 - 5\omega_{19}^2 \omega_7^2 \omega_{11}v_3^2 + 84\omega_{19}^2 \omega_{11}v_3^2 + 39\omega_{19}^2 cs^2 \omega_7^2 \omega_{11} + 24\omega_7^2 \omega_{11}^2 v_3^2 + 120\omega_{19}^2 \omega_7 v_3^2 - 84\omega_{19}\omega_{11}^2 v_3^2 - 168\omega_{19}^2 \omega_7\omega_{11}v_3^2 + 21\omega_{19}\omega_7^2 \omega_{11}^2 + 60\omega_{19}^2 cs^2 \omega_{11} - 12\omega_{19}\omega_7^2 \omega_{11} + 168\omega_{19}\omega_7\omega_{11}^2 v_3^2 + 24cs^2 \omega_7^2 \omega_{11} + 72\omega_{19}^2 \omega_7\omega_{11} + 36\omega_{19}\omega_{11}^2 - 12\omega_7^2 \omega_{11} - 48\omega_{19}^2 \omega_7 - 24\omega_{19}cs^2 \omega_7\omega_{11} + 36\omega_{19}\omega_7^2 \omega_{11}v_3^2 - 3\omega_{19}^2 cs^2 \omega_7^2 \omega_{11}$

2.2.5 Conservation of momentum: ρv_3

📎 attached text file: `output_d3q27_nse_mrt1_symbolic_pde_03.txt`

$v_3 \frac{\partial \rho}{\partial t} + \rho \frac{\partial v_3}{\partial t} + \frac{v_3 v_1 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{v_3 \rho \delta_l}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{v_1 \rho \delta_l}{\delta_t} \frac{\partial v_3}{\partial x_1} + \frac{v_2 v_3 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{v_3 \rho \delta_l}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{v_2 \rho \delta_l}{\delta_t} \frac{\partial v_3}{\partial x_2} + (cs^2 + v_3^2) \frac{\delta_l}{\delta_t} \frac{\partial \rho}{\partial x_3} +$
$\frac{2v_3 \rho \delta_l}{\delta_t} \frac{\partial v_3}{\partial x_3} + (-2 + \omega_6) \frac{\delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial \rho}{\partial x_1} \frac{\partial v_3}{\partial x_1} + (-2 + \omega_6) \frac{\delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial \rho}{\partial x_1} \frac{\partial v_1}{\partial x_3} + (-2 + \omega_7) \frac{\delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial \rho}{\partial x_2} \frac{\partial v_3}{\partial x_2} + (-2 + \omega_7) \frac{\delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial \rho}{\partial x_2} \frac{\partial v_2}{\partial x_3}$
$+ (-2 - 3\omega_{11}v_3^2 + 4cs^2 + \omega_{11} + 6v_3^2 - 2\omega_{11}cs^2) \frac{\delta_l^2}{\delta_t \omega_{11}} \frac{\partial \rho}{\partial x_3} \frac{\partial v_3}{\partial x_3} + (2 - \omega_{11}) \frac{3v_3 \rho \delta_l^2}{\delta_t \omega_{11}} \left(\frac{\partial v_3}{\partial x_3}\right)^2 + (-2 + \omega_6) \frac{\rho \delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial^2 v_3}{\partial x_1^2} +$
$(-2 + \omega_7) \frac{\rho \delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial^2 v_3}{\partial x_2^2} + (-2 + \omega_6) \frac{\rho \delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial^2 v_1}{\partial x_1 \partial x_3} + (-2 + \omega_7) \frac{\rho \delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial^2 v_2}{\partial x_2 \partial x_3} +$
$(-2 - \omega_{11}v_3^2 + 6cs^2 + \omega_{11} + 2v_3^2 - 3\omega_{11}cs^2) \frac{v_3 \delta_l^2}{2\delta_t \omega_{11}} \frac{\partial^2 \rho}{\partial x_3^2} + (-2 - 3\omega_{11}v_3^2 + 2cs^2 + \omega_{11} + 6v_3^2 - \omega_{11}cs^2) \frac{\rho \delta_l^2}{2\delta_t \omega_{11}} \frac{\partial^2 v_3}{\partial x_3^2} +$
$C_1 \frac{v_3 v_1 \delta_l^3}{12\omega_6 \delta_t \omega_{13}\omega_9} \frac{\partial^3 \rho}{\partial x_1^3} + C_2 \frac{v_3 \rho \delta_l^3}{12\omega_6 \delta_t \omega_{13}\omega_9} \frac{\partial^3 v_1}{\partial x_1^3} + C_3 \frac{v_1 \rho \delta_l^3}{6\omega_6^2 \delta_t \omega_{13}} \frac{\partial^3 v_3}{\partial x_1^3} +$
$(-6\omega_7\omega_8 - 6\omega_6\omega_7\omega_5 + 6\omega_6\omega_7\omega_8 + 6\omega_7\omega_5 - \omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_8 + 6\omega_6\omega_5) \frac{v_3 \rho \delta_l^3 cs^2}{6\omega_6 \delta_t \omega_7\omega_8\omega_5} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} +$
$(-\omega_7\omega_8 + \omega_6\omega_7\omega_8 - \omega_6^2 \omega_7 - \omega_6\omega_8 + \omega_6^2 + \omega_6\omega_7) \frac{v_2 \rho \delta_l^3 cs^2}{\omega_6^2 \delta_t \omega_7\omega_8} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_2} +$
$(-6\omega_7\omega_8 - 6\omega_6\omega_7\omega_5 + 6\omega_6\omega_7\omega_8 + 6\omega_7\omega_5 - \omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_8 + 6\omega_6\omega_5) \frac{v_3 \rho \delta_l^3 cs^2}{6\omega_6 \delta_t \omega_7\omega_8\omega_5} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} +$
$(-\omega_7\omega_8 + \omega_6\omega_7\omega_8 + \omega_7^2 - \omega_6\omega_8 + \omega_6\omega_7 - \omega_6\omega_7^2) \frac{v_1 \rho \delta_l^3 cs^2}{\omega_6 \delta_t \omega_7^2 \omega_8} \frac{\partial^3 v_3}{\partial x_1 \partial x_2^2} + C_4 \frac{v_2 v_3 \delta_l^3}{12\delta_t \omega_{16}\omega_{10}\omega_7} \frac{\partial^3 \rho}{\partial x_2^3} + C_5 \frac{v_3 \rho \delta_l^3}{12\delta_t \omega_{16}\omega_{10}\omega_7} \frac{\partial^3 v_2}{\partial x_2^3} +$
$C_6 \frac{v_2 \rho \delta_l^3}{6\delta_t \omega_{16}\omega_7^2} \frac{\partial^3 v_3}{\partial x_2^3} + (-12 + 12\omega_6 - \omega_6^2) \frac{\delta_l^3 cs^4}{6\omega_6^2 \delta_t} \frac{\partial^3 \rho}{\partial x_1^2 \partial x_3} + (2\omega_6 - 2\omega_{13} + \omega_6\omega_{13} - \omega_6^2) \frac{v_1 \rho \delta_l^3 cs^2}{\omega_6^2 \delta_t \omega_{13}} \frac{\partial^3 v_1}{\partial x_1^2 \partial x_3} +$
$(-\omega_6^2 \omega_{11}\omega_{18} + 12\omega_6\omega_{11} + 12\omega_6^2 - 12\omega_6\omega_{18} - 12\omega_6^2 \omega_{11} + 12\omega_6\omega_{11}\omega_{18} - 12\omega_{11}\omega_{18}) \frac{v_3 \rho \delta_l^3 cs^2}{6\omega_6^2 \delta_t \omega_{11}\omega_{18}} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} +$
$(-\omega_7\omega_8 + \omega_6\omega_7\omega_8 - \omega_6^2 \omega_7 - \omega_6\omega_8 + \omega_6^2 + \omega_6\omega_7) \frac{v_2 \rho \delta_l^3 cs^2}{\omega_6^2 \delta_t \omega_7\omega_8} \frac{\partial^3 v_1}{\partial x_1 \partial x_2 \partial x_3} +$
$(-\omega_7\omega_8 + \omega_6\omega_7\omega_8 + \omega_7^2 - \omega_6\omega_8 + \omega_6\omega_7 - \omega_6\omega_7^2) \frac{v_1 \rho \delta_l^3 cs^2}{\omega_6 \delta_t \omega_7^2 \omega_8} \frac{\partial^3 v_2}{\partial x_1 \partial x_2 \partial x_3} + (-12 - \omega_7^2 + 12\omega_7) \frac{\delta_l^3 cs^4}{6\delta_t \omega_7^2} \frac{\partial^3 \rho}{\partial x_2^2 \partial x_3} +$

$$(-2\omega_{16} - \omega_7^2 + 2\omega_7 + \omega_{16}\omega_7)\frac{v_2\rho\delta_l^3 cs^2}{\delta_t\omega_{16}\omega_7^2}\frac{\partial^3 v_2}{\partial x_2^2\partial x_3} +$$

$$(-12\omega_{19}\omega_7 + 12\omega_{19}\omega_7\omega_{11} + 12\omega_7^2 + 12\omega_7\omega_{11} - 12\omega_7^2\omega_{11} - 12\omega_{19}\omega_{11} - \omega_{19}\omega_7^2\omega_{11})\frac{v_3\rho\delta_l^3 cs^2}{6\omega_{19}\delta_t\omega_7^2\omega_{11}}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} +$$

$$C_7\frac{v_3 v_1\delta_l^3}{\omega_6\delta_t\omega_{11}^2\omega_{18}}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} + C_8\frac{v_3\rho\delta_l^3}{12\omega_6^2\delta_t\omega_{11}^2\omega_{18}}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} + C_9\frac{v_1\rho\delta_l^3}{\omega_6\delta_t\omega_{11}^2\omega_{18}}\frac{\partial^3 v_3}{\partial x_1\partial x_3^2} + C_{10}\frac{v_2 v_3\delta_l^3}{\omega_{19}\delta_t\omega_7\omega_{11}^2}\frac{\partial^3\rho}{\partial x_2\partial x_3^2} +$$

$$C_{11}\frac{v_3\rho\delta_l^3}{12\omega_{19}\delta_t\omega_7^2\omega_{11}^2}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C_{12}\frac{v_2\rho\delta_l^3}{\omega_{19}\delta_t\omega_7\omega_{11}^2}\frac{\partial^3 v_3}{\partial x_2\partial x_3^2} + C_{13}\frac{\delta_l^3}{12\delta_t\omega_{11}^2}\frac{\partial^3\rho}{\partial x_3^3} +$$

$$(-24 - 60\omega_{11}v_3^2 + 5\omega_{11}^2 cs^2 + 36cs^2 + 24\omega_{11} - 4\omega_{11}^2 + 60v_3^2 + 11\omega_{11}^2 v_3^2 - 36\omega_{11}cs^2)\frac{v_3\rho\delta_l^3}{6\delta_t\omega_{11}^2}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$C_{14}\frac{v_3\delta_l^4}{24\omega_6^2\delta_t\omega_{13}^2\omega_9^2}\frac{\partial^4\rho}{\partial x_1^4} + C_{15}\frac{v_3 v_1\rho\delta_l^4}{12\omega_6^2\delta_t\omega_{13}^2\omega_9^2}\frac{\partial^4 v_1}{\partial x_1^4} + C_{16}\frac{\rho\delta_l^4}{24\omega_6^3\delta_t\omega_{13}^2}\frac{\partial^4 v_3}{\partial x_1^4} + C_{17}\frac{v_2 v_3 v_1\delta_l^4}{4\omega_6^2\delta_t\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} +$$

$$C_{18}\frac{v_2 v_3\rho\delta_l^4}{4\omega_6^2\delta_t\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} + C_{19}\frac{v_3 v_1\rho\delta_l^4}{12\omega_6^2\delta_t\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C_{20}\frac{v_2 v_1\rho\delta_l^4}{2\omega_6^3\delta_t\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2}\frac{\partial^4 v_3}{\partial x_1^3\partial x_2} +$$

$$C_{21}\frac{v_3\delta_l^4 cs^4}{6\omega_6^2\delta_t\omega_7^2\omega_8^2\omega_5^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} + C_{22}\frac{v_3 v_1\rho\delta_l^4 cs^2}{2\omega_6^2\delta_t\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} + C_{23}\frac{v_2 v_3\rho\delta_l^4 cs^2}{2\omega_6^2\delta_t\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15}}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} +$$

$$C_{24}\frac{\rho\delta_l^4 cs^2}{2\omega_6^3\delta_t\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2^2} + C_{25}\frac{v_2 v_3 v_1\delta_l^4}{4\omega_6^2\delta_t\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15}}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + C_{26}\frac{v_2 v_3\rho\delta_l^4}{12\omega_6^2\delta_t\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15}}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} +$$

$$C_{27}\frac{v_3 v_1\rho\delta_l^4}{4\omega_6\delta_t\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15}}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} + C_{28}\frac{v_2 v_1\rho\delta_l^4}{2\omega_6^2\delta_t\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2}\frac{\partial^4 v_3}{\partial x_1\partial x_2^3} + C_{29}\frac{v_3\delta_l^4}{24\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3}\frac{\partial^4\rho}{\partial x_2^4} + C_{30}\frac{v_2 v_3\rho\delta_l^4}{12\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3}\frac{\partial^4 v_2}{\partial x_2^4} +$$

$$C_{31}\frac{\rho\delta_l^4}{24\delta_t\omega_{16}^2\omega_7^3}\frac{\partial^4 v_3}{\partial x_2^4} + C_{32}\frac{v_1\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} + C_{33}\frac{\rho\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} +$$

$$C_{34}\frac{v_3 v_1\rho\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{11}^2\omega_{18}^2\omega_9^2}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} + C_{35}\frac{\delta_l^4}{2\omega_6^3\omega_{22}\omega_{19}\delta_t\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C_{36}\frac{\rho\delta_l^4}{2\omega_6^3\omega_{22}\omega_{19}\delta_t\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} + C_{37}\frac{\rho\delta_l^4}{12\omega_6^3\omega_{22}\omega_{19}\delta_t\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C_{38}\frac{v_3\rho\delta_l^4}{2\omega_6^3\omega_{22}\omega_{19}\delta_t\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} + C_{39}\frac{\delta_l^4}{2\omega_6^2\omega_{19}\delta_t\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} +$$

$$C_{40}\frac{\rho\delta_l^4}{12\omega_6^3\omega_{19}\delta_t\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} + C_{41}\frac{v_2\rho\delta_l^4}{\omega_6^2\omega_{19}\delta_t\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3} +$$

$$C_{42}\frac{\rho\delta_l^4}{2\omega_6^2\omega_{19}^2\delta_t\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + C_{43}\frac{v_2\delta_l^4}{12\omega_{19}\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} +$$

$$C_{44}\frac{\rho\delta_l^4}{12\omega_{19}\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} + C_{45}\frac{v_2 v_3\rho\delta_l^4}{12\omega_{19}^2\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} + C_{46}\frac{v_3\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_{11}^3\omega_{18}^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} +$$

$$C_{47}\frac{v_3 v_1\rho\delta_l^4}{2\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_{11}^3\omega_{18}^2\omega_9}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} + C_{48}\frac{\rho\delta_l^4}{12\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_{11}^3\omega_{18}^2}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} + C_{49}\frac{v_2 v_3 v_1\delta_l^4}{\omega_6^2\omega_{19}^2\delta_t\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2}\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C_{50}\frac{v_2 v_3\rho\delta_l^4}{2\omega_6^2\omega_{19}^2\delta_t\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2} + C_{51}\frac{v_3 v_1\rho\delta_l^4}{2\omega_6^2\omega_{19}^2\delta_t\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C_{52}\frac{v_2 v_1\rho\delta_l^4}{\omega_6^2\omega_{19}^2\delta_t\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2}\frac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2} + C_{53}\frac{v_3\delta_l^4}{12\omega_{19}^2\delta_t\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} + C_{54}\frac{v_2 v_3\rho\delta_l^4}{2\omega_{19}^2\delta_t\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} +$$

$$C_{55}\frac{\rho\delta_l^4}{12\omega_{19}^2\delta_t\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} + C_{56}\frac{v_1\delta_l^4}{4\omega_6^2\delta_t\omega_{11}^3\omega_{18}^2}\frac{\partial^4\rho}{\partial x_1\partial x_3^3} + C_{57}\frac{\rho\delta_l^4}{12\omega_6^3\delta_t\omega_{11}^3\omega_{18}^2}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + C_{58}\frac{v_3 v_1\rho\delta_l^4}{4\omega_6^2\delta_t\omega_{11}^3\omega_{18}^2}\frac{\partial^4 v_3}{\partial x_1\partial x_3^3} +$$

$$C_{59}\frac{v_2\delta_l^4}{4\omega_{19}^2\delta_t\omega_7^2\omega_{11}^3}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} + C_{60}\frac{\rho\delta_l^4}{12\omega_{19}^2\delta_t\omega_7^2\omega_{11}^3}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} + C_{61}\frac{v_2 v_3\rho\delta_l^4}{4\omega_{19}^2\delta_t\omega_7^2\omega_{11}^3}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} + C_{62}\frac{v_3\delta_l^4}{12\delta_t\omega_{11}^3}\frac{\partial^4\rho}{\partial x_3^4} + C_{63}\frac{\rho\delta_l^4}{12\delta_t\omega_{11}^3}\frac{\partial^4 v_3}{\partial x_3^4}$$
$$= 0,$$

where:

$C_1 = -6\omega_6\omega_{13}v_1^2 + 12\omega_{13}v_1^2 - 12\omega_{13} - 36cs^2\omega_9 + 36\omega_{13}cs^2 + 3\omega_6\omega_{13}cs^2\omega_9 + 6\omega_6\omega_{13} - 18\omega_6\omega_{13}cs^2 + 18\omega_6 cs^2\omega_9 + \omega_6\omega_{13}v_1^2\omega_9 - 12v_1^2\omega_9 - 6\omega_6\omega_9 + 6\omega_6 v_1^2\omega_9 + 12\omega_9 - \omega_6\omega_{13}\omega_9$

$C_2 = -18\omega_6\omega_{13}v_1^2 + 36\omega_{13}v_1^2 - 12\omega_{13} - 12cs^2\omega_9 + 12\omega_{13}cs^2 + \omega_6\omega_{13}cs^2\omega_9 + 6\omega_6\omega_{13} - 6\omega_6\omega_{13}cs^2 + 6\omega_6 cs^2\omega_9 + 3\omega_6\omega_{13}v_1^2\omega_9 - 36v_1^2\omega_9 - 6\omega_6\omega_9 + 18\omega_6 v_1^2\omega_9 + 12\omega_9 - \omega_6\omega_{13}\omega_9$

$C_3 = 3\omega_6\omega_{13}v_1^2 + 6\omega_6 - 6\omega_6 v_1^2 + 3\omega_6^2 cs^2 - 3\omega_6^2\omega_{13}cs^2 + \omega_6^2\omega_{13} - 12\omega_{13}cs^2 - 3\omega_6\omega_{13} - 3\omega_6^2 + 15\omega_6\omega_{13}cs^2 - 6\omega_6 cs^2 - \omega_6^2\omega_{13}v_1^2 + 3\omega_6^2 v_1^2$

$C_4 = 6\omega_{10}\omega_7 v_2^2 - 18\omega_{16}\omega_7 cs^2 - 12\omega_{16} + 12\omega_{10} + 36\omega_{16}cs^2 + 6\omega_{16}\omega_7 + 3\omega_{16}\omega_{10}\omega_7 cs^2 - 12\omega_{10}v_2^2 - \omega_{16}\omega_{10}\omega_7 + 12\omega_{16}v_2^2 - 6\omega_{10}\omega_7 + \omega_{16}\omega_{10}\omega_7 v_2^2 - 36\omega_{10}cs^2 + 18\omega_{10}\omega_7 cs^2 - 6\omega_{16}\omega_7 v_2^2$

$C_5 = 18\omega_{10}\omega_7 v_2^2 - 6\omega_{16}\omega_7 cs^2 - 12\omega_{16} + 12\omega_{10} + 12\omega_{16}cs^2 + 6\omega_{16}\omega_7 + \omega_{16}\omega_{10}\omega_7 cs^2 - 36\omega_{10}v_2^2 - \omega_{16}\omega_{10}\omega_7 + 36\omega_{16}v_2^2 - 6\omega_{10}\omega_7 + 3\omega_{16}\omega_{10}\omega_7 v_2^2 - 12\omega_{10}cs^2 + 6\omega_{10}\omega_7 cs^2 - 18\omega_{16}\omega_7 v_2^2$

$C_6 = -\omega_{16}\omega_7^2 v_2^2 + 3\omega_7^2 cs^2 + 15\omega_{16}\omega_7 cs^2 + \omega_{16}\omega_7^2 - 6\omega_7 v_2^2 - 3\omega_7^2 - 12\omega_{16}cs^2 + 6\omega_7 - 3\omega_{16}\omega_7 - 3\omega_{16}\omega_7^2 cs^2 + 3\omega_7^2 v_2^2 + 3\omega_{16}\omega_7 v_2^2 - 6\omega_7 cs^2$

$C_7 = -3\omega_{11}^2 cs^2 + \omega_6\omega_{11} - 3\omega_6\omega_{11}\omega_{18}cs^2 + 3\omega_6\omega_{11}^2 cs^2 - \omega_6\omega_{11}v_3^2 + \omega_6 v_3^2\omega_{18} - \omega_6\omega_{11}^2 + 3\omega_{11}\omega_{18}cs^2 + \omega_{11}v_3^2\omega_{18} + \omega_{11}^2 - \omega_6\omega_{18} - 3\omega_6\omega_{11}cs^2 + \omega_6\omega_{11}\omega_{18} + \omega_6\omega_{11}^2 v_3^2 - \omega_{11}^2 v_3^2 - \omega_{11}\omega_{18} - \omega_6\omega_{11}v_3^2\omega_{18} + 3\omega_6\omega_{18}cs^2$

$C_8 = 6\omega_6^2\omega_{11}\omega_{18} + 12\omega_6^2\omega_{11}^2 v_3^2 - 12\omega_6^2\omega_{11}cs^2 + 6\omega_6\omega_{11}^2 v_3^2\omega_{18} - 24\omega_6\omega_{11}\omega_{18}cs^2 - 12\omega_6\omega_{11}^2 cs^2 + 36\omega_6^2\omega_{18}cs^2 - 6\omega_6\omega_{11}^2\omega_{18} - 12\omega_6^2\omega_{18} + 12\omega_6\omega_{11}^2 - 6\omega_6^2\omega_{11}v_3^2\omega_{18} - 11\omega_6^2\omega_{11}\omega_{18}cs^2 - 24\omega_{11}\omega_{18}cs^2 - 12\omega_6^2\omega_{11} - 18\omega_6^2\omega_{11}\omega_{18}cs^2 - 3\omega_6^2\omega_{11}^2 v_3^2\omega_{18} + 12\omega_6\omega_{11} - 12\omega_6\omega_{11}^2 v_3^2 + 42\omega_6\omega_{11}^2\omega_{18}cs^2 + 3\omega_6^2\omega_{11}^2\omega_{18} - 12\omega_6^2\omega_{11}v_3^2 + 12\omega_6^2 v_3^2\omega_{18} + 12\omega_6^2\omega_{11}cs^2$

$C_9 = -\omega_{11}^2 cs^2 + \omega_6\omega_{11} - \omega_6\omega_{11}\omega_{18}cs^2 + \omega_6\omega_{11}^2 cs^2 - 3\omega_6\omega_{11}v_3^2 + 3\omega_6 v_3^2\omega_{18} - \omega_6\omega_{11}^2 + \omega_{11}\omega_{18}cs^2 + 3\omega_{11}v_3^2\omega_{18} + \omega_{11}^2 - \omega_6\omega_{18} - \omega_6\omega_{11}cs^2 + \omega_6\omega_{11}\omega_{18} + 3\omega_6\omega_{11}^2 v_3^2 - 3\omega_{11}^2 v_3^2 - \omega_{11}\omega_{18} - 3\omega_6\omega_{11}v_3^2\omega_{18} + \omega_6\omega_{18}cs^2$

$C_{10} = -3\omega_{11}^2 cs^2 - \omega_7\omega_{11}^2 - \omega_{19}\omega_7 + \omega_{19}\omega_7\omega_{11} - \omega_{19}\omega_7\omega_{11}v_3^2 + \omega_{19}\omega_{11}v_3^2 + \omega_7\omega_{11}^2 v_3^2 + \omega_{19}\omega_7 v_3^2 - 3\omega_7\omega_{11}cs^2 + \omega_7\omega_{11} - \omega_{19}\omega_{11} + 3\omega_{19}\omega_{11}cs^2 - \omega_7\omega_{11}v_3^2 + \omega_{11}^2 + 3\omega_{19}\omega_7 cs^2 + 3\omega_7\omega_{11}^2 cs^2 - 3\omega_{19}\omega_7\omega_{11}cs^2 - \omega_{11}^2 v_3^2$

$C_{11} = 12\omega_7\omega_{11}^2 - 18\omega_{19}\omega_7^2\omega_{11}cs^2 - 3\omega_{19}\omega_7^2\omega_{11}v_3^2 + 42\omega_{19}\omega_7\omega_{11}cs^2 - 24\omega_{19}\omega_{11}^2 cs^2 - 12\omega_7\omega_{11}^2 v_3^2 - 6\omega_{19}\omega_7\omega_{11}^2 + 36\omega_{19}\omega_7^2 cs^2 - 12\omega_{19}\omega_7^2 + 12\omega_7^2\omega_{11}^2 cs^2 - 12\omega_7^2\omega_{11}v_3^2 + 12\omega_7^2\omega_{11} - 12\omega_7^2\omega_{11}cs^2 + 12\omega_7^2\omega_{11}v_3^2 + 12\omega_{19}\omega_7 v_3^2 + 3\omega_{19}\omega_7^2\omega_{11} - 12\omega_7\omega_{11}^2 cs^2 + 6\omega_{19}\omega_7\omega_{11} + 6\omega_{19}\omega_7\omega_{11}v_3^2 - 24\omega_{19}\omega_7\omega_{11}cs^2 - 12\omega_7^2\omega_{11}^2 - 11\omega_{19}\omega_7^2\omega_{11}cs^2 - 6\omega_{19}\omega_7\omega_{11}v_3^2$

$C_{12} = -\omega_{11}^2 cs^2 - \omega_7\omega_{11}^2 - \omega_{19}\omega_7 + \omega_{19}\omega_7\omega_{11} - 3\omega_{19}\omega_7\omega_{11}v_3^2 + 3\omega_{19}\omega_{11}v_3^2 + 3\omega_7\omega_{11}^2 v_3^2 + 3\omega_{19}\omega_7 v_3^2 - \omega_7\omega_{11}cs^2 + \omega_7\omega_{11} - \omega_{19}\omega_{11} + \omega_{19}\omega_{11}cs^2 - 3\omega_7\omega_{11}v_3^2 + \omega_{11}^2 + \omega_{19}\omega_7 cs^2 + \omega_7\omega_{11}^2 cs^2 - \omega_{19}\omega_7\omega_{11}cs^2 - 3\omega_{11}^2 v_3^2$

$C_{13} = 36\omega_{11}v_3^2 - \omega_{11}^2 cs^2 + 144v_3^2 cs^2 + 7\omega_{11}^2 v_3^4 - 12\omega_{11}cs^4 + 24\omega_{11}^2 v_3^2 cs^2 - 12cs^2 + 36v_3^4 + 12cs^4 - 144\omega_{11}v_3^2 cs^2 - 36v_3^2 - 36\omega_{11}v_3^4 + \omega_{11}^2 cs^4 - 7\omega_{11}^2 v_3^2 + 12\omega_{11}cs^2$

$C_{14} = 96\omega_6\omega_{13}^2 v_1^2\omega_9 - 12\omega_6^2 cs^2\omega_9^2 - \omega_6^2\omega_{13}^2 cs^4\omega_9^2 + 96\omega_6\omega_{13}v_1^4\omega_9^2 + 30\omega_6^2\omega_{13}v_1^2\omega_9^2 - 24\omega_{13}cs^2\omega_9 - 12\omega_6^2\omega_{13}^2 v_1^2 cs^2\omega_9^2 + 36\omega_6^2\omega_{13}v_1^2 + 72\omega_6\omega_{13}v_1^4 - 24\omega_{13}cs^4\omega_9^2 + 36\omega_6^2\omega_{13}v_1^4\omega_9 - 24\omega_6 v_1^4\omega_9^2 + 48\omega_6\omega_{13}cs^4\omega_9^2 - 3\omega_6^2\omega_{13}^2 v_1^4\omega_9^2 - 24\omega_6\omega_{13}^2 cs^2 - 12\omega_6^2 v_1^2\omega_9^2 - 12\omega_6^2\omega_{13}^2 cs^4 + 288\omega_6\omega_{13}^2 v_1^2 cs^2 - 24\omega_6^2\omega_{13}v_1^2\omega_9 + 48\omega_6\omega_{13}^2 cs^2\omega_9 + 150\omega_6^2\omega_{13}^2 v_1^2 cs^2\omega_9 + 72\omega_6^2 v_1^2 cs^2\omega_9^2 + 14\omega_6^2\omega_{13}^2 cs^4\omega_9^2 - 216\omega_{13}v_1^2 cs^2\omega_9^2 - 24\omega_6 cs^4\omega_9^2 - 48\omega_{13}v_1^4\omega_9^2 - 432\omega_6\omega_{13}^2 v_1^2 cs^2\omega_9 - 48\omega_6\omega_{13}v_1^4\omega_9 - 48\omega_{13}^2 v_1^4\omega_9 + 12\omega_6^2\omega_{13}cs^2\omega_9 + 12\omega_6^2\omega_{13}^2 cs^2 - 30\omega_6^2\omega_{13}v_1^4\omega_9 + 432\omega_6\omega_{13}v_1^2 cs^2\omega_9 + 216\omega_{13}^2 v_1^2 cs^2\omega_9 + 24\omega_{13}^2 cs^4\omega_9 + 24\omega_{13}cs^2\omega_9^2 - 36\omega_6^2\omega_{13}^2 v_1^2\omega_9 + 24\omega_6 v_1^2\omega_9^2 + 24\omega_6\omega_{13}^2 cs^4 - 96\omega_6^2\omega_{13}v_1^4\omega_9 + 12\omega_6^2 cs^4\omega_9^2 + \omega_6^2\omega_{13}^2 cs^2\omega_9^2 - 126\omega_6\omega_{13}v_1^2 cs^2\omega_9^2 - 96\omega_6\omega_{13}v_1^2\omega_9^2 - 14\omega_6^2\omega_{13}cs^2\omega_9 + 72\omega_6^2\omega_{13}v_1^2 cs^2\omega_9 + 24\omega_6 cs^2\omega_9^2 - 144\omega_6 v_1^2 cs^2\omega_9^2 + 48\omega_6\omega_{13}v_1^2\omega_9 + 48\omega_{13}v_1^2\omega_9^2 - 144\omega_6^2\omega_{13}v_1^2 cs^2 + 48\omega_{13}v_1^4\omega_9 - 12\omega_6^2\omega_{13}cs^4\omega_9^2 - 72\omega_6\omega_{13}v_1^2 - 48\omega_6\omega_{13}cs^2\omega_9^2 + 3\omega_6^2\omega_{13}v_1^2\omega_9^2 + 12\omega_6^2 v_1^4\omega_9^2 + 24\omega_6^2\omega_{13}v_1^4\omega_9 - 144\omega_6\omega_{13}v_1^2 cs^2\omega_9 - 48\omega_6\omega_{13}^2 cs^4\omega_9 - 36\omega_6^2\omega_{13}^2 v_1^4$

$C_{15} = -168\omega_6\omega_{13}^2 v_1^2\omega_9 + 24\omega_6^2\omega_{13} + 24\omega_6^2 cs^2\omega_9^2 + 12\omega_6^2\omega_{13}cs^2\omega_9 + 72\omega_6\omega_{13}^2\omega_9 - 36\omega_{13}^2\omega_9 - 51\omega_6^2\omega_{13}v_1^2\omega_9^2 + 60\omega_{13}cs^2\omega_9^2 - 60\omega_6^2\omega_{13}v_1^2 - 12\omega_6^2\omega_{13}\omega_9 + 21\omega_6^2\omega_{13}\omega_9^2 + 72\omega_6\omega_{13}^2 cs^2 + 24\omega_6^2 v_1^2\omega_9^2 + 36\omega_6^2\omega_{13}v_1^2\omega_9 - 120\omega_6\omega_{13}^2 cs^2\omega_9 + 84\omega_{13}^2 v_1^2\omega_9 - 12\omega_6\omega_9^2 - 33\omega_6^2\omega_{13}cs^2\omega_9^2 - 36\omega_6^2 cs^2 - 72\omega_6\omega_{13}\omega_9^2 - 60\omega_{13}cs^2\omega_9^2 - 24\omega_6\omega_{13}cs^2\omega_9 + 61\omega_6^2\omega_{13}v_1^2\omega_9 - 48\omega_6 v_1^2\omega_9^2 + 24\omega_6\omega_9^2 + 2\omega_6^2\omega_{13}\omega_9^2 - 3\omega_6^2\omega_{13}cs^2\omega_9^2 + 36\omega_{13}\omega_9^2 + 168\omega_6\omega_{13}v_1^2\omega_9^2 + 39\omega_6^2\omega_{13}cs^2\omega_9 - 48\omega_6 cs^2\omega_9^2 - 72\omega_6\omega_{13}v_1^2\omega_9 - 84\omega_{13}v_1^2\omega_9^2 - 25\omega_6^2\omega_{13}\omega_9 + 120\omega_6\omega_{13}v_1^2 + 120\omega_6\omega_{13}cs^2\omega_9^2 - 5\omega_6^2\omega_{13}v_1^2\omega_9^2 - 48\omega_6\omega_{13} + 24\omega_6\omega_{13}\omega_9$

$C_{16} = 48\omega_6\omega_{13}v_1^2 cs^2 + 6\omega_6^3\omega_{13}cs^4 + 48\omega_6\omega_{13}v_1^4 + 72\omega_6^2\omega_{13}v_1^4 - 24\omega_6^2 v_1^4 - 96\omega_{13}^2 v_1^2 cs^2 + 24\omega_6^2\omega_{13}v_1^2 + 24\omega_6\omega_{13}v_1^4 + \omega_6^3\omega_{13}cs^2 + 3\omega_6^3\omega_{13}v_1^4 + 12\omega_6\omega_{13}^2 cs^2 + 24\omega_6^2\omega_{13}cs^4 + 156\omega_6\omega_{13}v_1^2 cs^2 + 24\omega_6^2\omega_{13}cs^2 - 12\omega_6^3\omega_{13}v_1^2 cs^2 - 24\omega_6^2 v_1^2 cs^2 + 12\omega_6^3 v_1^4 + 24\omega_6\omega_{13}cs^4 + 18\omega_6^3\omega_{13}v_1^2 - 8\omega_6^2\omega_{13}cs^2 - 24\omega_6\omega_{13}v_1^2 cs^2 - 3\omega_6^3\omega_{13}v_1^2 - 48\omega_6^2\omega_{13}cs^4 + 6\omega_6^3\omega_{13}v_1^2 cs^2 + 24\omega_{13}cs^4 - 24\omega_6\omega_{13}cs^2 - 12\omega_6^3 v_1^2 - 18\omega_6^3\omega_{13}v_1^4 - 24\omega_6^2\omega_{13}cs^4 + 12\omega_6^3 v_1^2 cs^2 - 72\omega_6^2\omega_{13}v_1^2 - 72\omega_6^2\omega_{13}v_1^2 cs^2 - 6\omega_6^3\omega_{13}cs^2 - 48\omega_6\omega_{13}v_1^4 - 24\omega_6^2\omega_{13}v_1^2 - 3\omega_6^3\omega_{13}cs^4 + 24\omega_6^2 v_1^2 - 24\omega_6^2\omega_{13}v_1^4$

$C_{17} = 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2 - 4\omega_6\omega_{13}^2\omega_7\omega_{14}v_1^2\omega_5\omega_9\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_5 cs^2\omega_9^2\omega_{12} + 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2 - 4\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6\omega_{13}\omega_7\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} - 8\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_{14}\omega_5\omega_9\omega_{12} - 4\omega_6\omega_{13}^2\omega_7\omega_5\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7 v_1^2\omega_5\omega_9^2\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2\omega_9\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 2\omega_6^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 24\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9 + 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_{14}\omega_5 cs^2\omega_9^2 - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9^2 - 12\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_5\omega_9\omega_{12} + 24\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9 - 2\omega_6^2\omega_{13}^2\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 12\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 4\omega_6\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_9^2 - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2 - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9^2 + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5\omega_9^2 - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9 + 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_9\omega_{12} + 4\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 12\omega_6\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9 + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_{12} + 6\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_8\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2 - 6\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 cs^2\omega_9^2 + 2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5\omega_9^2 - 4\omega_6^2\omega_{13}^2\omega_5\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9 - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5\omega_9\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_{14}\omega_5 cs^2\omega_9\omega_{12} - 9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9 - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}v_1^2\omega_5\omega_9\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_5 cs^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2 - 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^2 + 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_9^2 - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_9^2 - 2\omega_6^2\omega_{13}\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2 v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2\omega_9\omega_{12} - 4\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 6\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2\omega_9 - 4\omega_6\omega_{13}^2\omega_{14}v_1^2\omega_5\omega_9\omega_{12} + 12\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 cs^2\omega_9\omega_{12} + 12\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_9\omega_{12} + 2\omega_6^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_9 + 4\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_9^2 + 8\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}v_1^2\omega_9\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 4\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 6\omega_6\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9 - 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_{12} - 12\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 4\omega_6\omega_{13}^2\omega_7 v_1^2\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_9\omega_{12} - 4\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9 + 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9 - 4\omega_6\omega_{13}^2\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_9\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2$

$$C_{18} = 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2 - 12\omega_6\omega_{13}^2\omega_7\omega_{14}v_1^2\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7\omega_5 cs^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2 -$$
$$12\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_7\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} - 24\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_{14}\omega_5\omega_9\omega_{12} -$$
$$4\omega_6\omega_{13}^2\omega_7\omega_5\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7 v_1^2\omega_5\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2\omega_9\omega_{12} + 4\omega_6\omega_{13}^2\omega_7\omega_8\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} -$$
$$2\omega_6^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 8\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2 + 9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 12\omega_6\omega_{13}\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} -$$
$$4\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_9^2 - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9^2 - 4\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9\omega_{12} + 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5\omega_9\omega_{12} +$$
$$4\omega_6^2\omega_{13}^2\omega_7\omega_5\omega_9^2\omega_{12} + 8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9 - 6\omega_6^2\omega_{13}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_9\omega_{12} -$$
$$6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 4\omega_6\omega_{13}\omega_7\omega_8\omega_9\omega_9^2\omega_{12} + 4\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_5 cs^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_{12} -$$
$$3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 12\omega_6\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_9^2 -$$
$$4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_9^2 - 12\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_9^2 + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_9\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9 +$$
$$4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} + 12\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} +$$
$$24\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 4\omega_6\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9 +$$
$$12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_8\omega_5\omega_9^2\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9\omega_{12} -$$
$$9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9 - 2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9 -$$
$$4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5\omega_9\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_{14}\omega_5 cs^2\omega_9\omega_{12} - 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9 - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}v_1^2\omega_5\omega_9\omega_{12} +$$
$$4\omega_6^2\omega_{13}^2\omega_5 cs^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2 - 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9^2 + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_9^2 - 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_9^2 - 6\omega_6\omega_{13}\omega_7\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} -$$
$$4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_9\omega_{12} + 12\omega_6^2\omega_{13}^2 v_1^2\omega_5\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2\omega_9\omega_{12} - 4\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2\omega_9^2 -$$
$$12\omega_6^2\omega_{13}^2\omega_{14}v_1^2\omega_5\omega_9\omega_{12} + 4\omega_6\omega_{13}^2\omega_7\omega_5 cs^2\omega_9^2\omega_{12} + 4\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} - 12\omega_6\omega_{13}\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 6\omega_6^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} +$$
$$4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_9^2 + 8\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9\omega_{12} - 4\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 4\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} -$$
$$8\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5\omega_9^2\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8 v_1^2\omega_9\omega_{12} - 6\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_{14}\omega_8\omega_9\omega_9\omega_{12} +$$
$$2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7 v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_{14}\omega_8 v_1^2\omega_9\omega_{12} - 4\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} +$$
$$12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_9^2 + 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9 - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} - 2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_{12} + 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2\omega_9\omega_{12} -$$
$$4\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} + 4\omega_6\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 4\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2$$

$$C_{19} =$$
$$-6\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9\omega_{12} + 12\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9^2 + 6\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^2\omega_{12} - 36\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} -$$
$$9\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9\omega_{12} + 12\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_9 - 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9 - 12\omega_6\omega_{13}^2\omega_7^2\omega_8^2\omega_5^2 cs^2\omega_9\omega_{12} -$$
$$36\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9^2\omega_{12} - 6\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7^2\omega_8\omega_5\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9 + 12\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} -$$
$$24\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9^2 - 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_8\omega_5^2 cs^2\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 cs^2\omega_9^2\omega_{12} -$$
$$12\omega_{13}\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^2\omega_{12} + 54\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2\omega_9\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9\omega_{12} +$$
$$36\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} + 54\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} + 9\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9 - 18\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9\omega_{12} -$$
$$12\omega_6\omega_{13}^2\omega_7^2\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9 - 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_8^2 v_1^2\omega_5\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9\omega_{12} +$$
$$6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9 + 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9 + 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9 + 12\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5^2\omega_9^2 +$$
$$12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_5 cs^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2\omega_9\omega_{12} + 12\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9\omega_{12} - 54\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9\omega_{12} +$$
$$36\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_{12} - 24\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} - 36\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9 +$$
$$18\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - 42\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} - 12\omega_6\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} -$$
$$12\omega_6\omega_{13}^2\omega_7^2\omega_8^2 v_1^2\omega_5^2\omega_9^2\omega_{12} - 4\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2 + 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} - 3\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^2\omega_{12} +$$
$$12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9 + 24\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_9^2\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_9^2\omega_9 -$$
$$54\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 6\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 cs^2\omega_9^2\omega_{12} +$$
$$18\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 cs^2\omega_9^2\omega_{12} - \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9 -$$
$$9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_9 - 6\omega_6^2\omega_{13}^2\omega_7\omega_8^2 v_1^2\omega_5^2\omega_9\omega_{12} + 3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9^2\omega_{12} + 12\omega_6\omega_{13}\omega_7^2\omega_8^2 v_1^2\omega_5^2\omega_9\omega_{12} - 9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9^2 -$$
$$12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} + 30\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 cs^2\omega_9^2\omega_{12} +$$
$$24\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} - 12\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_9 - 18\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 cs^2\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5\omega_9^2 +$$
$$12\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} - 12\omega_6^2\omega_{13}^2\omega_7\omega_8 v_1^2\omega_5^2\omega_9\omega_{12} + 42\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} - 24\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2\omega_9\omega_{12} +$$
$$12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9\omega_{12} - 18\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2 cs^2\omega_9^2\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_8\omega_5^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 cs^2\omega_9 +$$
$$6\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} + 12\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5^2 cs^2\omega_9^2\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} +$$
$$12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 6\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5^2\omega_9^2\omega_{12} + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9^2\omega_{12} -$$
$$12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9 - 24\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9 - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5\omega_9 + 12\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12} +$$
$$12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_9 - 6\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2\omega_{12} + 18\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 12\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9 + 24\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2\omega_9^2\omega_{12} +$$
$$6\omega_6^2\omega_7^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_9^2\omega_{12} - 6\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{12} + 12\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2\omega_9^2\omega_{12} + 6\omega_6^2\omega_{13}^2\omega_7\omega_8^2 v_1^2\omega_5\omega_9^2\omega_{12} + 6\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2\omega_5\omega_9^2$$

$$C_{20} = 2\omega_6^2\omega_{13}\omega_7^2\omega_8^2 v_1^2 - 2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 v_1^2 + \omega_6^3\omega_{13}^2\omega_7^2\omega_{14}\omega_8 v_1^2 - 6\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2 - 2\omega_6^3\omega_{13}^2\omega_7^2\omega_8 cs^2 - 2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 cs^2 -$$
$$11\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8 cs^2 - \omega_6^3\omega_{13}^2\omega_7^2\omega_{14}\omega_8 + 2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 2\omega_6^2\omega_{13}\omega_7^2\omega_8^2 + 2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}^2\omega_7\omega_8 cs^2 - 4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 2\omega_6^3\omega_{13}\omega_7\omega_8 -$$
$$2\omega_6^2\omega_{13}^2\omega_7^2\omega_8 cs^2 + 2\omega_6\omega_{13}^2\omega_7^2\omega_{14} cs^2 - 7\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 + \omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 v_1^2 - \omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 + \omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2 + \omega_6^2\omega_{13}^2\omega_7^2\omega_8^2 v_1^2 -$$
$$2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2 - 8\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 + \omega_6^3\omega_{13}^2\omega_7\omega_8^2 - \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2 + \omega_6^3\omega_7^2\omega_{14}\omega_8^2 v_1^2 + 7\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 + 4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 v_1^2 +$$
$$2\omega_6^2\omega_{13}\omega_7\omega_8 v_1^2 - \omega_6^3\omega_{13}\omega_7^2\omega_8^2 cs^2 + \omega_6^3\omega_{13}^2\omega_7\omega_8^2 + 6\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8 cs^2 - \omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 + 2\omega_6^2\omega_{13}^2\omega_7\omega_9 v_1^2 - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 -$$
$$\omega\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8 - \omega_6^3\omega_{13}^2\omega_7\omega_8^2 v_1^2 + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2 + 13\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8 cs^2 - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 v_1^2 + 2\omega_6^3\omega_{13}^2\omega_7\omega_8 v_1^2 - 2\omega_6^2\omega_{13}^2\omega_7^2\omega_8 v_1^2 +$$
$$5\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 - 2\omega_6^2\omega_{13}\omega_{14}\omega_8^2 cs^2 - 2\omega_6^3\omega_{13}^2\omega_7\omega_8 v_1^2 - 2\omega_6^2\omega_{13}^2\omega_7\omega_8 - 2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 + 2\omega_6^2\omega_{13}\omega_7^2\omega_8^2 cs^2 - \omega_6^3\omega_7^2\omega_{14}\omega_8^2 +$$
$$\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 - \omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8 v_1^2 - \omega_6^3\omega_{13}^2\omega_7\omega_8^2 - 2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 v_1^2 + 2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 + 4\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 +$$
$$\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2 + \omega_6^3\omega_7^2\omega_{14}\omega_8^2 cs^2 + 2\omega_6^3\omega_{13}^2\omega_7\omega_8 + 2\omega_6^2\omega_{13}^2\omega_7^2\omega_8 + 2\omega_6^2\omega_{13}^2\omega_7\omega_8^2 cs^2 + \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 v_1^2 - \omega_6^3\omega_{13}^2\omega_7\omega_8^2 v_1^2 +$$
$$2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 + \omega_6^3\omega_{13}^2\omega_7^2\omega_8 cs^2 - 2\omega_6^3\omega_{13}^2\omega_7\omega_{14} cs^2 + \omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2 - 5\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 + \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 v_1^2$$

$$C_{21} = 24\omega_6\omega_7^2\omega_8^2\omega_5 + 12\omega_6^2\omega_7^2\omega_8^2\omega_5^2 + 24\omega_6^2\omega_7\omega_8^2\omega_5 - 12\omega_6^2\omega_7\omega_5^2 - 12\omega_7^2\omega_8^2\omega_5 + 12\omega_6^2\omega_7^2\omega_8 + 12\omega_6\omega_8\omega_5^2 - 24\omega_6\omega_7\omega_8^2\omega_5 - 14\omega_6^2\omega_7\omega_8^2\omega_5 -$$
$$12\omega_6^2\omega_7\omega_8 + 12\omega_6\omega_7\omega_5^2 - 12\omega_6\omega_7\omega_8 + 12\omega_6^2\omega_7\omega_5 - 24\omega_6\omega_7\omega_8^2\omega_5 - 12\omega_6^2\omega_8^2\omega_5 + 12\omega_7^2\omega_8\omega_5 + \omega_6^2\omega_7^2\omega_8^2\omega_5$$

$$C_{22} = -2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_{12} + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2\omega_9 - 2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_5^2\omega_9\omega_{12} +$$
$$4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9 + 4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2\omega_9\omega_{12} - 2\omega_6^2\omega_7^2\omega_{14}\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_9\omega_{12} +$$
$$3\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9 + 2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7^2\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2\omega_9\omega_{12} + 2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} -$$
$$3\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} - 2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 2\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 4\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5\omega_9\omega_{12} +$$
$$4\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2\omega_9\omega_{12} - 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 2\omega_6^2\omega_7^2\omega_8^2\omega_5^2\omega_9\omega_{12} - 4\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2\omega_9\omega_{12} - 6\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} -$$
$$4\omega_6\omega_7^2\omega_8^2\omega_5^2\omega_9\omega_{12} - 4\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 4\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_{12} + 2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} -$$
$$4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_9\omega_{12} + 2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12} - 4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9 + 2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_5^2\omega_9\omega_{12} + 4\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} +$$
$$4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_9 - 4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2\omega_9 - 2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5\omega_9\omega_{12} + 6\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12} + 4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_9\omega_{12}$$

$$C_{23} = 2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5\omega_{15} +$$
$$4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^2\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 -$$
$$4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2\omega_{15} -$$
$$4\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$4\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6^2\omega_{10}\omega_7\omega_8^2\omega_5^2\omega_{15} + 2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 4\omega_6\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_8^2 +$$
$$2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_{15} - 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8\omega_5\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2\omega_{15} +$$
$$6\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 2\omega_6^2\omega_{10}\omega_7^2\omega_8^2\omega_5^2\omega_{15} - 6\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_{15} - 2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5\omega_{15} - 2\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5\omega_{15} + 3\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$$
$$3\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15}$$

$$C_{24} = -\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2v_1^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8^2 - \omega_6^3\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2v_1^2 + \omega_6^3\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{14}\omega_8 +$$
$$\omega_6^3\omega_{13}\omega_7^3\omega_{14}\omega_8^2cs^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8 - 2\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2cs^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8 +$$
$$\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8^2cs^2 + 3\omega_6\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2cs^2 + 3\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2 - \omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8v_1^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8v_1^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8v_1^2 - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14} - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8cs^2 -$$
$$2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8cs^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8cs^2 - 4\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2v_1^2 + 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8cs^2 +$$
$$2\omega_6\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14} - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8v_1^2 - 2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8v_1^2 -$$
$$2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2v_1^2 - 4\omega_6\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2 - \omega_6^3\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2v_1^2 + 2\omega_6\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8^2v_1^2 + 4\omega_6^2\omega_{16}\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2 + 4\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8v_1^2 - \omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2cs^2 - 2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 -$$
$$6\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2 + \omega_6^3\omega_{16}\omega_7^3\omega_{17}\omega_8^2cs^2 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{14}\omega_8 + 2\omega_6^2\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8^2 - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2v_2^2\omega_{14}\omega_8 -$$
$$2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2cs^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2cs^2 - \omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2cs^2 - \omega_6^3\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2 -$$
$$\omega_6^2\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2 + \omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2cs^2 + \omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2 + \omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2cs^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2v_1^2 +$$
$$\omega_6^3\omega_{13}\omega_7^3v_2^2\omega_{14}\omega_8^2 + \omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2v_1^2 - \omega_6^2\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}v_1^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}v_1^2 -$$
$$\omega_6^2\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8^2cs^2 - 6\omega_6\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8 - 4\omega_6^2\omega_{16}\omega_{13}\omega_7^3v_2^2\omega_{17}\omega_{14}\omega_8 - \omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2cs^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8v_1^2 + 4\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2 + \omega_6^3\omega_{16}\omega_7^3\omega_{17}\omega_8^2v_1^2 - 2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}v_1^2 -$$
$$2\omega_6^3\omega_{13}\omega_7^3v_2^2\omega_{14}\omega_8^2 - \omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2v_1^2 - 4\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8v_1^2 + 2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2cs^2 - 6\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8v_1^2 -$$
$$2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2v_1^2 + 4\omega_6^3\omega_{16}\omega_{13}\omega_7v_2^2\omega_{17}\omega_{14}\omega_8 - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8cs^2 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2v_2^2\omega_{17}\omega_{14}\omega_8 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8cs^2$$

$$C_{25} = -4\omega_6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_5\omega_{15} + 2\omega_{16}\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_5\omega_{15} + 6\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5cs^2 - 4\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_5\omega_{15} -$$
$$4\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5\omega_{15} + 8\omega_6\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5cs^2\omega_{15} -$$
$$4\omega_6\omega_{16}^2\omega_{10}^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 6\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5cs^2\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_5\omega_{15} -$$
$$12\omega_6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_5cs^2\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5cs^2\omega_{15} + 4\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_5\omega_{15} + 4\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$12\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8cs^2 + 4\omega_6\omega_{16}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 + 2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5\omega_{15} -$$
$$4\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_{15} -$$
$$8\omega_6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5cs^2\omega_{15} + 6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5cs^2 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}^2\omega_7^2v_2^2\omega_{17}\omega_5\omega_8\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2 -$$
$$2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5\omega_{15} + 8\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$$
$$4\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 3\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$$
$$9\omega_6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5cs^2 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8 - 4\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_{15} +$$
$$4\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5cs^2\omega_{15} + 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5cs^2\omega_{15} - 24\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5\omega_{15} -$$
$$4\omega_6\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5 - 3\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}^2\omega_{10}^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5\omega_{15} +$$
$$4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 - 6\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} + 4\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - 6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5\omega_{15} -$$
$$12\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8cs^2 - 12\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8cs^2 - 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_5\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_5cs^2\omega_{15} +$$
$$12\omega_{16}^2\omega_{10}^2\omega_7\omega_5cs^2\omega_{15} + 2\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5 - 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5cs^2\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5 - 6\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5cs^2\omega_{15} +$$
$$4\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8cs^2\omega_{15} + 2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5\omega_{15} + 6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} +$$
$$2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_5\omega_{15} - 4\omega_{16}^2\omega_{10}\omega_7^2\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5\omega_{15} + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5cs^2 -$$
$$2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}v_2^2\omega_8\omega_5\omega_{15} + 24\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 4\omega_6\omega_{16}\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5 -$$
$$2\omega_6\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_8\omega_5\omega_{15} + 9\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_5\omega_5cs^2\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{17}\omega_8 + 2\omega_6\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5 +$$
$$2\omega_6\omega_{10}^2\omega_7^2v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 8\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_{15} + 12\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_{15} +$$
$$12\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_{15} - 2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5$$

$$C_{26} = -6\omega_6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_8^2\omega_5\omega_{15} - 6\omega_6^2\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} - 6\omega_6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8\omega_5^2\omega_{15} -$$
$$12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5^2cs^2 +$$
$$18\omega_6^2\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_6\omega_{16}^2\omega_{10}\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^2 - 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5^2cs^2 + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^2\omega_{15} +$$
$$12\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2\omega_{15} + 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 36\omega_6^2\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5^2cs^2\omega_{15} + 6\omega_6\omega_{16}^2\omega_{10}^2\omega_7v_2^2\omega_{17}\omega_8\omega_5\omega_{15} -$$
$$24\omega_6^2\omega_{16}^2\omega_{10}\omega_{17}\omega_8^2\omega_5cs^2\omega_{15} + 4\omega_6^2\omega_{16}\omega_{10}\omega_7v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_{10}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 24\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2\omega_{15} +$$

$$12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 cs^2 - 12\omega_6^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 36\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8^2\omega_5\omega_{15} +$$
$$6\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 cs^2 + 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5 cs^2 + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5 cs^2\omega_{15} + 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 -$$
$$18\omega_6^2\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 18\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 3\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} +$$
$$6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 6\omega_6^2\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2 v_2^2\omega_8^2\omega_5\omega_{15} -$$
$$24\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_{15} - 6\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 18\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} -$$
$$6\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} + 6\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_8^2\omega_5\omega_{15} -$$
$$6\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5 + 24\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_8^2\omega_5\omega_{15} - 6\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} -$$
$$3\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2\omega_{15} + 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2 cs^2\omega_{15} - 6\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} +$$
$$24\omega_6^2\omega_{16}^2\omega_{10}^2\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} + 3\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 cs^2\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} -$$
$$36\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2 + 36\omega_6^2\omega_{16}\omega_{10}\omega_{10}\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5\omega_{15} - 9\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 cs^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 + 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_8^2\omega_5\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5^2 cs^2\omega_{15} +$$
$$12\omega_6^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}^2 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 36\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} + 9\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 +$$
$$54\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 cs^2 - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_8^2\omega_5^2\omega_{15} - 54\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} +$$
$$12\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} + 42\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} + 6\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} - \omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} +$$
$$6\omega_6^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 cs^2 - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^2 cs^2\omega_{15} - 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8^2\omega_5^2\omega_{15} -$$
$$6\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} - 9\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} + 30\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 cs^2\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5 -$$
$$12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2 v_2^2\omega_8^2\omega_5^2\omega_{15} + 24\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_{15} - 6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 cs^2\omega_{15} -$$
$$4\omega_6^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 9\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 cs^2 - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} +$$
$$6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8^2\omega_5^2\omega_{15} - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2 +$$
$$18\omega_6^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2\omega_{15} + \omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} - 42\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 cs^2\omega_{15} + 18\omega_6^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} -$$
$$12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2\omega_{15} - 6\omega_6^2\omega_{16}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2 cs^2\omega_{15} + 6\omega_6\omega_{16}^2\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8^2\omega_5 + 6\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5\omega_{15} +$$
$$54\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 cs^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8^2\omega_5 - 54\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_{15} - 24\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_{15}$$

$C_{27} = -12\omega_6\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_5\omega_{15} + 6\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_5\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5\omega_{15} + 24\omega_6\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 6\omega_{16}^2\omega_{10}\omega_7^2 v_2^2\omega_8\omega_5\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 cs^2\omega_{15} -$
$12\omega_6\omega_{16}\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5\omega_{15} - 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5\omega_{15} + 9\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_5\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5 cs^2\omega_{15} + 6\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 v_2^2\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 cs^2\omega_{15} + 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2 v_2^2\omega_5\omega_{15} + 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$
$4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2 + 12\omega_6\omega_{16}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5\omega_{15} -$
$4\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 cs^2\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_{15} -$
$24\omega_6\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 cs^2\omega_{15} + 2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} +$
$2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 6\omega_{16}^2\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_6\omega_{16}^2\omega_7^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2 -$
$2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5\omega_{15} + 8\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} +$
$4\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 4\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5\omega_{15} - 12\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 3\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$
$3\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2 - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8 - 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_{15} +$
$12\omega_{16}^2\omega_{10}\omega_7^2 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 cs^2\omega_{15} + 2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 8\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} -$
$12\omega_6\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 9\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 v_2^2\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} + 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5\omega_{15} +$
$4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 - 2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2\omega_{15} + 4\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - 2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 cs^2\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5\omega_{15} -$
$4\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 cs^2 - 4\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2 - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_5 cs^2\omega_{15} +$
$4\omega_{16}^2\omega_{10}^2\omega_7\omega_5 cs^2\omega_{15} + 6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5 - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 cs^2\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8 - 2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 cs^2\omega_{15} +$
$4\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2\omega_{15} + 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_{15} + 2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5\omega_{15} + 2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2\omega_{15} +$
$2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5\omega_{15} - 4\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5\omega_{15} + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5\omega_{15} + 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_{15} -$
$2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5 + 8\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} - 12\omega_6\omega_{16}^2\omega_{10}\omega_{10}\omega_7 v_2^2\omega_{17}\omega_8\omega_5 -$
$6\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_8\omega_5\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 cs^2\omega_{15} + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8 +$
$6\omega_6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5 + 6\omega_{16}^2\omega_{10}^2\omega_7 v_2^2\omega_{17}\omega_8\omega_5\omega_{15} - 8\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_{15} + 4\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} -$
$4\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_{15} + 4\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2\omega_{15} - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_{15} - 2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5\omega_{15} + 3\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5$

$C_{28} = 2\omega_6^2\omega_{16}^2\omega_7\omega_{17} cs^2 + 13\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2 cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_8 cs^2 + 5\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8 cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_8 + 4\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8 cs^2 -$
$4\omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 - \omega_6^2\omega_7^3\omega_{17}\omega_8^2 + 2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 cs^2 - 2\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 cs^2 + 2\omega_6\omega_{16}^2\omega_7^3\omega_8^2 cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_8 -$
$\omega_6^2\omega_{16}^2\omega_7^3\omega_8^2 - \omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8 + \omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_8 - 2\omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_8 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_8^2 cs^2 - \omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_8 -$
$6\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2 cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_8 - 7\omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8 cs^2 - 8\omega_6^2\omega_{16}^2\omega_{17}\omega_8^2 cs^2 - 11\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8 cs^2 -$
$2\omega_6^2\omega_{16}^2\omega_7 v_2^2\omega_{17}\omega_8^2 + 2\omega_6\omega_{16}^2\omega_7^3\omega_{17} cs^2 + \omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6\omega_{16}\omega_7 v_2^2\omega_{17}\omega_8^2 - 2\omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_8 + \omega_6^2\omega_7^3 v_2^2\omega_{17}\omega_8^2 - 4\omega_6\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8^2 -$
$\omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 + 2\omega_6^2\omega_7^3\omega_{17}\omega_8^2 - 5\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 cs^2 - \omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8 + \omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 cs^2 + \omega_6^2\omega_{16}\omega_7^3\omega_8^2 + \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_8^2 -$
$2\omega_6^2\omega_7^3\omega_{17}\omega_8^2 cs^2 - \omega_6\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8 + 4\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 cs^2 - \omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8 + \omega_6\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8 - 2\omega_6^2\omega_{16}^2\omega_7\omega_{17} cs^2 + 2\omega_6\omega_{16}^2\omega_7^3 v_2^2\omega_8 +$
$2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_8 cs^2 - \omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_8^2 cs^2 + \omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 cs^2 - 2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 cs^2 - \omega_6\omega_{16}^2\omega_7^3 v_2^2\omega_8^2 -$
$\omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8 - \omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8^2 + 2\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8 - 2\omega_6\omega_{16}^2\omega_7^3\omega_8 + 2\omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_8 - \omega_6\omega_{16}^2\omega_7^3\omega_8^2 cs^2 + 6\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2 cs^2 +$
$4\omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8^2 - 2\omega_6^2\omega_7^3 v_2^2\omega_{17}\omega_8^2 + \omega_6\omega_{16}^2\omega_7^3 v_2^2\omega_{17}\omega_8^2 + \omega_6^2\omega_{16}^2\omega_7^3\omega_8^2 cs^2 + \omega_6^2\omega_{16}^2\omega_7^3\omega_8^2 + \omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8 + \omega_6^2\omega_{16}^2\omega_7^3 v_2^2\omega_8 + 7\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2 cs^2$

$C_{29} = 36\omega_{16}^2\omega_{10}\omega_7 v_2^4 - \omega_{16}^2\omega_{10}^2\omega_7 cs^4 + 72\omega_{16}\omega_{10}\omega_7 v_2^2 cs^2 + 12\omega_{16}^2\omega_7 cs^2 - 24\omega_{10}^2\omega_7 v_2^4 - 216\omega_{16}\omega_{10}^2 v_2 cs^2 + 24\omega_{10}\omega_7 cs^2 - 36\omega_{16}^2\omega_7 v_2^4 +$
$3\omega_{16}^2\omega_{10}\omega_7 v_2^2 - 14\omega_{16}^2\omega_{10}\omega_7 cs^2 - 144\omega_{16}^2\omega_7 v_2^2 cs^2 - 72\omega_{16}^2\omega_7 v_2 + 12\omega_{10}^2\omega_7 cs^4 - 144\omega_{10}^2 v_2 cs^2 - 48\omega_{16}^2\omega_{10}\omega_7 cs^4 + 96\omega_{16}^2\omega_{10}\omega_7 v_2^2 +$
$150\omega_{16}^2\omega_{10}\omega_7 v_2^2 cs^2 - 12\omega_{10}^2\omega_7 v_2 + 24\omega_{16}^2\omega_7 cs^4 + 48\omega_{16}\omega_{10}^2 v_2 + 216\omega_{16}^2\omega_{10} v_2 cs^2 - 24\omega_{16}^2\omega_{10}\omega_7 v_2 + 12\omega_{16}\omega_{10}^2\omega_7 cs^2 - 30\omega_{16}\omega_{10}^2\omega_7 v_2^4 -$
$432\omega_{16}\omega_{10}^2\omega_7 v_2^2 cs^2 - 24\omega_{16}^2\omega_{10}^2 cs^4 - 96\omega_{16}\omega_{10}^2\omega_7 v_2 - 48\omega_{16}^2\omega_{10}^2 v_2 + 24\omega_{16}^2\omega_{10} cs^4 + 48\omega_{16}\omega_{10}^2\omega_7 cs^4 - 48\omega_{16}\omega_{10}\omega_7 v_2^4 + 30\omega_{16}\omega_{10}^2\omega_7 v_2^2 +$
$24\omega_{16}\omega_{10}^2 cs^2 - 126\omega_{16}\omega_{10}^2\omega_7 v_2^2 cs^2 - 48\omega_{16}^2\omega_{10} v_2^4 + 24\omega_{16}\omega_{10}\omega_7 v_2^4 - 12\omega_{16}\omega_{10}^2\omega_7 cs^4 - 12\omega_{16}\omega_{10}^2\omega_7 v_2^2 cs^2 - 24\omega_{16}^2\omega_{10} cs^2 - 48\omega_{16}\omega_{10}^2\omega_7 cs^2 +$
$48\omega_{16}\omega_{10}\omega_7 v_2^2 + 96\omega_{16}\omega_{10}^2\omega_7 v_2^4 + 48\omega_{16}^2\omega_{10} v_2^4 - 144\omega_{16}\omega_{10}\omega_7 v_2^2 cs^2 - 24\omega_{10}^2\omega_7 cs^4 + 36\omega_{16}^2\omega_7 v_2 - 3\omega_{16}^2\omega_{10}\omega_7 v_2^2 + 14\omega_{16}\omega_{10}\omega_7 cs^4 +$
$288\omega_{16}^2\omega_7 v_2^2 cs^2 - 36\omega_{16}^2\omega_{10}\omega_7 v_2^2 + \omega_{16}^2\omega_{10}^2\omega_7 cs^2 - 12\omega_{16}^2\omega_7 cs^4 + 24\omega_{10}^2\omega_7 v_2^2 - 96\omega_{16}^2\omega_{10}\omega_7 v_2^2 + 72\omega_{10}^2\omega_7 v_2^2 cs^2 + 12\omega_{10}^2\omega_7 v_2^2 -$

$$24\omega_{16}^2\omega_7 cs^2 + 72\omega_{16}^2\omega_7 v_2^4 - 12\omega_{10}^2\omega_7^2 cs^2 - 432\omega_{16}^2\omega_{10}\omega_7 v_2^2 cs^2 + 48\omega_{16}^2\omega_{10}\omega_7 cs^2$$

$C_{30} = -12\omega_{16}\omega_{10}\omega_7^2 - 36\omega_{16}^2\omega_7^2 cs^2 + 36\omega_{16}\omega_{10}^2 - 48\omega_{10}^2\omega_7 cs^2 - 5\omega_{16}^2\omega_{10}\omega_7^2 v_2^2 + 39\omega_{16}^2\omega_{10}\omega_7^2 cs^2 + 120\omega_{16}^2\omega_7 v_2^2 + 2\omega_{16}^2\omega_{10}\omega_7^2 - 12\omega_{10}^2\omega_7^2 -$
$168\omega_{16}^2\omega_{10}\omega_7 v_2^2 + 24\omega_{10}^2\omega_7 v_2^2 - 84\omega_{16}^2\omega_{10}v_2^2 + 24\omega_{10}^2\omega_7 + 36\omega_{16}\omega_{10}\omega_7^2 v_2^2 - 33\omega_{16}^2\omega_{10}\omega_7^2 cs^2 - 24\omega_{16}\omega_{10}\omega_7 cs^2 + 168\omega_{16}\omega_{10}^2\omega_7 v_2^2 +$
$84\omega_{16}\omega_{10}v_2^2 + 24\omega_{16}\omega_{10}\omega_7 - 51\omega_{16}\omega_{10}^2\omega_7^2 v_2^2 + 12\omega_{16}\omega_{10}\omega_7^2 cs^2 - 60\omega_{16}\omega_{10}^2 cs^2 - 36\omega_{16}^2\omega_{10} - 72\omega_{16}\omega_{10}^2\omega_7 + 60\omega_{16}\omega_{10}^2 cs^2 +$
$120\omega_{16}\omega_{10}^2\omega_7 cs^2 - 72\omega_{16}\omega_{10}\omega_7 v_2^2 + 72\omega_{16}^2\omega_{10}\omega_7 - 48\omega_{16}^2\omega_7 - 25\omega_{16}^2\omega_{10}\omega_7^2 - 60\omega_{16}\omega_7^2 v_2^2 + 24\omega_{16}^2\omega_7 + 61\omega_{16}^2\omega_{10}\omega_7^2 v_2^2 - 3\omega_{16}^2\omega_{10}\omega_7^2 cs^2 -$
$48\omega_{10}^2\omega_7 v_2^2 + 21\omega_{16}\omega_{10}^2\omega_7^2 + 72\omega_{16}^2\omega_7 cs^2 + 24\omega_{10}^2\omega_7^2 cs^2 - 120\omega_{16}\omega_{10}\omega_7 cs^2$

$C_{31} = -24\omega_7^2 v_2^4 - 8\omega_{16}^2\omega_7 cs^2 - 72\omega_{16}\omega_7^2 v_2^2 - 24\omega_{16}\omega_7^2 cs^4 - 24\omega_{16}^2\omega_7^2 v_2^4 - 72\omega_{16}^2\omega_7^2 v_2^2 cs^2 - 24\omega_{16}\omega_7 v_2^2 - 24\omega_{16}\omega_7 cs^2 - 12\omega_{16}\omega_7^3 v_2^2 cs^2 -$
$24\omega_7^2 v_2^2 cs^2 - 48\omega_{16}\omega_7 v_2^4 - 48\omega_{16}^2\omega_7 cs^4 - 24\omega_{16}\omega_7 v_2^2 cs^2 + 3\omega_{16}^2\omega_7^3 v_2^4 + 6\omega_{16}\omega_7^3 cs^4 + 18\omega_{16}\omega_7^3 v_2^2 + \omega_{16}^2\omega_7^3 cs^2 - 96\omega_{16}^2 v_2^2 cs^2 + 12\omega_7^3 v_2^4 +$
$24\omega_{16}^2 cs^4 - 18\omega_{16}\omega_7^3 v_2^4 - 3\omega_{16}^2\omega_7^3 cs^4 + 48\omega_{16}\omega_7^2 v_2^2 cs^2 - 12\omega_7^3 v_2^2 + 12\omega_7^3 v_2^2 cs^2 - 3\omega_{16}^2\omega_7^3 v_2^2 - 6\omega_{16}\omega_7^3 cs^2 + 6\omega_{16}^2\omega_7^3 v_2^2 cs^2 + 24\omega_{16}\omega_7^2 cs^2 +$
$24\omega_{16}^2\omega_7^2 v_2^2 + 156\omega_{16}^2\omega_7 v_2^2 cs^2 + 24\omega_7^2 v_2^2 + 24\omega_{16}\omega_7^2 cs^4 + 72\omega_{16}\omega_7^2 v_2^4 + 48\omega_{16}\omega_7 v_2^2 + 12\omega_{16}^2\omega_7 cs^2 + 24\omega_{16}^2\omega_7 v_2^4 + 24\omega_{16}\omega_7 cs^4$

$C_{32} = -9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_1^2 cs^2\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 - 6\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{13}^2 v_3^2\omega_9^2 -$
$12\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 - 12\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 - 42\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{11}\omega_{18}cs^2\omega_9^2 - 12\omega_6^3\omega_{13}\omega_{11}v_1^2 cs^2\omega_9^2 -$
$36\omega_6^3\omega_{13}^2\omega_{11}v_3 cs^2\omega_9^2 - 18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}cs^2\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}v_3^2 cs^2\omega_9 + 6\omega_6^3\omega_{22}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{18}cs^4\omega_9 -$
$6\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2 v_1^2\omega_{18} + 36\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2 cs^2\omega_9 - 18\omega_6^3\omega_{13}^2 v_3^2\omega_{18}cs^2\omega_9^2 - 12\omega_6^2\omega_{13}^2\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{11}\omega_{18}cs^4\omega_9^2 -$
$18\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 - 12\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9 + 12\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9 -$
$6\omega_6^3\omega_{13}^2 v_1^2\omega_{18}cs^2\omega_9^2 + \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 + 72\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 - 36\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 cs^2\omega_9 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 +$
$18\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}^2 v_1^2\omega_{18}cs^2\omega_9 - 48\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{13}^2\omega_{11}v_3^2\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_9 -$
$72\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2 - 60\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{13}^2 v_1^2 cs^2\omega_9 -$
$72\omega_6\omega_{22}\omega_{13}v_3^2\omega_{18}cs^2\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_9 + 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2 - 6\omega_6^3\omega_{22}\omega_{11}v_3^2\omega_{18}\omega_9^2 + 6\omega_6^3\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 +$
$6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 + 48\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_9 + 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2 v_1^2\omega_9 - 3\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 -$
$12\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2 + 54\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_9 - 12\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 +$
$36\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}cs^2\omega_9^2 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2 - 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9 + 3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9 +$
$36\omega_6^2\omega_{13}^2\omega_{11}cs^4\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18} +$
$15\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 - 12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_1^2 cs^2\omega_9 + 12\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 + 27\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}cs^2\omega_9 - 96\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2 +$
$36\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2 cs^2\omega_9 + 6\omega_6^3\omega_{13}^2\omega_{18}cs^2\omega_9^2 +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18} + 12\omega_6^3\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 - 45\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 72\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_{18}cs^2\omega_9 -$
$12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_9 + 36\omega_6^2\omega_{13}^2\omega_{11}cs^4\omega_9 - 36\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9 - 36\omega_6^2\omega_{13}^2\omega_{11}cs^4\omega_9^2 + 5\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9 - 6\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 -$
$36\omega_6^2\omega_{13}^2\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9 - 24\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9 + 18\omega_6^3\omega_{22}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 -$
$12\omega_6^3\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_9 - 6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 +$
$6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 - 36\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 + 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 - 24\omega_6^2\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9^2 +$
$12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_9 - 24\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 36\omega_6^2\omega_{13}^2\omega_{11}v_3^2 cs^2\omega_9^2 + 144\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{11}\omega_{18}cs^4\omega_9^2 +$
$36\omega_6^2\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 - 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 - 24\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 - 108\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 + 12\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_9^2 -$
$6\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 + 12\omega_6^3\omega_{13}\omega_{11}v_1^2 cs^2\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{18}cs^2\omega_9^2 + 6\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 -$
$6\omega_6^3\omega_{22}\omega_{11}\omega_{18}cs^2\omega_9^2 + 24\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 - 12\omega_6^2\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 +$
$3\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^2 + 6\omega_6^3\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 - 36\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18} -$
$36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 - 18\omega_6^3\omega_{13}^2\omega_{18}cs^4\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 - 12\omega_6^3\omega_{22}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 -$
$12\omega_6^3\omega_{13}^2 cs^2\omega_9^2 + 24\omega_6^2\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9 - 36\omega_6^2\omega_{22}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 36\omega_6^2\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 +$
$24\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 36\omega_6^2\omega_{13}^2 v_3^2 cs^2\omega_9^2 + 18\omega_6^3\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 - 18\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2\omega_9 +$
$156\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2 + 6\omega_6^3\omega_{13}^2 v_3^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_9^2 + 12\omega_6^3\omega_{13}^2 v_1^2 cs^2\omega_9^2 - \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2 + 9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 -$
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 - 12\omega_6^2\omega_{13}^2\omega_{11}cs^2\omega_9^2 - 36\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^4\omega_9 + 12\omega_6^2\omega_{13}^2\omega_{11}v_3^2 v_1^2\omega_9$

$C_{33} = -9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 36\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_1^2 cs^2\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 - 6\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{13}^2 v_3^2\omega_9^2 +$
$60\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 - 12\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 - 36\omega_6^3\omega_{13}^2\omega_{11}v_1^2 cs^2\omega_9^2 - 12\omega_6^3\omega_{13}\omega_{11}v_3^2 cs^2\omega_9^2 -$
$6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}cs^2\omega_9 - 18\omega_6^3\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{22}\omega_{13}^2\omega_{18}cs^4\omega_9 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18} +$
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 cs^2\omega_9 - 6\omega_6^3\omega_{13}^2 v_3^2\omega_{18}cs^2\omega_9^2 - 36\omega_6^3\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 - 36\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9 +$
$12\omega_6^3\omega_{13}^2\omega_{11}cs^2\omega_9^2 + 12\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9 - 5\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9 - 18\omega_6^3\omega_{13}^2 v_1^2\omega_{18}cs^2\omega_9^2 + 24\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9 -$
$12\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_9 - 108\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9 + 18\omega_6^3\omega_{22}\omega_{13}^2 v_1^2\omega_{18}cs^2\omega_9 - 48\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 -$
$12\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_9^2 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_9 - 24\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2 -$
$5\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 - 36\omega_6^3\omega_{22}\omega_{13}^2 v_1^2 cs^2\omega_9 - 24\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}cs^2\omega_9 - 12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}cs^2 -$
$6\omega_6^3\omega_{22}\omega_{11}v_3^2\omega_{18}\omega_9^2 + 6\omega_6^3\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}\omega_9 + 144\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 + 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 +$
$36\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2 v_1^2\omega_9 + 30\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9 - 36\omega_6^3\omega_{13}\omega_{11}v_3^2 v_1^2\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_9 -$
$36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 - 48\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_{18}cs^2\omega_9^2 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2 - 15\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9 -$
$\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4\omega_9^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9 + 24\omega_6^2\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^2 -$
$12\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2 cs^2\omega_9 + 60\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 +$
$9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}cs^2\omega_9 - 12\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2 + 36\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_9 + 18\omega_6^3\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 -$
$12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2 cs^2\omega_9 + 6\omega_6^3\omega_{13}^2\omega_{18}cs^2\omega_9^2 + 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18} + 36\omega_6^3\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 - 36\omega_6^3\omega_{22}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9^2 -$
$15\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 24\omega_6^2\omega_{22}\omega_{13}^2 v_3^2\omega_{18}cs^2\omega_9 - 36\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_9 + 12\omega_6^3\omega_{13}^2 cs^4\omega_9^2 - 12\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9 -$
$12\omega_6^3\omega_{13}^2\omega_{11}cs^4\omega_9^2 + 5\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9 - 18\omega_6^3\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 54\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9 -$
$24\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9 + 6\omega_6^3\omega_{22}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{11}v_3^2\omega_{18}\omega_9^2 - 12\omega_6^3\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2 - 6\omega_6^3\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_9 -$
$18\omega_6^3\omega_{22}\omega_{13}^2 v_3^2 v_1^2\omega_{18}\omega_9 - 6\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2 v_1^2\omega_{18}\omega_9 - 12\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2 + \omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2 -$
$102\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2 - 72\omega_6^2\omega_{22}\omega_{13}v_3^2 v_1^2\omega_{18}\omega_9^2 + 12\omega_6^3\omega_{22}\omega_{13}^2 v_3^2\omega_9 - 24\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 12\omega_6^3\omega_{13}^2\omega_{11}v_3^2 cs^2\omega_9^2 +$

$$48\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2+12\omega_6^2\omega_{13}\omega_{11}\omega_{18}cs^4\omega_9^2+18\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2-72\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9^2-36\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}cs^2\omega_9+$$
$$36\omega_6^3\omega_{13}^2v_3^2v_1^2\omega_9^2-18\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2-12\omega_6^3\omega_{22}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2+36\omega_6^2\omega_{13}^2\omega_{11}v_1^2cs^2\omega_9^2-6\omega_6^3\omega_{22}\omega_{13}^2\omega_{18}cs^2\omega_9+6\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2+$$
$$72\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9+12\omega_6^2\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9^2-36\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2-6\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2+$$
$$36\omega_6^3\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}\omega_9+18\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2-12\omega_6^3\omega_{22}\omega_{13}^2cs^4\omega_9-12\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}-12\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9-$$
$$6\omega_6^3\omega_{13}^2\omega_{18}cs^4\omega_9^2-12\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}\omega_9^2+36\omega_6^2\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2+24\omega_6^2\omega_{22}\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2-12\omega_6^3\omega_{13}^2cs^2\omega_9^2+72\omega_6^2\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}\omega_9-$$
$$45\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}\omega_9^2-12\omega_6^2\omega_{22}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2+12\omega_6^2\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2+24\omega_6\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}\omega_9^2+12\omega_6^2\omega_{13}^2v_3^2cs^2\omega_9^2+$$
$$6\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_{18}cs^2\omega_9^2-18\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9-12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_9+18\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^4\omega_9^2+6\omega_6^3\omega_{13}^2v_3^2\omega_{18}\omega_9^2+12\omega_6^3\omega_{13}^2\omega_{11}v_3^2\omega_9^2+$$
$$36\omega_6^3\omega_{13}^2v_1^2cs^2\omega_9^2+27\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2v_1^2\omega_{18}\omega_9-15\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2-12\omega_6^2\omega_{13}^2\omega_{11}cs^2\omega_9^2-12\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^4\omega_9+36\omega_6^2\omega_{13}\omega_{11}v_3^2v_1^2\omega_9^2$$

$C_{34}=-132\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+156\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2\omega_{18}cs^2\omega_9^2-12\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}\omega_9^2+12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2-18\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2\omega_9-$
$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9-12\omega_6^3\omega_{13}^2\omega_{11}^2\omega_{18}\omega_9^2+\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2v_1^2\omega_{18}\omega_9^2+24\omega_6^3\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^2-24\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+$
$12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2-18\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2\omega_9^2-24\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2+18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9^2-36\omega_6\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^2\omega_9^2-$
$24\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2+24\omega_6^2\omega_{13}^2\omega_{11}^2v_1^2\omega_{18}\omega_9^2+36\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2\omega_{18}cs^2-12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2\omega_9-12\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2-$
$6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9-12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2+66\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9^2+24\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2-24\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_9^2+$
$6\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9-6\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}-24\omega_6\omega_{13}\omega_{11}\omega_{18}\omega_9^2-12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}+84\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2-$
$12\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9^2+12\omega_6^3\omega_{22}\omega_{11}^2v_1^2\omega_{18}\omega_9^2-48\omega_6^2\omega_{22}\omega_{11}^2\omega_{18}cs^2\omega_9^2+24\omega_6^2\omega_{13}\omega_{11}^2\omega_{18}cs^2\omega_9^2+4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2v_1^2\omega_{18}\omega_9-$
$24\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2+18\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9+12\omega_6^3\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^2-24\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+60\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2-$
$12\omega_6^2\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9+12\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2\omega_{18}cs^2\omega_9-12\omega_6^2\omega_{22}\omega_{11}^2v_1^2\omega_{18}\omega_9-12\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2\omega_{18}\omega_9^2-66\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9^2-$
$36\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9^2+12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2+12\omega_6^3\omega_{22}\omega_{11}\omega_{18}\omega_9^2-18\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2+6\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}-24\omega_6^3\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^2+$
$24\omega_6^3\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2-12\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9-24\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2-12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^2-96\omega_{22}\omega_{13}^2\omega_{11}^2\omega_{18}cs^2\omega_9^2+$
$48\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+24\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2\omega_9^2-72\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+24\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2\omega_{18}cs^2\omega_9^2-$
$\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2-24\omega_6^2\omega_{22}\omega_{13}\omega_{18}cs^2\omega_9^2+12\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^2+12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^2-42\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9+$
$12\omega_6\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9+72\omega_6\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9+24\omega_6^3\omega_{22}\omega_{13}\omega_{18}cs^2\omega_9^2+24\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2-66\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+$
$24\omega_6^2\omega_{22}\omega_{11}^2\omega_{18}\omega_9^2+12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9-24\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^2-12\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2+12\omega_6^2\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9^2+$
$12\omega_6^3\omega_{13}\omega_{11}\omega_{18}\omega_9^2-24\omega_6^2\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^2-4\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9+6\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9+12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}+$
$12\omega_6^2\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^2+36\omega_6\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9+24\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2\omega_9^2-12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9+$
$24\omega_6^2\omega_{13}\omega_{11}^2v_1^2\omega_{18}\omega_9^2-24\omega_6\omega_{22}\omega_{11}^2v_1^2\omega_{18}\omega_9^2+12\omega_6\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}\omega_9-12\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}\omega_9^2-84\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^2\omega_9^2+$
$24\omega_6^3\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2+12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_1^2\omega_{18}\omega_9^2-12\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}\omega_9^2+90\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^2\omega_9^2+12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9^2$

$C_{35}=\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^3\omega_{14}\omega_8^2v_1cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2+$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18}+2\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2-2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1^2cs^2-$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2+$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_3^2v_3^2\omega_{14}\omega_8^2v_1-4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4-$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18}+2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2+$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}cs^2+$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}cs^2-\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2+$
$2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2-\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_8^2v_1^2\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{14}\omega_8^2v_1cs^2-$
$2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_{18}+$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8^2cs^2+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2v_1\omega_{18}+$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1\omega_{18}+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2+\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_{18}+$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2v_1^2\omega_{18}cs^2-2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1^2\omega_{18}+$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^4-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2v_1+$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^4-2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1^2\omega_{18}-\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-$
$\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_{18}-\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4-$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_{18}+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1-\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2v_1\omega_{18}cs^2-$
$2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2-$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8^2v_1^2cs^2+$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2v_1cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2-$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2v_1^2cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2+\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18}+$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2-2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2-$
$\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2+\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-2\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2+$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2-2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_1^2\omega_{18}cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1cs^2+$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2v_1\omega_{18}+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1^2+$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8\omega_{18}cs^2+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_{18}-2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2+$
$12\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}-\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2+$
$\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2-\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2-$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2+\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2+$
$2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2+2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2cs^2+$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2+2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1^2\omega_{18}+$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1cs^4-\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2v_1cs^2-2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8^2v_1cs^2-$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_3^2\omega_{14}\omega_8^2v_1cs^2+2\omega_6^2\omega_{22}\omega_{19}\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2+2\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2+$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1^2\omega_{18}+2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1^2cs^2-2\omega_6^3\omega_{22}\omega_{19}\omega_7v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}-$
$2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18}-\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_{18}-2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2-$
$\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_{18}+\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2-\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18}-$

$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_{18}cs^2 +$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} - \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1^2 - \omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} + \omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2 +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 - \omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} -$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2 v_1\omega_{18}cs^2 - \omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{13}\omega_7 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} + \omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 +$
$\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 cs^2 -$
$2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1 + \omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 + 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1 cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_{18}cs^4 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8\omega_{18}cs^2 +$
$2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 - \omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2 +$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} + 4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^4 - \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 +$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8 v_1\omega_{18} + \omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_8 v_1^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}v_1\omega_{18}cs^2 -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 + \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2 v_1 cs^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 +$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8^2 v_1^2\omega_{18} -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 cs^2 + \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18}cs^2 +$
$\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_{18}cs^4 - 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8 v_1 cs^2 +$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2 - 8\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1 cs^2 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1^2\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} -$
$2\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} + \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} - 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1 +$
$2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_8 v_1\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} - 8\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 +$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + 8\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4 - \omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1 cs^2 -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2 v_1^2\omega_{18} -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{14}\omega_8^2 v_1^2 cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1 cs^2 +$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} + 2\omega_6^2\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} + \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8 v_1\omega_{18} + 2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8 v_1^2\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 + 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} + \omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2^2 v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_8 v_1\omega_{18} - 4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4 + 2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 +$
$\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 -$
$8\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^4 - 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1^2\omega_{18} -$
$\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8 v_1\omega_{18}cs^2 +$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2 -$
$\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 +$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2$

$C_{36} = -\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8^2\omega_{18}cs^2 +$
$4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2 + \omega_6^3\omega_{22}^2\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2\omega_{18}cs^2 -$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8\omega_{18}v_1\omega_{18} + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18} - \omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18} - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} -$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2 +$

$$
\begin{aligned}
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18} + \\
&\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{14}\omega_8^2cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2 - \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2cs^2 - \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2^2v_3^2\omega_{14}\omega_8^2\omega_{18} - 2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2 + \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 + \omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_8^2\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1cs^2 + \\
&4\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1cs^2 - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18} + \\
&2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2cs^2 - \\
&12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + \\
&6\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18} - \omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} - \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18} - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8^2\omega_{18} + \\
&4\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1 - 2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2cs^2 + 4\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1 + 2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2 + \omega_6^3\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}\omega_{14}\omega_8^2v_1cs^2 - \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + \\
&\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_3^2\omega_8\omega_{18} - 8\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2 + \\
&4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - \omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2v_2\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1 - \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{14}\omega_8^2v_1cs^2 - \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_{18} + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18} + \\
&\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_{18} - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1 + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_8\omega_{18} + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 - \omega_6^3\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_1v_1\omega_{18}cs^2 - \\
&2\omega_6^3\omega_{22}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_8^2\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 - 8\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18} - \\
&2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2cs^2 + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{14}\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 - \\
&6\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_{18} - \omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}\omega_{14}\omega_8^2cs^2 - \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2 + \\
&4\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{19}\omega_{20}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + \\
&2\omega_6^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 + \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2v_2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2v_1cs^2 - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_8^2\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18} - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2^2v_3^2\omega_{14}\omega_8^2\omega_{18} + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} - \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_8\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{11}v_3^2\omega_8v_1cs^2 - \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 10\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_8\omega_{18} - \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}v_1\omega_{18}cs^2 - \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + \omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2^2v_3^2\omega_{14}\omega_8^2 - \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2cs^2 - \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18} - 4\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2cs^2 + \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 + \omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - \\
&4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 4\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1 + \\
&4\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_{18} - \\
&2\omega_6^3\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{13}^2\omega_7v_3^2\omega_{14}\omega_8^2cs^2 + \omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2\omega_{18} - \\
&2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - 4\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_3^2\omega_{14}\omega_8^2cs^2 - \\
&4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} - \omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2cs^2 - \\
&\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}v_1\omega_{18}cs^2 - \\
&2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_8\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 +
\end{aligned}
$$

$2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 + \omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} -$

$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{14}\omega_8^2v_1cs^2 + 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} -$

$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2\omega_{11}\omega_{14}\omega_8^2cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2 +$

$2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8\omega_{18} - \omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 +$

$\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 + 4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_{18} -$

$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2^2\omega_{14}\omega_8^2cs^2 - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2v_2\omega_{14}\omega_8^2\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2v_2v_3^2\omega_{14}\omega_8v_1 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 -$

$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}v_2^2v_3^2\omega_{14}\omega_8^2$

$C_{37} = 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 +$

$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3v_2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 + 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_8^2v_1\omega_5^2\omega_{18} +$

$24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}cs^2 -$

$6\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^3v_2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18} -$

$6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}cs^2 +$

$24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18} - 6\omega_6^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 24\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 -$

$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 -$

$6\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2v_1^2\omega_5^2\omega_{18} + 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} + 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3\omega_{14}\omega_8^2\omega_5^2cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 42\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18} -$

$6\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 +$

$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18} -$

$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} -$

$12\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2 +$

$6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2v_3^2\omega_8^2v_1\omega_5^2\omega_{18} + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5^2cs^2 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 24\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2v_1^2\omega_5^2cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3\omega_8v_1^2\omega_5^2\omega_{18} + 24\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3\omega_{14}\omega_8^2\omega_5cs^2 - 6\omega_6^3\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 -$

$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}v_1^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 +$

$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 -$

$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 24\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 +$

$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3\omega_{14}v_1^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 +$

$12\omega_6^3\omega_{19}\omega_7^3\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 +$

$24\omega_6^3\omega_{22}\omega_{19}\omega_7^3v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18} - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18} - 24\omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18} -$

$24\omega_6^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2v_1\omega_5^2cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2cs^2 -$

$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18} -$

$6\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5\omega_{18}cs^2 + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8v_1\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 - 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 -$

$24\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2cs^2 + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18} + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8v_5\omega_{18}cs^2 -$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2cs^2 -$

$12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2cs^2 + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2 + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 -$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2v_1^2\omega_5^2\omega_{18} + 24\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5^2cs^2 +$

$6\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18} -$

$12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} -$

$6\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2v_1^2\omega_5^2\omega_{18} - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}v_3\omega_{14}\omega_8^2v_1^2\omega_5^2 +$

$6\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18} + 12\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} -$

$2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 + 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 +$

$24\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 18\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 +$

$24\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2 + 10\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 6\omega_6^3\omega_{19}\omega_{13}\omega_7\omega_{20}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 -$

$24\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} -$

$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2cs^2 -$

$36\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2 + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 +$

$12\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2cs^2 + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3v_2\omega_{11}\omega_{14}\omega_8v_1\omega_5^2cs^2 -$

$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2v_1^2\omega_5^2cs^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8v_1\omega_5^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_8v_1\omega_5^2\omega_{18} +$

$24\omega_6^3\omega_{22}\omega_{13}\omega_7^3v_2\omega_{11}\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 -$

$6\omega_6^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} - 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}v_3^2\omega_{14}\omega_8^2v_1^2\omega_5^2 -$

$6\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2v_1^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2v_1\omega_5^2\omega_{18} - 12\omega_6^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 +$

$$18\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 - 60\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 + 24\omega_6^3\omega_{19}\omega_{13}\omega_7\omega_3^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2cs^2 -$$
$$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_8 v_1\omega_5^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} -$$
$$24\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2 - 6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 cs^4 -$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} - 18\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 +$$
$$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} -$$
$$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^3\omega_8 v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1^2\omega_5^2\omega_{18} -$$
$$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4 - 18\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 +$$
$$6\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 - 60\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4 -$$
$$24\omega_6^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2 - 48\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8 v_1^2\omega_5^2 +$$
$$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2 cs^2 - \omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 -$$
$$6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_7^3\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 -$$
$$6\omega_6^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_{18}cs^2 - 18\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 cs^4 -$$
$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^3 v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^4 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 v_2\omega_{14}\omega_8^2 v_1\omega_5^2 cs^2 + 6\omega_6^3\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2 +$$
$$24\omega_6^3\omega_{22}\omega_{13}\omega_7^3 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} - 6\omega_6^3\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} +$$
$$12\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 36\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^2 cs^2 -$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 -$$
$$6\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}\omega_8 v_1\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} + 12\omega_6^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 + 12\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 +$$
$$24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2 v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^4 - 24\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 +$$
$$24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2 cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14} v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 v_3^2\omega_{14}\omega_8 v_1^2\omega_5^2\omega_{18} +$$
$$6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8 v_1^2\omega_5^2\omega_{18} +$$
$$24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_5^2 cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 + 24\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}\omega_8 v_1\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8 v_1\omega_5^2\omega_{18}cs^2 +$$
$$6\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4 +$$
$$6\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}v_3^2\omega_8 v_1^2\omega_5^2\omega_{18} +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_7 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{19}\omega_7\omega_{20}v_2\omega_{11}v_3^3\omega_8 v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_7^3 v_3^2\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18} -$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8 v_1^2\omega_5^2 + 36\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8\omega_5\omega_{18}cs^2 -$$
$$24\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14} v_1^2\omega_5^2\omega_{18}cs^2 +$$
$$24\omega_6^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8 v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_{14}\omega_8^2\omega_5 cs^2 - 6\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4 -$$
$$24\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18} + 24\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}v_2\omega_{11}v_3^2\omega_{14}\omega_8^2 v_1\omega_5^2\omega_{18}$$

$C_{38} = -4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 + 4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}^2 cs^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_5\omega_{18}^2 cs^2 + 4\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}^2 -$
$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} - 4\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} +$
$2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} - 4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8^2 v_1^2\omega_5\omega_{18} + 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8 v_1^2\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$
$4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_5\omega_{18}^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 -$
$4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_{18}^2 cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 -$
$2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 + 12\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} -$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_8 v_1^2\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 -$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8^2 v_1\omega_5\omega_{18}^2 -$
$2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 - 4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$
$4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_8 v_1\omega_5\omega_{18}^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_7\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$
$4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 + 4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} -$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 -$

$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 14\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{13}\omega_7^2 v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}^2 +$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_8^2 v_1\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18} +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}^2 - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_8 v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}cs^2 +$
$2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_8 v_1^2\omega_5\omega_{18}^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} +$
$8\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18} + 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} + 8\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} + 2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 v_1\omega_5\omega_{18}cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18} - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} +$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 +$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$
$6\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$
$4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_8^2 v_1\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_8^2 v_1^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8 v_1\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_8 v_1\omega_5\omega_{18}^2 - 8\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 -$
$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}^2 + 2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8 v_1^2\omega_5\omega_{18}^2 +$
$4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 + 4\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} -$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} +$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 -$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_8^2 v_1^2\omega_5\omega_{18}^2 - 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 cs^2 + 8\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 v_1\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}cs^2 - 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 9\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 +$
$2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_8^2 cs^2 - 8\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_8 v_1\omega_5\omega_{18}^2 +$
$2\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 v_1\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}v_2^2\omega_{11}^2\omega_8 v_1\omega_5\omega_{18}^2 + 2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18}^2 -$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} - 4\omega_6^3\omega_{22}\omega_{19}\omega_7\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8^2 v_1^2\omega_5\omega_{18} -$
$2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_8^2 v_1^2\omega_5\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18} + 2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 v_1\omega_5\omega_{18}cs^2 +$
$4\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 - \omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2 + 4\omega_6^2\omega_{22}\omega_{13}\omega_7 v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18}^2 -$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} - 4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18} +$
$2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^2 -$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 v_2\omega_{11}^2\omega_{14}\omega_8 v_1^2\omega_5\omega_{18} - 2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18} + 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}\omega_{14}\omega_8 v_1\omega_5\omega_{18} +$
$4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}v_2^2\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 - 4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 v_1\omega_5\omega_{18}^2 cs^2$

$C_{39} = -2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 + 4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^4 + 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8 v_1\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 v_1^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18}cs^2 -$
$\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1 cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 + 4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^4 -$
$2\omega_6^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2 cs^2 +$
$2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1^2\omega_{18} - 2\omega_6\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6\omega_6^2\omega_{23}\omega_7\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8 v_1\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2\omega_{17}v_3\omega_8^2 v_1^2 -$
$\omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^4 +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2 cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8 v_1\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 +$
$2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8 v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8 v_1\omega_{18} - \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2 -$
$\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2 +$
$\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_8^2 v_1^2\omega_{18}cs^2 +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2 v_1 -$
$4\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^4 + 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18} +$
$2\omega_6^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 cs^2 - 2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1 cs^2 -$
$2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8 v_1^2\omega_{18} +$

$$
\begin{aligned}
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_{18}cs^2 - 8\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^4 - \\
&\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1cs^2 - \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2 + \\
&2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + \\
&2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_8^2v_1\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + \\
&2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^2\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - \\
&\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1cs^2 - 2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + \\
&\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1^2cs^2 - 2\omega_6^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 - \\
&\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + \\
&\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1^2\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1cs^2 - \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_{18}cs^2 - \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} + 2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8v_1cs^2 + \\
&4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^4 - \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - \\
&2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2 + \\
&\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2v_1cs^2 - \\
&2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1cs^2 + \\
&2\omega_6^2\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1^2 - \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + \\
&\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^4 - \\
&\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_{18} + \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_{18}cs^2 - \\
&\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 12\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^4 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2 - \\
&2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_{18} - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_{18} + \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8v_1 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_{18}cs^2 + \\
&\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_{18} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2 - \\
&2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18} + \\
&2\omega_6^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^4 + \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} + \\
&2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2v_1\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_{18} + \\
&2\omega_6^2\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_{18} - \\
&4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^4 + \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + \\
&\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18} - \omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + \\
&2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_{18} - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}v_3^2\omega_8v_1cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1^2cs^2 + \\
&8\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^4 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_{18} + \\
&2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8v_1cs^2 + 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18} - \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_{18} - \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - \\
&\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_{18}cs^2 - \\
&\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8v_1\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8v_1^2\omega_{18}cs^2 - \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} - 8\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^4 - \\
&\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1^2\omega_{18} - 8\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^4 + \\
&2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_{18}cs^2 + \\
&2\omega_6^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2v_1\omega_{18} - 4\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^4 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_{18}cs^2 +
\end{aligned}
$$

$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 -$$
$$\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} +$$
$$2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}cs^2 + 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 +$$
$$\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^3v_1^2\omega_{18} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 +$$
$$2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18}cs^2 +$$
$$\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^3v_1^3\omega_{18} + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^3\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^3\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1^2\omega_{18}cs^2 +$$
$$2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_8^2v_1cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8^2v_1\omega_{18}cs^2$$

$C_{40} = -6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} +$
$12\omega_6^3\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$12\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 - 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^3v_1\omega_5^2cs^2 - 12\omega_6^3\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 +$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^4 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}cs^2 +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 - 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 - 12\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 -$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18} + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^4 -$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^3v_1\omega_5^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} -$
$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2cs^2 + 12\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2 +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2 +$
$36\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} - 18\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^4 - 36\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2 +$
$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 24\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} -$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_5^2\omega_{18}cs^2 +$
$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18} - 18\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 +$
$12\omega_6^3\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 - 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2cs^4 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^3v_1\omega_5^2 -$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{18} +$
$12\omega_6^3\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} - 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2 -$
$6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 -$
$6\omega_6^3\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^4 -$
$24\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$24\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2 - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}cs^2 -$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 + 24\omega_6^3\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8\omega_5^2\omega_{18}cs^2 +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^4 + 12\omega_6^3\omega_{16}\omega_7^2\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}cs^2 -$
$12\omega_6^3\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18}cs^2 + 6\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} -$
$24\omega_6^3\omega_{16}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 -$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1\omega_5^2cs^2 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$12\omega_6^3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}cs^2 -$
$60\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}cs^2 + 24\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} -$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^4 +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_5\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 +$
$12\omega_6^3\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - \omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 +$
$24\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18} - 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2cs^2 +$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 +$
$6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} -$
$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 18\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^4 +$
$24\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_5^2cs^2 - 12\omega_6^3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 -$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_5^2\omega_{18} +$
$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 - 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 +$
$12\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8\omega_5\omega_{18}cs^2 - 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^4 + 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 - 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 -$
$24\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} -$
$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8v_1\omega_5^2cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}cs^2 -$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_5^2cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2cs^2 + 18\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 -$
$12\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18} - 24\omega_6^3\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2 +$
$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2v_1\omega_5^2cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_5\omega_{18}cs^2 +$
$12\omega_6^3\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2cs^2 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2 -$
$24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 -$
$24\omega_6^3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5^2\omega_{18}cs^2 + 24\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} +$
$12\omega_6^3\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_5cs^2 + 24\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_5^2\omega_{18}cs^2 +$

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$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 cs^4 - 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 - 24\omega_6^3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 +$$
$$24\omega_6^3\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 24\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 -$$
$$18\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18} + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18} -$$
$$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18} - 24\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8\omega_5^2\omega_{18} + 10\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 - 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 cs^2 -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5\omega_{18} +$$
$$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8\omega_5^2\omega_{18} + 6\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 -$$
$$6\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8\omega_5\omega_{18} +$$
$$24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 + 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_5\omega_{18} +$$
$$24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18}cs^2 -$$
$$24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_5\omega_{18} + 24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2 cs^2 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^4 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 -$$
$$24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4 - 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 - 60\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} +$$
$$12\omega_6^3\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^4 + 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18} -$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_5^2\omega_{18} + 42\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_5^2\omega_{18}cs^2 - 24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} + 6\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 24\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 +$$
$$24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} + 12\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 + 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 - 24\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 - 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_5\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{18}cs^2 - 6\omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 -$$
$$24\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 - 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8\omega_5^2\omega_{18} - 48\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8\omega_5^2\omega_{18} +$$
$$24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2 +$$
$$36\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 +$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^4 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18}cs^2 -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 cs^4 + 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^3\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} +$$
$$24\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18} +$$
$$24\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}v_3\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18} - 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2 -$$
$$6\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4 + 12\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5 cs^2 +$$
$$24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 + 6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 -$$
$$6\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18}cs^2 - 12\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 + 24\omega_6^3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2\omega_{18}cs^2 +$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2\omega_5^2 + 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2 v_1\omega_5^2 cs^2 + 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 -$$
$$24\omega_6^3\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}v_3\omega_8^2 v_1\omega_5^2\omega_{18} - 24\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_5^2\omega_{18} - 6\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4 +$$
$$24\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2\omega_5\omega_{18}cs^2 + 12\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3^2\omega_8^2\omega_5^2\omega_{18} - 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}v_3^2\omega_8^2\omega_5^2\omega_{18}$$

$C_{41} = 5\omega_6^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} -$
$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + 3\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 +$
$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 +$
$2\omega_6^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} -$
$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 -$
$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 +$
$2\omega_6^2\omega_{19}\omega_{16}^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} - \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} -$
$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}v_3\omega_8^2\omega_{18}cs^4 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8\omega_{18}cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 v_1\omega_{18}cs^2 +$
$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8 v_1\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2 cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} + 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_{18} + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_{18} -$
$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_5 v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18} + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 +$
$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8 v_1^2\omega_{18} -$
$\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} -$
$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18} + 2\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8 v_1 - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_{18} +$
$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} + 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3^2\omega_8^2 v_1\omega_{18} +$
$2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8 v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1^2\omega_{18} -$
$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8 v_1\omega_{18} + 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2 v_1^2\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 -$
$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 v_1\omega_{18} - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2 cs^2 -$
$2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8 v_1^2\omega_{18} + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2 v_1\omega_{18} +$
$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2 cs^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8 v_1^2\omega_{18} -$

$$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2v_1 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1^2\omega_{18} + \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 3\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - 4\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} +$$
$$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_{18} - \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 - 6\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2cs^2 +$$
$$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8\omega_{18}cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2v_1cs^2 -$$
$$2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2 + \omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} +$$
$$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3^2\omega_8^2v_1\omega_{18} - \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8v_1\omega_{18} - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2v_1\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1cs^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} -$$
$$2\omega_6^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}v_3^2\omega_8^2v_1\omega_{18} -$$
$$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} +$$
$$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2v_1cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} +$$
$$2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} + 3\omega_6^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 +$$
$$2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 - \omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 +$$
$$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 -$$
$$\omega_6\omega_{19}\omega_{16}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 -$$
$$6\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 +$$
$$\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} +$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} +$$
$$2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1^2 + 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1cs^2 - 2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} +$$
$$2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1^2\omega_{18} + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}v_3\omega_8^2v_1^2\omega_{18} - \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3^2\omega_8v_1\omega_{18} +$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}v_3^2\omega_8^2v_1\omega_{18} - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_{18} + \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8v_1\omega_{18} - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}v_3\omega_8^2v_1^2\omega_{18} + \omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} +$$
$$\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1^2\omega_{18} -$$
$$2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}v_3\omega_8^2\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2$$

$C_{42} = -8\omega_6^2\omega_{19}^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5cs^2 +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 + 2\omega_6\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 +$
$\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 12\omega_6^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} +$
$2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 + 4\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5 - \omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2 -$
$2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} - 4\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 -$
$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18} -$
$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8v_1^2\omega_5\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} -$
$2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} +$
$4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} -$
$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} - \omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 -$
$\omega_6^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 +$
$2\omega_6\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 4\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}cs^2 -$
$4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_{18}cs^2 + 8\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + \omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5cs^2 + \omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 -$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18} + 6\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18}cs^2 -$
$2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18} + \omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18} + \omega_6^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 +$
$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 -$
$2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8v_1^2\omega_5cs^2 +$
$2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 -$

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$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 -$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + 4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18}cs^2 -$$
$$\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 +$$
$$4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18}cs^2 +$$
$$\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 +$$
$$9\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8\omega_1\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 8\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} + 2\omega_6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18} +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} - 2\omega_6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}cs^2 - 12\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 -$$
$$\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 +$$
$$\omega_6^2\omega_7^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18}cs^2 - 14\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} -$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5 +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} - 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 +$$
$$4\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 +$$
$$8\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3v_1\omega_5\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8\omega_5\omega_{18}cs^2 +$$
$$4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8v_1\omega_5\omega_{18} + 2\omega_6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18} -$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 + 2\omega_6\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5 - 4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18} -$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} - \omega_6^2\omega_7^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}cs^2 -$$
$$\omega_6^2\omega_7^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 4\omega_6\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} - \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + 4\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5cs^2 -$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5 + 4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2 +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18} + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18} +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_7^3\omega_{20}v_2^2\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 + 4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 +$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2 -$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18}cs^2 - \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18} -$$
$$\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2\omega_5\omega_{18} + \omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2\omega_8^2v_1^2\omega_5\omega_{18} -$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8v_1^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 -$$
$$2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8v_1^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_5cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{17}\omega_{11}v_3v_1\omega_5\omega_{18}cs^2 -$$
$$\omega_6^2\omega_7^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2v_1\omega_5cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8v_1\omega_{18}cs^2 + 4\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 -$$
$$2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 8\omega_6\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_5\omega_{18}cs^2 +$$
$$4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}v_3\omega_8^2v_1\omega_5cs^2 + 2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}v_2^2\omega_{11}^2v_3\omega_8v_1\omega_5\omega_{18}$$

$$C_{43} = 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2 + 24\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_3^2 +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}cs^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{11}v_3^2 + 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 + 24\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}v_3^2 +$$
$$\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 - 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2 - 6\omega_{19}\omega_{16}^2\omega_{10}^2v_2^2\omega_{11}v_3^2 + 3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 108\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 +$$
$$12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7v_2^2\omega_{11}v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 -$$
$$6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3v_2^2cs^2 + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}v_3^2cs^2 + 72\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}v_3^2cs^2 + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4 - 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4 +$$
$$36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}v_3^2cs^2 - 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 15\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}v_2^2\omega_{11}cs^2 +$$
$$12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^4 - 36\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}v_3^2cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11}cs^2 - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 - 24\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}v_2^2v_3^2 +$$

$$12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 - 36\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}v_3^2cs^2 - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 +$$
$$5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^4 - 36\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2v_{11}v_3^2cs^2 - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}cs^4 - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 +$$
$$156\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}v_3^2 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_2^2v_3^2 - 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2cs^2 -$$
$$24\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}v_3^2 - 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^4 - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}v_3^2 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 + 36\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}v_3^2cs^2 +$$
$$36\omega_{16}^2\omega_{10}\omega_7^3v_3^2cs^2 + 36\omega_{16}^2\omega_{10}^2\omega_7^3cs^4 + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^4 + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2\omega_{11}v_3^2 - 36\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 -$$
$$45\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2 - 36\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}cs^4 - 36\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}v_3^2 -$$
$$12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2v_3^2 - 18\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - \omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2\omega_{11}v_3^2 -$$
$$5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}v_3^2 - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2v_2^2\omega_{11}v_3^2 + 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 +$$
$$36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 96\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}cs^4 +$$
$$6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 72\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}v_3^2cs^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 -$$
$$12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2v_3^2v_2^2\omega_{11}cs^2 - 48\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 - 15\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 -$$
$$72\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11}cs^2 + 9\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 -$$
$$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 + 3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 - 9\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 - 42\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^4 +$$
$$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 + 18\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 -$$
$$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_3^2 - 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2cs^2 + 36\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 -$$
$$12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 + 144\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 15\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 + 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 60\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 -$$
$$6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 + 27\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 72\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2cs^2 - 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 -$$
$$36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^4 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}v_3^2 - 36\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 - 3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 -$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 36\omega_{16}^2\omega_{10}\omega_7^2v_3^2cs^2 + 12\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}v_3^2 +$$
$$12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 + 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 36\omega_{16}^2\omega_{10}\omega_7^3v_3^2cs^2 + 36\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^4 + 48\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 +$$
$$6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2cs^2 - 36\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{11}cs^2 -$$
$$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2v_3^2v_3^2 + 36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_3^2cs^2 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}cs^2 + 54\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 +$$
$$15\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2 - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3v_2^2\omega_{11}cs^2 - 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2cs^2 + 6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11}v_3^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2v_3^2$$

$C_{44} = -102\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2 + 24\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2v_3^2 +$
$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}cs^2 + 36\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11}v_3^2 - 12\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 -$
$6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2 - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3v_2^2\omega_{11}v_3^2 - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 36\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 +$
$36\omega_{16}^2\omega_{10}\omega_7^3v_3^2cs^2 - 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2 - 36\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{11}v_3^2 + \omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 - 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2cs^2 +$
$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}v_3^2cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}v_3^2cs^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^4 - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}v_3^2cs^2 -$
$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 45\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 60\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^4 - 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}v_3^2cs^2 -$
$12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}cs^2 - 18\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 - 72\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2v_3^2 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 36\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 -$
$12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11}v_3^2cs^2 - 108\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 5\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11}v_3^2cs^2 -$
$6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^4 - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 + 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}v_3^2 + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 +$
$36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2v_3^2 - 48\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}v_2^2\omega_{11}cs^2 - 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2v_3^2 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^4 -$
$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}v_3^2 + 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}v_3^2cs^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2cs^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^3cs^4 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^4 +$
$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2 - 36\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2\omega_{11}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 - 15\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^3v_3^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^4 -$
$12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}v_3^2 - 36\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 72\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2v_3^2 - 6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 +$
$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3v_2^2v_3^2 - 15\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 + 72\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}v_3^2 + 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 +$
$36\omega_{16}^2\omega_{10}\omega_7^2v_2^2\omega_{11}v_3^2 + 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 - 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^2 -$
$12\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}cs^4 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7cs^2 - 36\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 - 24\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}v_3^2cs^2 -$
$36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 - 12\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 + 36\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2v_2^2\omega_{11}cs^2 - 48\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 5\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 -$
$24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2cs^2 - 36\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2\omega_{11}cs^2 + 27\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2cs^2 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_3^2cs^2 +$
$12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 - \omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 - 9\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 + 54\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 -$
$24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2 + 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 + 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^2 -$
$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2 - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2cs^2 + 12\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 +$
$48\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 + 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 +$
$9\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 15\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_3^2cs^2 + 24\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^4 +$
$12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 - 72\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}v_3^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 + 30\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 -$
$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}v_3^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}cs^4 + 36\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 36\omega_{16}^2\omega_{10}^2\omega_7^2v_2^2\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}v_3^2 -$
$12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 - 18\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 144\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 +$
$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 36\omega_{19}\omega_{16}^2\omega_7^2v_2^2\omega_{11}cs^2 -$
$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3v_2^2v_3^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_3^2cs^2 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 60\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11}cs^2 + 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^4 +$
$15\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}v_3^2 - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3v_2^2\omega_{11}cs^2 - 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2cs^2 + 6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}v_3^2 + 36\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2v_3^2$

$C_{45} = -12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 42\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} +$
$12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11} -$
$48\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11}^2cs^2 + 48\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11} - 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11} +$
$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11} - 66\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 24\omega_{19}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} -$
$24\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{11} - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11} + 24\omega_{19}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} +$
$24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11} - 72\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{11} + 90\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_{23}\omega_{11}cs^2 +$
$12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 + 3\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12\omega_{19}^2\omega_{16}^2\omega_7^3v_2^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11} -$
$66\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 + 24\omega_{19}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 + 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 72\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 -$
$36\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 84\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 24\omega_{19}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 -$
$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} - 24\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 24\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^2 +$

$$24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3v_2^2\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11} + 60\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}v_2^2\omega_{11} -$$
$$18\omega_{19}^3\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 18\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 -$$
$$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 18\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11} + 36\omega_{19}^3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 156\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 + 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} +$$
$$24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{16}^2\omega_7\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11} - 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 -$$
$$24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} - 36\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 18\omega_{19}^3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 +$$
$$4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 84\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 - 96\omega_{19}^2\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 + 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$12\omega_{19}^2\omega_{10}^2\omega_7\omega_{23}v_2^2\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}cs^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3v_2^2\omega_{11} - \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}v_2^2\omega_{11} + 24\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_2^2\omega_{11} + 66\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}v_2^2\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} -$$
$$24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2v_2^2\omega_{11} - 12\omega_{19}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + \omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}v_2^2\omega_{11} + 36\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 -$$
$$132\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2cs^2$$

$C_{46} =$
$$36\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2cs^2 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18} + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2 + 36\omega_6^3\omega_{22}\omega_{13}v_1^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{11}^2v_3^2v_1^2\omega_{18} -$$
$$36\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2\omega_{18} + 6\omega_6^3\omega_{13}\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} - 84\omega_6\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2cs^4 + 12\omega_6^3\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} -$$
$$36\omega_6^2\omega_{13}\omega_{11}^3\omega_{18}^2cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}^2cs^2 + 18\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2 + 2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{13}v_3^2\omega_{18}^2cs^2 - 2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2\omega_{18}^2cs^2 - 6\omega_6^3\omega_{13}\omega_{11}v_1^2\omega_{18}^2cs^2 - 24\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2\omega_{18} +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2 - 42\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}cs^4 - 36\omega_6\omega_{22}\omega_{11}^2\omega_{18}^2cs^4 - 42\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4 - 12\omega_6^3\omega_{13}\omega_{11}\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18} +$$
$$72\omega_6\omega_{22}\omega_{13}\omega_{11}^3v_1^2\omega_{18}cs^2 - 12\omega_6^3\omega_{11}^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{11}^2v_1^2\omega_{18}^2 - 6\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}^2cs^2 - 36\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}cs^4 - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^3v_3^2\omega_{18}^2cs^2 +$$
$$12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2cs^2 +$$
$$12\omega_6\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^4 + 36\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18}cs^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2 + 6\omega_6^3\omega_{11}^3\omega_{18}^2cs^2 - 12\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}cs^2 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18}^2 +$$
$$12\omega_6^3\omega_{13}\omega_{11}^3v_3^2\omega_{18}cs^2 - 12\omega_6^3\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} - 6\omega_6^3\omega_{13}\omega_{11}^2v_3^2\omega_{18}^2cs^2 + 6\omega_6^3\omega_{22}\omega_{11}^2v_3^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3cs^2 + 24\omega_6\omega_{22}\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} -$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}cs^2 + 12\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18} - 96\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}^2cs^4 - 72\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2cs^2 - 6\omega_6^3\omega_{11}^3v_3^2v_1^2\omega_{18} +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^4 + 5\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}^2cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18} + 36\omega_6^3\omega_{11}^3v_1^2\omega_{18}^2cs^2 + \omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 + 150\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2cs^4 +$$
$$6\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18}^2 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2\omega_{18}^2cs^2 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2cs^2 - 24\omega_6\omega_{22}\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} +$$
$$24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} - 18\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}cs^4 + 18\omega_6^3\omega_{22}\omega_{11}^3v_1^2\omega_{18}^2cs^2 - 18\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2 +$$
$$12\omega_6^3\omega_{13}\omega_{11}^2v_3^2\omega_{18}cs^2 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2 +$$
$$30\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^4 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_3^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_3^2v_1^2 - 18\omega_6^3\omega_{11}^3\omega_{18}cs^4 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2 +$$
$$36\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}cs^4 + 36\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}cs^4 - 54\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2cs^4 + 6\omega_6^3\omega_{11}^3v_1^2\omega_{18}^2 + 72\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2cs^2 - 18\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^2 -$$
$$12\omega_6^3\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} - 36\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2cs^2 - \omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2cs^2 + 180\omega_6\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}^2cs^4 - 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} + 6\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}^2cs^2 -$$
$$18\omega_6^3\omega_{11}^3v_1^2\omega_{18}^2cs^2 + 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18} + 12\omega_6^3\omega_{11}^3v_3^2v_1^2\omega_{18} + 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} + 12\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18} -$$
$$6\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3cs^4 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2cs^2 - 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2 - 48\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^4 -$$
$$36\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 + 6\omega_6^3\omega_{22}\omega_{11}^2v_3^2v_1^2\omega_{18} - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3cs^2 -$$
$$6\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2v_1^2\omega_{18} + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^4 + 12\omega_6^2\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} - 88\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^4 +$$
$$36\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^4 - 36\omega_6^2\omega_{22}\omega_{11}^2v_1^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2 + 18\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}^2cs^4 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} -$$
$$12\omega_6^3\omega_{22}\omega_{13}v_1^2\omega_{18}^2 + 12\omega_6^3\omega_{22}\omega_{13}v_3^2v_1^2\omega_{18}^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{22}\omega_{11}^2v_3^2\omega_{18}^2cs^2 + 6\omega_6^3\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} + 24\omega_6\omega_{22}\omega_{13}\omega_{11}^3v_1^2\omega_{18} -$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^2 + 108\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2\omega_{18}cs^2 + 72\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}cs^2 +$$
$$12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^4 - 12\omega_6^3\omega_{13}\omega_{11}^3v_3^2\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4 - 12\omega_6^3\omega_{11}^3v_1^2\omega_{18}^2 + 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2cs^2 -$$
$$18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2 - 36\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18}cs^2 + 36\omega_6^2\omega_{13}\omega_{11}^3\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}^2cs^2 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^2 - 6\omega_6^3\omega_{22}\omega_{11}^2v_1^2\omega_{18} +$$
$$36\omega_6^3\omega_{11}^3\omega_{18}^2cs^4 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_3^2\omega_{18}cs^2 + 12\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}cs^2 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_3^2\omega_{18}cs^2 + 18\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}^2cs^4$$

$C_{47} = -4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 - 2\omega_6^3\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 4\omega_6^3\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 2\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 + 4\omega_6^2\omega_{13}^2\omega_{11}^3\omega_{18}^2\omega_9 -$
$3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 + 4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2 + 5\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9 + 26\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + 11\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 +$
$13\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + \omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_3^2\omega_{18}\omega_9 - 8\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 8\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2\omega_9 +$
$4\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_9 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}^2cs^2\omega_9 + 4\omega_6^3\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 - 7\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 - 9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 + 4\omega_6^3\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 +$
$4\omega_6^2\omega_{13}\omega_{11}^3\omega_{18}^2cs^2\omega_9 + 4\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_9 + 4\omega_6^2\omega_{22}\omega_{11}^3\omega_{18}^2cs^2\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}\omega_9 - 15\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}cs^2\omega_9 + 2\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}\omega_9 -$
$2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_3^2\omega_{18}\omega_9 - 6\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 2\omega_6^3\omega_{13}\omega_{11}^3v_3^2\omega_{18}\omega_9 + 6\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 + 2\omega_6^3\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 + 4\omega_6^2\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 +$
$2\omega_6^3\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 + 3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 5\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 4\omega_6^2\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 +$
$12\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 6\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3v_1^2\omega_{18}cs^2\omega_9 - \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 + \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 16\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 -$
$4\omega_6^3\omega_{13}^2\omega_{11}^3v_1^2\omega_{18}\omega_9 - 8\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2 + 8\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2\omega_9 -$
$4\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_9 + 3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 - 4\omega_6^3\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 + 8\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2\omega_9 + 2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 + 8\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2\omega_9 -$
$4\omega_6^2\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 + 7\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 + 9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2 - 2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}\omega_9 + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_9 -$
$2\omega_6^3\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + 2\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 2\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 - \omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + 4\omega_6^2\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 +$
$2\omega_6^3\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 8\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + 3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 2\omega_6^3\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 - 6\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 +$
$4\omega_6^3\omega_{22}\omega_{13}^2v_3^2\omega_{18}\omega_9 + 2\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 - 4\omega_6^3\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 + \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 -$
$4\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 24\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 + 4\omega_6^3\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 5\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 4\omega_6^2\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 +$
$4\omega_6^2\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 4\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}cs^2 - \omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_{18}\omega_9 + 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}\omega_{18}\omega_9 - 3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_{18}\omega_9 - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_9 -$
$2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}v_3^2\omega_{18}\omega_9 - 2\omega_6^3\omega_{13}^2\omega_{11}^3\omega_{18}cs^2\omega_9 - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3v_3^2\omega_9 - 2\omega_6^3\omega_{22}\omega_{11}^3\omega_{18}cs^2\omega_9 - 4\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3\omega_9$

$C_{48} = 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2cs^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{13}\omega_{11}^2v_1^2\omega_{18} + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}^2 + 12\omega_6^3\omega_{22}\omega_{13}v_1^2\omega_{18}^2cs^2 -$
$36\omega_6^3\omega_{22}\omega_{11}^2v_3^2v_1^2\omega_{18} + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3v_1^2\omega_{18} + 18\omega_6^3\omega_{13}\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2cs^4 +$
$36\omega_6^3\omega_{13}\omega_{11}^3v_3^2v_1^2\omega_{18} - 12\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}^2cs^4 + 6\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_1^2 + 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2cs^2 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 -$
$6\omega_6^3\omega_{13}\omega_{11}\omega_{18}^2cs^2 - 24\omega_6\omega_{22}\omega_{13}\omega_{11}^2v_1^2\omega_{18} - 42\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{13}\omega_{11}^3v_1^2\omega_{18} + 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^4 -$
$12\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}^2cs^4 - 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2cs^4 - 12\omega_6^3\omega_{13}\omega_{11}\omega_{18}^2cs^2 - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18} - 24\omega_6\omega_{22}\omega_{13}\omega_{11}v_1^2\omega_{18}cs^2 - 12\omega_6^3\omega_{11}^2\omega_{18}^2cs^2 +$
$12\omega_6^3\omega_{22}\omega_{11}^2v_1^2\omega_{18} - 6\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}^2cs^2 - 12\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}cs^4 + 60\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2\omega_{18}^2cs^2 + 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2v_1^2\omega_{18} + 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}v_3^2cs^2 +$

$$24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_3^2 cs^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^4 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^2 + 12\omega_6^2\omega_{13}\omega_{11}^3 v_1^2\omega_{18}cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2 + 6\omega_6^3\omega_{11}^3\omega_{18}^2 cs^2 -$$
$$12\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}cs^2 - 48\omega_{22}\omega_{13}\omega_{11}^3 v_3^2\omega_{18}^2 cs^2 - 54\omega_6^3\omega_{22}\omega_{13}\omega_{11} v_3^2 v_1^2\omega_{18}^2 + 36\omega_6^2\omega_{22}\omega_{13}\omega_{11} v_3^2 v_1^2\omega_{18}cs^2 - 36\omega_6^2\omega_{13}\omega_{11}^3 v_3^2 v_1^2\omega_{18} - 18\omega_6^3\omega_{13}\omega_{11} v_3^2\omega_{18}^2 cs^2 +$$
$$18\omega_6^3\omega_{22}\omega_{11}^2 v_3^2\omega_{18}^2 cs^2 + 72\omega_6\omega_{22}\omega_{13}\omega_{11}^2 v_3^2 v_1^2\omega_{18} + 72\omega_6\omega_{22}\omega_{13}\omega_{11} v_3^2 v_1^2\omega_{18} + 36\omega_6^2\omega_{11}^3\omega_{18}^2 cs^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11} v_3^2\omega_{18}^2 cs^2 - 12\omega_6^2\omega_{13}\omega_{11}^3 v_1^2\omega_{18} -$$
$$12\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}^2 cs^4 - 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 v_1^2\omega_{18}^2 cs^2 - 18\omega_6^3\omega_{11}^3 v_3^2 v_1^2\omega_{18} - \omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2 cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11} v_1^2\omega_{18} + 12\omega_6^2\omega_{11}^3 v_1^2\omega_{18}^2 cs^2 +$$
$$24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 v_1^2\omega_{18}^2 cs^4 + 6\omega_6^3\omega_{13}\omega_{11}^2 v_1^2\omega_{18}^2 + 180\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 v_3^2\omega_{18}^2 cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11} v_1^2\omega_{18}cs^2 - 72\omega_6\omega_{22}\omega_{13}\omega_{11}^3 v_3^2 v_1^2\omega_{18} +$$
$$24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_1^2\omega_{18} - 6\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}^2 cs^4 + 6\omega_6^3\omega_{22}\omega_{11}^2 v_1^2\omega_{18}^2 cs^2 - 6\omega_6^3\omega_{13}\omega_{11}^2 v_1^2\omega_{18}^2 cs^2 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11} v_3^2\omega_{18}^2 cs^2 +$$
$$36\omega_6^3\omega_{13}\omega_{11}^2 v_3^2\omega_{18}cs^2 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11} v_1^2\omega_{18}cs^2 - 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 v_3^2 cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 v_1^2\omega_{18}cs^2 + 60\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 v_3\omega_{18}cs^2 -$$
$$12\omega_6\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}\omega_{18}cs^4 + 78\omega_6^3\omega_{22}\omega_{13}\omega_{11} v_3\omega_{18}cs^2 + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^4 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_1^2 -$$
$$36\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_3^2 v_1 - 6\omega_6^3\omega_{11}^3\omega_{18}^2 cs^4 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11} v_3^2 v_1 + 12\omega_6^3\omega_{13}\omega_{11}^2\omega_{18}cs^4 + 12\omega_6^3\omega_{13}\omega_{11}^2 v_1^2\omega_{18}cs^2 - 18\omega_6^3\omega_{22}\omega_{13}\omega_{11} v_1^2\omega_{18}^2 cs^2 +$$
$$6\omega_6^3\omega_{11}^2 v_1^2\omega_{18} + 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_1^2\omega_{18}cs^2 - 24\omega_6^2\omega_{13}\omega_{11}^3\omega_{18}^2 cs^4 - 6\omega_6^3\omega_{13}\omega_{11}^3 v_3^2 v_1\omega_{18} - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11} v_1^2\omega_{18}cs^2 + 18\omega_6\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}^2 cs^4 -$$
$$72\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 v_3^2 v_1^2\omega_{18} + 6\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}^2 cs^2 - 6\omega_6^3\omega_{11} v_3^2\omega_{18}^2 cs^2 + 108\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 v_3^2 v_1^2\omega_{18} - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11} v_1^2\omega_{18} + 36\omega_6^3\omega_{11}^3 v_3^2 v_1^2\omega_{18} +$$
$$72\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_3^2 v_1\omega_{18} + 12\omega_6^3\omega_{13}\omega_{11}^3 v_3^2\omega_{18} - 18\omega_6^3\omega_{11}^2 v_3^2\omega_{18}^2 cs^2 - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 v_1^2 cs^2 - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_1^2 cs^2 - 24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_1^2\omega_{18} -$$
$$12\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{11}\omega_{18}^2 cs^4 - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 v_1^2\omega_{18} - 36\omega_6^2\omega_{13}\omega_{11}^3 v_3^2\omega_{18}^2 cs^2 + 18\omega_6^3\omega_{22}\omega_{11}^2 v_3^2 v_1^2\omega_{18} - 18\omega_6^3\omega_{13}\omega_{11}^2 v_3^2 v_1^2\omega_{18}^2 -$$
$$84\omega_6\omega_{22}\omega_{13}\omega_{11}^2 v_3^2\omega_{18}^2 cs^2 - 6\omega_6^3\omega_{13}\omega_{11}^2 v_1^2\omega_{18}^2 + 18\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_3^2 v_1^2\omega_{18}^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}^2 cs^2 - 6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^4 +$$
$$12\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3\omega_{18}cs^4 - 12\omega_6^2\omega_{22}\omega_{11}^2 v_1^2\omega_{18}^2 cs^2 + 36\omega_6^3\omega_{13}\omega_{11}^2 v_3^2 v_1^2\omega_{18} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 v_1^2 + 6\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}^2 cs^4 -$$
$$6\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_1^2\omega_{18}^2 - 12\omega_6^3\omega_{22}\omega_{13} v_1^2\omega_{18}^2 + 36\omega_6^3\omega_{22}\omega_{13} v_3^2 v_1^2\omega_{18}^2 + 84\omega_6\omega_{22}\omega_{13}\omega_{11}^3 v_3^2\omega_{18}^2 cs^2 - 36\omega_6^2\omega_{22}\omega_{11}^2 v_3^2\omega_{18}^2 cs^2 + 18\omega_6^3\omega_{13}\omega_{11}^3 v_3^2 v_1^2\omega_{18} +$$
$$24\omega_6\omega_{22}\omega_{13}\omega_{11}^3 v_1^2\omega_{18} - 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 v_3^2 v_1^2\omega_{18} - 36\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 v_3^2 v_1^2\omega_{18} - 6\omega_6^2\omega_{22}\omega_{13}\omega_{11}\omega_{18}^2 cs^2 + 36\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 v_1^2\omega_{18}cs^2 +$$
$$24\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 v_1^2\omega_{18}cs^2 - 36\omega_6^3\omega_{13}\omega_{11}^3 v_3^2\omega_{18}cs^2 - 108\omega_6^2\omega_{22}\omega_{13}\omega_{11} v_3^2\omega_{18}^2 cs^2 - 12\omega_6^3\omega_{11}^3 v_1^2\omega_{18}^2 + 12\omega_6\omega_{22}\omega_{13}\omega_{11} v_1^2\omega_{18}^2 cs^2 +$$
$$24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 v_1^2\omega_{18}cs^2 - 12\omega_6^3\omega_{13}\omega_{11} v_1^2\omega_{18}cs^2 + 12\omega_6^2\omega_{13}\omega_{11}^3\omega_{18}cs^4 + 12\omega_6^2\omega_{22}\omega_{11}^2\omega_{18}^2 cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2\omega_{18}cs^2 - 6\omega_6^3\omega_{22}\omega_{11}^2 v_1^2\omega_{18}^2 +$$
$$12\omega_6^3\omega_{11}^2\omega_{18}^2 cs^4 - 132\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 v_3^2\omega_{18}cs^2 + 12\omega_6^3\omega_{13}\omega_{11}^3\omega_{18}cs^2 - 144\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 v_3\omega_{18}cs^2 + 6\omega_6^3\omega_{22}\omega_{11}^2\omega_{18}cs^4$$

$C_{49} = \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 + 3\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2 cs^2 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2 + \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 + \omega_6^2\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8\omega_{18} +$
$3\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2 cs^2 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2 - 3\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8\omega_{18} + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} +$
$\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8\omega_{18} + \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + 2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8\omega_{18} + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 +$
$\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + 3\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2 -$
$3\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2 cs^2 + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + \omega_6^2\omega_{20}\omega_{11}^3\omega_8\omega_{18} + 3\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_{18}^2 cs^2 - \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} +$
$3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 -$
$2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - 2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} +$
$\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8\omega_{18} + 3\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2 cs^2 - 6\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} -$
$9\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2 cs^2 - \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8 - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8 +$
$3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 - \omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18} + 2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} - \omega_6\omega_{19}\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} -$
$3\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7^2\omega_{11}^3 v_3^2\omega_8\omega_{18} + 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 + 3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 +$
$\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8 - \omega_6\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8\omega_{18} -$
$\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} + \omega_6\omega_{19}\omega_{20}\omega_{11}^3\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_6^2\omega_{19}\omega_7^2\omega_{11} v_3^2\omega_8\omega_{18} +$
$\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} + 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 + \omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18} - \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} +$
$\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11} v_3^2\omega_8\omega_{18} + 3\omega_6^2\omega_7^2\omega_{11}^3\omega_8\omega_{18}cs^2 - \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} + 3\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 -$
$\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} + \omega_6\omega_{19}\omega_7\omega_{11}^3 v_3^2\omega_8 - 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_{18} - 3\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 +$
$\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8 + \omega_6^2\omega_{19}\omega_7^3\omega_{11}\omega_8 + \omega_6^2\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} -$
$3\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - 3\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_{18}^2 cs^2 - 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} -$
$2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_{18} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18} - 3\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8 -$
$\omega_6\omega_{19}\omega_7^3\omega_{11}\omega_8 + \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{20}^2\omega_8\omega_{18} - \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + \omega_6\omega_{19}\omega_7^3\omega_{11} v_3^2\omega_8\omega_{18} -$
$\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - 3\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7\omega_7^3\omega_{11}\omega_8\omega_{18} +$
$\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2 + 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 - \omega_6^2\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} + 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2 +$
$3\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2 - \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8\omega_{18} - 3\omega_6\omega_{19}\omega_7^2\omega_{11}^3\omega_8\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} +$
$\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + 3\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - 3\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} v_3^2\omega_8\omega_{18} + \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} -$
$2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} + 6\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - \omega_6\omega_{19}\omega_7^3\omega_{11} v_3^2\omega_8\omega_{18} - \omega_6\omega_{19}\omega_7^3\omega_{11}\omega_8\omega_{18} - 3\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 -$
$3\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 + \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} - 3\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} - 3\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 +$
$3\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - 3\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7^2\omega_{11} v_3^2\omega_{18}^2 - \omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8\omega_{18} - \omega_6^2\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18} +$
$\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8\omega_{18} - \omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_{18} - \omega_6^2\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_{18}$

$C_{50} = -2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 4\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}cs^2 - 3\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} -$
$6\omega_6^3\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + \omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 + 3\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^3\omega_8\omega_5\omega_{18}cs^2 -$
$3\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}\omega_7^3\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 -$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11} v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 + 6\omega_6^6\omega_{19}\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2 - \omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_5\omega_{18} +$
$2\omega_6^3\omega_{19}\omega_7^3\omega_{11}^3 v_3^2\omega_8\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3 v_3^2\omega_8\omega_5\omega_{18} - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} + \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7^3\omega_{11}\omega_8\omega_5\omega_{18} +$
$2\omega_6^2\omega_{19}\omega_7^3 v_3^2\omega_8\omega_5\omega_{18} + 2\omega_6^3\omega_{19}\omega_7^3\omega_{11} v_3^2\omega_8\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 + 4\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11} v_3^2\omega_8\omega_5\omega_{18} -$
$2\omega_6^3\omega_{19}\omega_7^3\omega_{11}\omega_8\omega_5\omega_{18}cs^2 + 4\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}cs^2 -$
$6\omega_6^3\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_5 - 2\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18} - 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18}cs^2 - 2\omega_6^3\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18} -$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} v_3^2\omega_8\omega_5\omega_{18} - 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_5\omega_{18} +$
$4\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}cs^2 - 15\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2 - 8\omega_{19}^3\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2 -$
$6\omega_6^3\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6^3\omega_{19}\omega_7^3\omega_{11}\omega_8\omega_5\omega_{18} + \omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_5\omega_{18} + 2\omega_6^3\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_5\omega_{18}cs^2 -$
$3\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}cs^2 + 4\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3 v_3^2\omega_8\omega_5\omega_{18} + 15\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}cs^2 +$
$2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 8\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}\omega_{20}\omega_{11} v_3^2\omega_8^2\omega_5\omega_{18} +$

$$5\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 + 4\omega_6^3\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 + \omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}^2 + 2\omega_6^3\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 - 2\omega_6^3\omega_{19}\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18}^2 +$$
$$4\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5 + 2\omega_6^3\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 + 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2 cs^2 - 2\omega_6^3\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18}^2 -$$
$$5\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 8\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$2\omega_6^2\omega_{19}^3\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} + \omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 - \omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2 cs^2 -$$
$$2\omega_6^3\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18}^2 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 - 8\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} +$$
$$\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_8\omega_5\omega_{18} - 11\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$$
$$2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - \omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_5\omega_{18}^2 + 4\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\, cs^2 + 2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 -$$
$$4\omega_6^2\omega_{19}^3\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 9\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 +$$
$$2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} + 12\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2 cs^2 -$$
$$4\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 3\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} + 9\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 -$$
$$2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_{18}^2 + 2\omega_6^2\omega_{19}\omega_7^3\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18}^2 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} +$$
$$11\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2\omega_5\omega_{18} + 3\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} +$$
$$2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 - 6\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 +$$
$$8\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\, cs^2 - 2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 -$$
$$4\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 9\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$3\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 4\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5\omega_{18} - \omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 +$$
$$2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 3\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_6^3\omega_{19}^2\omega_{20}\omega_8^2\omega_5\, cs^2 - 2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5\omega_{18} - \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5 -$$
$$2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6^3\omega_{19}^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + 6\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$$
$$2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 13\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 + 6\omega_6^3\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 -$$
$$\omega_8^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_5\omega_{18}^2 - 4\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2 cs^2 + 2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2$$

$$C_{51} = 2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2 cs^2 -$$
$$\omega_6^2\omega_{19}^3\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18} + 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 8\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3v_3^2\omega_8\omega_5\omega_{18} + 2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} +$$
$$\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2 -$$
$$6\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\, cs^2 + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 -$$
$$2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 3\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} + 3\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} + 9\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$5\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$11\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2 cs^2 + 4\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6\omega_{19}^2\omega_7^3\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5 +$$
$$2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^3\omega_7\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2 cs^2 - 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 4\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2 - 8\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^3\omega_7\omega_{11}\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}\omega_7^3\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^3\omega_7\omega_{11}\omega_8^2\omega_5\omega_{18} - 4\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 + \omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 + \omega_6^2\omega_{19}^3\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$4\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 -$$
$$4\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2 - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + \omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 - 2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_5\omega_{18}^2 -$$
$$2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - 8\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} +$$
$$8\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} +$$
$$2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_8\omega_5\omega_{18} + 15\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} +$$
$$2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18} + 4\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2 cs^2 -$$
$$3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} + \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18} + 8\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 - 4\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} -$$
$$11\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 - 5\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18} +$$
$$6\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 4\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} + \omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5\omega_{18} + 6\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} -$$
$$2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5 + 4\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 -$$
$$2\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} + 9\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2 - 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5\omega_{18} +$$
$$2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2v_3^2\omega_8^2\omega_5\omega_{18} + 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 3\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\, cs^2 + 2\omega_6^2\omega_{19}^3\omega_7\omega_{11}v_3^2\omega_8^2\omega_5\omega_{18} +$$
$$3\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 3\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 -$$
$$\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 15\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 + 12\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5\omega_{18}^2 cs^2 +$$
$$3\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2 cs^2 - 9\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 - 13\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2 +$$
$$2\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} - 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2 cs^2 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}v_3^2\omega_8\omega_5\omega_{18}^2 +$$
$$2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + 4\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2 + \omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3v_3^2\omega_8^2\omega_5\omega_{18}$$

$$C_{52} = \omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_{18}^2 + \omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2 + \omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 + 3\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}v_3^2\omega_8\omega_{18} +$$
$$\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_{18}^2 cs^2 + 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 cs^2 - \omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 cs^2 - \omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_{18} + 6\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18}^2 +$$
$$\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} + 3\omega_6^2\omega_{19}^2\omega_7\omega_{11}v_3^2\omega_8\omega_{18}^2 + \omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 + 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18}^2 - 3\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8 +$$

$$3\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2v_3^2\omega_8\omega_{18}^2 + \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 6\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18}^2 - 3\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3v_3^2\omega_8\omega_{18} + 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}cs^2 +$$
$$3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 + \omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2 -$$
$$\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_{18}^2cs^2 + \omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18} + \omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_{18}^2cs^2 - 3\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} +$$
$$\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2cs^2 - 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18} + 3\omega_6^2\omega_{19}\omega_7\omega_{11}^3v_3^2\omega_8\omega_{18} - 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}cs^2 -$$
$$2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 - \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - \omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_{18}^2 - 9\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 - 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 +$$
$$\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2 - \omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_{18}^2 + \omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2cs^2 - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2 - \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}^2 -$$
$$3\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2cs^2 - 3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2v_3^2\omega_{18}^2 - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} - 3\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8 +$$
$$\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8cs^2 - 3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2 + 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 - 3\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18}^2 -$$
$$\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_{18}^2cs^2 - 3\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_8\omega_{18} + 3\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2 - \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 + \omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2 +$$
$$3\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8\omega_{18}^2cs^2 + \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} + 3\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3v_3^2\omega_{18}^2 - 3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} -$$
$$3\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3v_3^2\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18} - \omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 - \omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_8\omega_{18} - 3\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_8\omega_{18}^2 +$$
$$\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 + 3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} + \omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_{18}^2 - 3\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18}^2 +$$
$$\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 - 3\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 + \omega_6^2\omega_7^2\omega_7^2\omega_{11}^2\omega_8\omega_{18}cs^2 - 3\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} + \omega_6^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 -$$
$$\omega_6^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 + 3\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_{18}^2 - \omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2cs^2 - 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_{18}^2 - \omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 +$$
$$\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} + 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_{18}^2 + \omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_{18}^2 + 3\omega_6^2\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18}^2 + 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 -$$
$$\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2 - \omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_{18}^2cs^2 - 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2 - 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_{18}^2 + 6\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} -$$
$$2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18} - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_{18}^2 - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} - \omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8cs^2 + 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8 -$$
$$\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_{18}^2 + \omega_6\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_{18}^2 + 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} + 6\omega_6^2\omega_{19}^2\omega_7\omega_{20}v_3^2\omega_8\omega_{18}^2 - \omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2 +$$
$$3\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2\omega_8\omega_{18} - \omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} - 6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2 - \omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 + 2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_{18}^2cs^2 +$$
$$\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_{18} + \omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_{18}^2cs^2 - 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18} +$$
$$\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2 + \omega_6\omega_{19}^2\omega_7\omega_{11}^3\omega_{18}^2cs^2 - 3\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_{18}^2 - \omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8\omega_{18}^2cs^2 -$$
$$2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 + \omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_{18}^2 + \omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18}^2cs^2 - \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2 + 3\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18}^2 +$$
$$3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}v_3^2\omega_8\omega_{18} - 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_{18} + 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2 - 3\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3v_3^2\omega_8\omega_{18} - \omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8\omega_{18} -$$
$$\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 - \omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 + 3\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18} - \omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8\omega_{18}cs^2 + \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_{18} -$$
$$\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 + \omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2 - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_{18}^2cs^2 - 3\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3v_3^2\omega_{18}^2 - \omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 -$$
$$3\omega_6^2\omega_7\omega_{20}\omega_{11}^2v_3^2\omega_8\omega_{18}^2 + \omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8\omega_{18}^2 - \omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 - 3\omega_6^2\omega_7\omega_{20}\omega_{11}^3v_3^2\omega_8\omega_{18}^2$$

$C_{53} = -12\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3v_3^2cs^2 - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 - 36\omega_{19}^2\omega_7^2\omega_{23}v_2^2\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2v_3^2 - 24\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^3v_3^2 -$
$12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^3cs^2 - 36\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 -$
$2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2v_3^2cs^2 - 42\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2 + 18\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^2cs^2 +$
$150\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^4 - 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11} + 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 36\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 + 36\omega_{19}\omega_{16}\omega_7^2v_2^2\omega_{11}^3cs^2 - 96\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3cs^4 -$
$36\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11} + 12\omega_{19}^2\omega_7^3\omega_{11}^3v_3^2cs^2 - 42\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 - 6\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 +$
$12\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3 + 36\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^2cs^2 - 12\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3v_3^2 + 12\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 + 5\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 - 12\omega_{19}^2\omega_7^3\omega_{11}^2cs^2 +$
$6\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^2v_3^2 - 18\omega_{19}^2\omega_7^3v_2^2\omega_{11}^2cs^2 - 36\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2cs^4 + 36\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3v_3^2 - 72\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3 + 36\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^4 -$
$12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^4 - 88\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 - 36\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_7^2v_2^2\omega_{11}^3 +$
$6\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2v_3^2cs^2 + 12\omega_{19}^2\omega_7^2\omega_{23}v_2^2\omega_{11}^2 + 30\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3 + 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2 -$
$18\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}^2cs^2 - 6\omega_{19}^2\omega_7^3\omega_{11}^2v_3^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 + 72\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2cs^2 + 6\omega_{19}^2\omega_7^3v_2^2\omega_{11} -$
$18\omega_{19}^2\omega_7^3\omega_{11}^2cs^4 + 18\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 36\omega_7^3\omega_7^2v_2^2\omega_{11}^3cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 - 24\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} - 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2v_3^2 -$
$12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 + 24\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11} + 12\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 +$
$6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 - 36\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 +$
$72\omega_{19}^2\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^2cs^2 - 36\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3cs^4 - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_7^2v_2^2\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 +$
$18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} - 36\omega_{19}^2\omega_{16}\omega_7^2v_2^2\omega_{11}^3cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^4 - 54\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^4 + 6\omega_{19}^2\omega_7^3\omega_{11}^2cs^2 -$
$6\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 36\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 - 12\omega_{16}\omega_7^3\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 - 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 -$
$12\omega_{19}^2\omega_{16}\omega_7^2v_2^2\omega_{11}^3v_3^2 - 36\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^4 - 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 24\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^2v_3^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 -$
$12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2cs^2 - 12\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2 + 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 - 18\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3cs^4 + 36\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^4 + 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3cs^2 -$
$6\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2 + 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 36\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3cs^2 + 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_3^2cs^2 + 18\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3v_3^2cs^2 -$
$24\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2v_3^2 + 36\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^4 - 12\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2v_3^2 + 12\omega_{19}^2\omega_7^3v_2^2\omega_{11}^3v_3^2 - 36\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 +$
$24\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^3 + \omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3v_3^2cs^2 + 24\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^2v_3^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2 -$
$12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 - 18\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3v_3^2 - 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}v_3^2cs^2 -$
$6\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11} + 18\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3cs^4 + 18\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3cs^2 - 36\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^4 - 18\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 +$
$108\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3cs^2 - 12\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3cs^2 + 18\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3cs^2 + 180\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 - 6\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2cs^2 -$
$12\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11} - 6\omega_{19}^2\omega_7^3v_2^2\omega_{11}^3v_3^2 + 18\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3v_3^2 - 72\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^3cs^2 + 36\omega_{19}^2\omega_7^3\omega_{11}^3cs^4 -$
$12\omega_{19}^2\omega_7^3v_2^2\omega_{11}^3 - 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^2v_3^2 + 6\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11} + 36\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2 -$
$24\omega_{19}^2\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 + 12\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3v_3^2 - 36\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 + 12\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2 -$
$18\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 48\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^4 + 6\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2 - \omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2$

$C_{54} = -4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3v_3^2 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}v_3^2 -$
$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3cs^2 + 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3v_3^2 - 2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 +$
$4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 16\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11}^3cs^2 + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2v_3^2 - 7\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^3cs^2 +$
$4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2v_3^2 - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2v_3^2 + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3v_3^2 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$
$2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3v_3^2 + 3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 - 24\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 - 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3v_3^2 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 - 8\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 7\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2v_3^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^3 +$
$8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2v_3^2 + 8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 -$
$5\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3v_3^2 + 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11}^3 +$

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$$2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2v_3^2 + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^3cs^2 + 4\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 9\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3v_3^2 +$$
$$4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}v_3^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^3v_3^2 + \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2v_3^2 - 8\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 9\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 +$$
$$4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3 + 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 - 15\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 4\omega_7^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 11\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 +$$
$$12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2v_3^2 + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 - 6\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 +$$
$$2\omega_{19}^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 13\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^3cs^2 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2cs^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}v_3^2 -$$
$$4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^3v_3^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 + 2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^3 - 8\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3v_3^2 -$$
$$2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + \omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3v_3^2 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 26\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3cs^2 + 3\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 +$$
$$4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2v_3^2 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3v_3^2 + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$$
$$4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 6\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3v_3^2 + \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} +$$
$$8\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3v_3^2 + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2cs^2 - 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2$$

$C_{55} = -36\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3v_3^2cs^2 - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 - 12\omega_{19}^2\omega_7^2\omega_{23}v_2^2\omega_{11}^2cs^2 + 36\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2v_3^2 - 72\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^3v_3^2 -$
$36\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 + 72\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 - 12\omega_{19}\omega_{16}^2\omega_{23}v_2^2\omega_{11}^3cs^2 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 - 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2v_3^2cs^2 -$
$12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 6\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}^2cs^2 + 24\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^4 -$
$108\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}v_3^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11} + 12\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^2v_2^2\omega_{11}^2cs^2 + 60\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2v_3^2cs^2 -$
$12\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^2cs^4 - 36\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11} + 36\omega_{19}^2\omega_7^2\omega_{11}^3v_3^2cs^2 - 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 - 6\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 +$
$12\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^2cs^2 - 36\omega_{19}\omega_7^2\omega_{23}v_2^2\omega_{11}^3v_3^2 - \omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 +$
$18\omega_{19}^2\omega_7^3v_2^2\omega_{11}^2v_3^2 - 6\omega_{19}^2\omega_7^3v_2^2\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^3cs^4 + 108\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3v_3^2 - 24\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 -$
$6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}\omega_{11}cs^2 - 4\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 - 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 12\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_7^2v_2^2\omega_{11} + 18\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2v_3^2cs^2 +$
$12\omega_{19}^2\omega_7^2\omega_{23}v_2^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} + 36\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}v_3^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 - 6\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}cs^2 -$
$18\omega_{19}^2\omega_7^3\omega_{11}^3v_3^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 + 24\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 + 84\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2cs^2 + 6\omega_{19}^2\omega_7^3v_2^2\omega_{11}^3 - 6\omega_{19}^2\omega_7^3\omega_{11}^3cs^4 +$
$6\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 12\omega_{19}^2\omega_7^2v_2^2\omega_{11}^2cs^2 - 36\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 - 24\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} - 36\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2v_3^2 -$
$42\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3v_3^2cs^2 - 24\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3v_3^2cs^2 + 36\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 + 24\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^2 + 12\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2 + 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 -$
$12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 - 12\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}^2cs^2 + 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2v_3^2 + 24\omega_{19}^2\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3cs^4 +$
$78\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 + 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11} - 12\omega_{19}^2\omega_{16}\omega_7^2v_2^2\omega_{11}^2cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 -$
$18\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}cs^2 + 24\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 - 12\omega_{19}^2\omega_7^3\omega_{11}^3cs^4 + 6\omega_{19}^2\omega_7^3\omega_{11}^2cs^2 - 6\omega_{19}^2\omega_7^3v_2^2\omega_{11}^2cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 -$
$12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^2 - 36\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2v_3^2cs^2 - 36\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^4 - 54\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 +$
$72\omega_{19}^2\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}v_3^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 60\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2cs^2 - 36\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}v_3^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}cs^2 -$
$6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}cs^4 + 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3cs^2 - 18\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}v_3^2 + 6\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^2cs^2 - 48\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11} -$
$132\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3v_3^2cs^2 - 72\omega_{19}\omega_{16}\omega_7^2\omega_{23}v_2^2\omega_{11}^3v_3^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 - 36\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3v_3^2 +$
$36\omega_{19}^2\omega_7^2v_2^2\omega_{11}^3v_3^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3cs^2 + 24\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2\omega_{11} + 72\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 36\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3v_3^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}v_2^2 +$
$24\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3v_3^2cs^2 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 36\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2 + 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}v_3^2cs^2 - 6\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11} +$
$6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^4 - 144\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3v_3^2cs^2 - 12\omega_{19}^2\omega_7^2\omega_{23}v_2^2\omega_{11}^2cs^2 - 24\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 36\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 +$
$24\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^3 + 180\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2cs^2 + 18\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^3cs^2 - 18\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11} - 18\omega_{19}^2\omega_7^3v_2^2\omega_{11}v_3^2 +$
$6\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^2cs^2 - 36\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}^3v_3^2 - 24\omega_{19}\omega_{16}\omega_7\omega_{23}v_2^2\omega_{11}^3cs^2 + 12\omega_{19}^2\omega_7^3\omega_{11}cs^4 - 12\omega_{19}^2\omega_7^3v_2^2\omega_{11} - 84\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3v_3^2cs^2 +$
$12\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 36\omega_{19}^2\omega_7^3\omega_{23}v_2^2\omega_{11}v_3^2 + 6\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}v_2^2cs^2 - 24\omega_{19}^2\omega_7\omega_{23}v_2^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11} +$
$36\omega_{16}\omega_7^3\omega_{23}v_2^2\omega_{11}^3v_3^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 + 36\omega_{19}\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2 + 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^4 + 18\omega_{19}^2\omega_{16}\omega_7^3v_2^2\omega_{11}^3v_3^2$

$C_{56} = 8\omega_6^2\omega_{18}^2cs^4 + 24\omega_6^2\omega_{11}^3v_3^2cs^2 + 8\omega_6\omega_{11}^3\omega_{18}^2cs^2 + 51\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 36\omega_6\omega_{11}v_3^2\omega_{18}^2 + 13\omega_6^2\omega_{11}^3v_3^2\omega_{18} + 4\omega_6^2\omega_{11}^2v_3^2 + 4\omega_6\omega_{11}\omega_{18}^2cs^4 +$
$32\omega_6^2\omega_{11}^2v_3^4\omega_{18}^2 - 4\omega_6^2\omega_{11}\omega_{18}cs^4 - 8\omega_{11}^3v_3^2\omega_{18}^2 + 16\omega_6\omega_{11}^2v_3^4\omega_{18} + 4\omega_{11}^3\omega_{18}^2cs^2 + 24\omega_6^2v_3^4\omega_{18}^2 - 4\omega_6^2\omega_{11}^2cs^4 + 20\omega_6\omega_{11}^3v_3^4\omega_{18} -$
$84\omega_6\omega_{11}^2v_3^2\omega_{18}^2cs^2 + 20\omega_6\omega_{11}v_3^4\omega_{18}^2 - 8\omega_{11}^3v_3^4\omega_{18} - 4\omega_6^2\omega_{11}^3v_3^2 + 4\omega_6^2\omega_{11}^2\omega_{18}cs^4 + 12\omega_6^2\omega_{11}\omega_{18}^2cs^2 + 20\omega_6\omega_{11}^2v_3^4\omega_{18}^2 - 8\omega_6\omega_{11}^3\omega_{18}^2cs^2 -$
$4\omega_6\omega_{11}^3v_3^4 - 36\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 4\omega_6^2\omega_{11}\omega_{18}cs^4 + 13\omega_6^2\omega_{11}v_3^4\omega_{18}^2 + 4\omega_6\omega_{11}^3\omega_{18}cs^4 + 4\omega_6\omega_{11}^2\omega_{18}cs^4 + 20\omega_6^2\omega_{11}v_3^2\omega_{18} - 4\omega_{11}^2\omega_{18}^2cs^2 - 72\omega_6^2\omega_{11}v_3^2\omega_{18}^2cs^2 -$
$8\omega_6^2\omega_{11}^2\omega_{18}cs^2 - 12\omega_6^2\omega_{11}\omega_{18}^2cs^4 - 16\omega_6\omega_{11}^2v_3^4\omega_{18} + 8\omega_{11}^2v_3^4\omega_{18}^2 + 4\omega_6\omega_{11}^3v_3^2 - 24\omega_6^2v_3^2\omega_{18}^2 + 8\omega_6\omega_{11}^3\omega_{18}cs^4 - 51\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 -$
$20\omega_6\omega_{11}^3v_3^2\omega_{18} + 96\omega_6^2v_3^2\omega_{18}^2cs^2 + 4\omega_6^2\omega_{11}^3v_3^4 - 24\omega_6\omega_{11}^3v_3^2cs^2 - 144\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 4\omega_6^2\omega_{11}^2\omega_{18}^2cs^2 - 20\omega_6\omega_{11}v_3^2\omega_{18}^2 - 4\omega_6^2\omega_{11}^3cs^2 -$
$36\omega_6^2\omega_{11}v_3^4\omega_{18}^2 + 4\omega_{11}^3\omega_{18}^2cs^4 + 8\omega_6^2\omega_{11}\omega_{18}^2cs^4 - 13\omega_6^2\omega_{11}^3v_3^4\omega_{18} + 72\omega_6\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 24\omega_6^2\omega_{11}v_3^2cs^2 + 4\omega_6^2\omega_{11}\omega_{18}^2cs^2 - 32\omega_6^2\omega_{11}^3v_3^2\omega_{18} +$
$84\omega_6\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 4\omega_6\omega_{11}^3cs^4 - 4\omega_6^2\omega_{11}^2v_3^2 - 4\omega_6\omega_{11}^2\omega_{18}^2cs^2 - 13\omega_6^2\omega_{11}^3v_3^2\omega_{18} + 4\omega_6^2\omega_{11}^3\omega_{18}cs^2 + 36\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 48\omega_6\omega_{11}^3v_3^2\omega_{18}^2cs^2 -$
$8\omega_6^2\omega_{18}^2cs^2 - 8\omega_6\omega_{11}^3\omega_{18}^2cs^4 - 20\omega_6^2\omega_{11}^3v_3^4\omega_{18} + 120\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 8\omega_{11}^3v_3^2\omega_{18} - 20\omega_6\omega_{11}^3v_3^4\omega_{18} - 4\omega_{11}^3\omega_{18}^2cs^4 + 4\omega_6^2\omega_{11}^2cs^2$

$C_{57} = -12\omega_6^2\omega_{11}^3v_3^2cs^2 + 19\omega_6^3\omega_{11}^3v_3^4\omega_{18}^2 + 162\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 48\omega_6^3\omega_{11}^3v_3^2\omega_{18} + 12\omega_6^3\omega_{11}^3\omega_{18}^2cs^4 - 4\omega_6^3\omega_{11}^3v_3^2\omega_{18} + 6\omega_6^3\omega_{11}^3\omega_{18}cs^2 +$
$36\omega_6^3\omega_{11}^3v_3^2\omega_{18} - 24\omega_6^2\omega_{11}^3v_3^4\omega_{18} - 18\omega_6^2\omega_{11}^3\omega_{18}cs^4 + \omega_6^3\omega_{11}^3\omega_{18}cs^4 - 5\omega_6^2\omega_{11}^3\omega_{18}^2cs^2 + 12\omega_6^3\omega_{11}^3v_3^4 - 72\omega_6^3v_3^4\omega_{18}^2 - 24\omega_6\omega_{11}^3v_3^4\omega_{18} -$
$48\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 54\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{11}^3\omega_{18}^2cs^2 + 12\omega_6\omega_{11}^3v_3^4\omega_{18} - 306\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 12\omega_6^2\omega_{11}^3v_3^2 + 6\omega_6^2\omega_{11}^3\omega_{18}cs^4 +$
$12\omega_6^3\omega_{11}^3\omega_{18}^2cs^2 - 12\omega_6\omega_6^3\omega_{11}^3\omega_{18}cs^2 - 21\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 102\omega_6\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 27\omega_6^3\omega_{11}^3v_3^2\omega_{18} - 24\omega_6\omega_{11}^3\omega_{18}cs^4 - 12\omega_6^3\omega_{18}^2cs^2 -$
$81\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 12\omega_6^2\omega_{11}^3v_3^4\omega_{18} + 90\omega_6^3\omega_{11}^3v_3^2\omega_{18} + 12\omega_6^3\omega_{11}^3v_3^2cs^2 + 6\omega_6^3\omega_{11}^3\omega_{18}cs^4 - 12\omega_6^3\omega_{11}^3v_3^4 + 60\omega_6^3\omega_{11}^3v_3^4\omega_{18} - 12\omega_6^2\omega_{11}^3\omega_{18}^2cs^2 +$
$18\omega_6^2\omega_{11}^3v_3^2\omega_{18} - 12\omega_6^2\omega_{11}^3\omega_{18}^2cs^4 + 12\omega_6\omega_{11}^3\omega_{18}cs^4 + 30\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 72\omega_6^3v_3^4\omega_{18}^2 + 24\omega_6\omega_{11}^3v_3^2\omega_{18} - \omega_6^3\omega_{11}^3\omega_{18}cs^4 - 12\omega_6^2\omega_{11}^3v_3^4 -$
$108\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 6\omega_6^2\omega_{11}^3\omega_{18}cs^2 - 6\omega_6^3\omega_{11}^3\omega_{18}cs^2 - 36\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 12\omega_6^2\omega_{11}^3v_3^2 - 19\omega_6^3\omega_{11}^3v_3^4\omega_{18} + 12\omega_6^2\omega_{11}^3\omega_{18}cs^4 + 48\omega_6^3\omega_{11}^3v_3^4\omega_{18} +$
$4\omega_6^3\omega_{11}^3v_3^4\omega_{18} + 6\omega_6\omega_{11}^3\omega_{18}^2cs^2 + 12\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 + 12\omega_6^3\omega_{18}^2cs^4 + 24\omega_6^2\omega_{11}^3v_3^2\omega_{18} - 36\omega_6^3\omega_{11}^3v_3^4\omega_{18} - 12\omega_6\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 48\omega_{11}^3v_3^2\omega_{18}^2cs^2 -$
$27\omega_6^3\omega_{11}^3v_3^4\omega_{18} - 6\omega_6^2\omega_{11}^3\omega_{18}cs^4 - 90\omega_6^3\omega_{11}^3v_3^4\omega_{18} - 12\omega_6^2\omega_{11}^3v_3^2\omega_{18} + 18\omega_6^3\omega_{11}^3\omega_{18}cs^2 - 60\omega_6^3\omega_{11}^3v_3^2\omega_{18} - 12\omega_6^2\omega_{11}^3v_3^2cs^2 + 60\omega_6^3\omega_{11}^3v_3^2\omega_{18}^2cs^2 -$
$18\omega_6^3\omega_{11}^3v_3^2\omega_{18} - 12\omega_6^2\omega_{11}^3v_3^2\omega_{18}^2cs^2 - 12\omega_6\omega_{11}^3v_3^2\omega_{18}^2 - 12\omega_6^2\omega_{11}^3\omega_{18}^2cs^4 - \omega_6^3\omega_{11}^3\omega_{18}^2cs^2 + 252\omega_6^3v_3^2\omega_{18}^2cs^2 + 13\omega_6^2\omega_{11}^3\omega_{18}^2cs^4 - 12\omega_6^3\omega_{11}^3v_3^2$

$C_{58} = -44\omega_6^2\omega_{11}^2\omega_{18}^2cs^2 - 120\omega_6^2\omega_{11}v_3^2\omega_{18}^2 - 43\omega_6^2\omega_{11}^3v_3^2\omega_{18} + 24\omega_6^2\omega_{11}\omega_{18} - 16\omega_6^2\omega_{11}^2v_3^2 - 32\omega_6^2\omega_{18}^2 + 28\omega_{11}^3v_3^2\omega_{18}^2 - 48\omega_6\omega_{11}^2v_3^2\omega_{18} -$
$20\omega_{11}^3\omega_{18}cs^2 + 16\omega_6\omega_{11}^2\omega_{18} + 16\omega_6^2\omega_{11}^3v_3^2 + 28\omega_6\omega_{11}^2\omega_{18} - 72\omega_6^2\omega_{11}\omega_{18}^2cs^2 - 68\omega_6^2\omega_{11}v_3^2\omega_{18} + 44\omega_6\omega_{11}^3\omega_{18}cs^2 + 12\omega_{11}^3\omega_{18} + 48\omega_6^2\omega_{11}\omega_{18}^2 -$
$28\omega_6\omega_{11}^3\omega_{18} - 16\omega_6^2\omega_{11}^3cs^2 - 12\omega_{11}^2\omega_{18}^2 - 64\omega_6^2\omega_{11}v_3^2\omega_{18} + 20\omega_{11}^3\omega_{18}cs^2 + 56\omega_6^2\omega_{11}^2\omega_{18}cs^2 + 8\omega_6\omega_{11}^3 - 16\omega_6^2\omega_{11}^3v_3^2 + 80\omega_6^2v_3^2\omega_{18}^2 - 17\omega_6^2\omega_{11}^2\omega_{18}^2 -$
$68\omega_6\omega_{11}^3v_3^2\omega_{18} - 8\omega_6^2\omega_{11}^3 + 25\omega_6^2\omega_{11}^2\omega_{18}^2cs^2 + 64\omega_6\omega_{11}^3v_3^2\omega_{18} + 16\omega_6^2\omega_{11}^3cs^2 - 24\omega_6\omega_{11}^2\omega_{18} + 17\omega_6^2\omega_{11}^3\omega_{18} + 8\omega_6^2\omega_{11}^3 - 32\omega_6^2\omega_{11}^3\omega_{18}cs^2 +$
$104\omega_6^2\omega_{11}^3v_3^2\omega_{18} + 32\omega_6\omega_{11}^3\omega_{18}cs^2 + 43\omega_6^2\omega_{11}^3v_3^2\omega_{18} - 25\omega_6^2\omega_{11}^3\omega_{18}cs^2 + 48\omega_6^2\omega_{18}^2cs^2 - 16\omega_6\omega_{11}^2\omega_{18}cs^2 - 28\omega_{11}^3v_3^2\omega_{18} - 40\omega_6^2\omega_{11}^2\omega_{18} - 16\omega_6^2\omega_{11}^2cs^2$

$$C_{59} = -16\omega_{19}\omega_7\omega_{11}^2 v_3^4 - 84\omega_{19}^2\omega_7\omega_{11}^2 v_3^2 cs^2 + 4\omega_7\omega_{11}^3 v_3^2 - 51\omega_{19}\omega_7^2\omega_{11}^3 v_3^2 cs^2 + 4\omega_7^2\omega_{11}^3 v_3^4 + 24\omega_7^2\omega_{11}^3 v_3^2 cs^2 + 4\omega_{19}\omega_{11}^3 cs^2 + 4\omega_{19}\omega_7^2\omega_{11} cs^2 - $$
$$32\omega_{19}\omega_7^2\omega_{11}^2 v_3^2 + 8\omega_{19}\omega_7^2\omega_{11}^2 cs^4 - 4\omega_7^2\omega_{11}^3 cs^2 - 20\omega_{19}\omega_7^2\omega_{11} v_3^4 - 8\omega_{19}\omega_{11}^3 v_3^4 - 4\omega_7\omega_{11}^3 cs^4 - 48\omega_{19}\omega_7\omega_{11}^2 v_3^2 cs^2 + 13\omega_{19}\omega_7^2\omega_{11} v_3^2 - $$
$$4\omega_{19}^2\omega_7\omega_{11} cs^2 + 36\omega_{19}^2\omega_7\omega_{11} v_3^2 cs^2 + 8\omega_{19}\omega_7^2 cs^4 - 4\omega_7^2\omega_{11} v_3^4 + 20\omega_{19}\omega_7\omega_{11}^2 v_3^2 + 4\omega_{19}\omega_{11}^2 cs^4 + 13\omega_{19}\omega_7^2\omega_{11} v_3^4 - 144\omega_{19}\omega_7^2\omega_{11} v_3^2 cs^2 + $$
$$20\omega_{19}\omega_7\omega_{11}^3 v_3^4 - 12\omega_{19}^2\omega_7^2\omega_{11} cs^4 + 36\omega_{19}^2\omega_7^2\omega_{11} v_3^2 - 8\omega_{19}\omega_7\omega_{11}^3 cs^2 - 4\omega_{19}\omega_7^2\omega_{11}^2 cs^2 - 72\omega_{19}\omega_7^2\omega_{11} v_3^2 cs^2 + 96\omega_{19}\omega_7^2 v_3^2 cs^2 - 8\omega_{19}\omega_{11}^2 v_3^2 - $$
$$36\omega_{19}\omega_{11}^3 v_3^2 cs^2 + 4\omega_7^2\omega_{11} cs^2 - 8\omega_{19}\omega_7\omega_{11}^2 cs^4 + 20\omega_{19}^2\omega_7\omega_{11} v_3^4 - 4\omega_{19}\omega_7^2\omega_{11}^3 cs^4 - 24\omega_{19}\omega_7^2 v_3^2 - 4\omega_{19}\omega_{11}^3 cs^2 - 13\omega_{19}^2\omega_7^2\omega_{11} v_3^2 + $$
$$84\omega_{19}\omega_7\omega_{11}^3 v_3^2 cs^2 - 24\omega_7\omega_{11}^3 v_3^2 cs^2 - 20\omega_{19}\omega_7\omega_{11}^3 v_3^2 + 12\omega_{19}^2\omega_7^2\omega_{11} cs^2 - 13\omega_{19}\omega_7^2\omega_{11}^3 v_3^2 + 4\omega_{19}\omega_7\omega_{11} cs^4 + 51\omega_{19}\omega_7^2\omega_{11}^2 v_3^2 cs^2 - 8\omega_{19}\omega_7^2 cs^2 + $$
$$4\omega_7^2\omega_{11} v_3^2 - 20\omega_{19}\omega_7\omega_{11}^2 v_3^2 - 24\omega_7^2\omega_{11} v_3^2 cs^2 - 4\omega_7^2\omega_{11} cs^4 + 8\omega_{19}\omega_7\omega_{11}^2 cs^2 + 120\omega_{19}\omega_7^2\omega_{11} v_3^2 cs^2 - 20\omega_{19}\omega_7\omega_{11} v_3^2 + 4\omega_{19}\omega_7^2\omega_{11} cs^2 + $$
$$24\omega_{19}\omega_7^2 v_3^4 - 36\omega_{19}\omega_7^2\omega_{11} v_3^2 + 8\omega_{19}\omega_7\omega_{11} cs^4 + 4\omega_{19}\omega_7^2\omega_{11} cs^4 + 8\omega_7^2\omega_{11} v_3^4 + 72\omega_{19}\omega_7\omega_{11} v_3^2 cs^2 - 4\omega_7^2\omega_{11} v_3^2 - 4\omega_{19}\omega_{11} cs^4 - $$
$$4\omega_{19}\omega_7^2\omega_{11} cs^4 + 32\omega_{19}\omega_7^2\omega_{11}^2 v_3^2 + 16\omega_{19}\omega_7\omega_{11}^2 v_3^2 - 4\omega_7\omega_{11}^3 v_3^2 + 4\omega_7\omega_{11}^3 cs^2 - 8\omega_{19}\omega_7^2\omega_{11}^2 cs^2 + 4\omega_7^2\omega_{11}^3 cs^4 + 20\omega_{19}\omega_7^2\omega_{11} v_3^2 + 8\omega_{19}\omega_{11}^3 v_3^2$$

$$C_{60} = -90\omega_{19}^2\omega_7^3\omega_{11} v_3^4 - 36\omega_{19}\omega_7^3\omega_{11} v_3^2 cs^2 - 18\omega_{19}^2\omega_7^3\omega_{11} v_3^4 + 12\omega_{19}^2\omega_{11}^3 cs^4 - 48\omega_{19}^2\omega_7\omega_{11}^2 v_3^2 cs^2 + \omega_{19}^2\omega_7^2\omega_{11} cs^4 + 30\omega_{19}\omega_7^3\omega_{11}^3 v_3^2 cs^2 - $$
$$12\omega_7^2\omega_{11}^3 v_3^4 - 12\omega_{19}\omega_7\omega_{11}^3 v_3^2 - 12\omega_7^3\omega_{11}^3 v_3^2 cs^2 + 24\omega_{19}\omega_7^2\omega_{11}^2 v_3^2 + 12\omega_{19}\omega_7^3 cs^4 - 6\omega_{19}\omega_7^3\omega_{11}^3 cs^2 + 12\omega_{19}\omega_7^2\omega_{11}^2 cs^4 - 81\omega_{19}^2\omega_7^2\omega_{11}^3 v_3^2 cs^2 - $$
$$27\omega_{19}^2\omega_7^3\omega_{11} v_3^4 - 72\omega_{19}^2\omega_7^3 v_3^2 + 12\omega_7^2\omega_{11}^3 v_3^2 - 24\omega_{19}^2\omega_7\omega_{11} cs^4 - 5\omega_{19}\omega_7^2\omega_{11}^3 cs^2 - 306\omega_{19}^2\omega_7^3\omega_{11} v_3^2 cs^2 - 19\omega_{19}\omega_7^3\omega_{11}^2 v_3^2 + 12\omega_{19}^2\omega_7^3\omega_{11} cs^2 - $$
$$48\omega_{19}\omega_7^2\omega_{11}^3 v_3^2 + 6\omega_{19}\omega_7^3\omega_{11}^2 cs^2 + 36\omega_{19}\omega_7^3\omega_{11} v_3^2 + 12\omega_{19}^2\omega_7^3\omega_{11} v_3^2 cs^2 + 12\omega_{19}^2\omega_7^2\omega_{11} v_3^2 - \omega_{19}^2\omega_7^3\omega_{11} cs^4 - 108\omega_{19}^2\omega_7^2\omega_{11} v_3^2 cs^2 - $$
$$24\omega_{19}\omega_7\omega_{11}^3 v_3^2 - 12\omega_{19}^2\omega_7^2\omega_{11} cs^4 - 12\omega_{19}\omega_7\omega_{11}^3 cs^2 - 6\omega_{19}^2\omega_7^2\omega_{11} cs^2 - 4\omega_{19}^2\omega_7^3\omega_{11} v_3^2 - 12\omega_7^3\omega_{11}^3 v_3^2 + 12\omega_7^3\omega_{11}^3 v_3^2 cs^2 - 18\omega_{19}^2\omega_7^2\omega_{11} cs^4 + $$
$$60\omega_{19}\omega_7^3\omega_{11}^2 v_3^2 - 21\omega_{19}\omega_7^3\omega_{11} v_3^2 cs^2 - 12\omega_{19}^2\omega_7^2\omega_{11} v_3^2 - 12\omega_{19}\omega_7\omega_{11}^3 v_3^2 cs^2 + 24\omega_{19}\omega_7\omega_{11}^2 v_3^2 + 12\omega_{19}^2\omega_7^2\omega_{11} cs^2 + 48\omega_{19}\omega_7^3\omega_{11}^2 v_3^4 + $$
$$162\omega_{19}^2\omega_7^2\omega_{11}^2 v_3^2 cs^2 - 6\omega_{19}\omega_7^3\omega_{11}^2 cs^4 - 36\omega_{19}\omega_7^3\omega_{11} v_3^4 + 12\omega_7^3\omega_{11}^3 v_3^2 - 12\omega_{19}\omega_7^2\omega_{11}^3 v_3^2 cs^2 + 18\omega_{19}\omega_7^2\omega_{11}^3 cs^2 - 60\omega_{19}\omega_7^3\omega_{11}^2 v_3^2 + 12\omega_{19}\omega_7\omega_{11}^3 cs^4 + $$
$$6\omega_{19}\omega_7^2\omega_{11}^2 cs^4 + 102\omega_{19}\omega_7\omega_{11}^3 v_3^2 cs^2 + 4\omega_{19}\omega_7^3\omega_{11}^3 v_3^4 + 12\omega_7^3\omega_{11}^3 v_3^2 + 12\omega_{19}\omega_7\omega_{11}^3 v_3^4 + 54\omega_{19}\omega_7^3\omega_{11}^2 v_3^2 cs^2 - 24\omega_{19}\omega_7^2\omega_{11}^2 v_3^4 + 6\omega_{19}\omega_7^3\omega_{11}^2 cs^4 - $$
$$12\omega_{19}\omega_7^3 cs^2 - 12\omega_7^3\omega_{11}^2 v_3^2 cs^2 + 90\omega_{19}\omega_7^3\omega_{11} v_3^2 + 18\omega_{19}^2\omega_7^3\omega_{11} v_3^2 + 252\omega_{19}^2\omega_7^3 v_3^2 cs^2 - \omega_{19}\omega_7^2\omega_{11} cs^2 + 13\omega_{19}\omega_7^3\omega_{11} cs^4 + 19\omega_{19}^2\omega_7^3\omega_{11} v_3^4 - $$
$$12\omega_{19}^2\omega_7\omega_{11} cs^4 - 12\omega_{19}\omega_7^2\omega_{11} cs^2 - 48\omega_{19}^2\omega_{11}^3 v_3^2 cs^2 + 72\omega_{19}^2\omega_7^3 v_3^4 + 27\omega_{19}\omega_7^3\omega_{11}^3 v_3^2 + 60\omega_{19}^2\omega_7^3\omega_{11} v_3^2 cs^2 + 6\omega_{19}\omega_7\omega_{11}^3 cs^2 - 12\omega_7^3\omega_{11}^3 v_3^4$$

$$C_{61} = -12\omega_{19}^2\omega_7\omega_{11}^2 + 48\omega_{19}^2\omega_7\omega_{11} - 16\omega_7\omega_{11}^3 v_3^2 - 20\omega_{19}\omega_{11}^3 cs^2 - 32\omega_{19}\omega_7\omega_{11} cs^2 + 104\omega_{19}\omega_7^2\omega_{11}^2 v_3^2 + 16\omega_7^2\omega_{11}^3 cs^2 + 8\omega_7\omega_{11}^3 - 16\omega_{19}\omega_7\omega_{11}^2 cs^2 - $$
$$43\omega_{19}\omega_7^2\omega_{11}^3 v_3^2 + 32\omega_{19}\omega_7\omega_{11} cs^2 - 68\omega_{19}^2\omega_7\omega_{11}^2 v_3^2 + 16\omega_{19}\omega_7\omega_{11}^2 - 120\omega_{19}^2\omega_7\omega_{11} v_3^2 + 44\omega_{19}\omega_7\omega_{11}^3 cs^2 + 25\omega_{19}^2\omega_7^2\omega_{11} cs^2 + 28\omega_{19}^2\omega_7\omega_{11} v_3^2 - $$
$$16\omega_7^2\omega_{11}^3 cs^2 - 28\omega_{19}\omega_7\omega_{11}^3 + 80\omega_{19}^2\omega_7^3 v_3^2 - 17\omega_{19}\omega_7^2\omega_{11}^3 + 20\omega_{19}\omega_{11}^3 cs^2 - 32\omega_{19}^2\omega_7^3 + 43\omega_{19}^2\omega_7^2\omega_{11}^3 v_3^2 + 68\omega_{19}\omega_7\omega_{11}^3 v_3^2 - 72\omega_{19}\omega_7^2\omega_{11} cs^2 + $$
$$48\omega_{19}^2\omega_7^2 cs^2 - 16\omega_7^2\omega_{11}^3 v_3^2 + 28\omega_{19}^2\omega_7\omega_{11}^3 + 17\omega_{19}\omega_7^2\omega_{11}^3 - 44\omega_{19}^2\omega_7\omega_{11}^2 cs^2 + 64\omega_{19}\omega_7\omega_{11} v_3^2 - 25\omega_{19}\omega_7^2\omega_{11}^3 cs^2 - 40\omega_{19}\omega_7^2\omega_{11}^2 + 24\omega_{19}^2\omega_7\omega_{11} + $$
$$12\omega_{19}\omega_{11} + 16\omega_7^2\omega_{11}^3 v_3^2 - 48\omega_{19}\omega_7\omega_{11}^2 v_3^2 - 8\omega_7^2\omega_{11}^3 - 16\omega_7\omega_{11}^3 cs^2 - 24\omega_{19}^2\omega_7\omega_{11} + 8\omega_7^2\omega_{11}^3 + 56\omega_{19}\omega_7^2\omega_{11}^2 cs^2 - 64\omega_{19}\omega_7\omega_{11} v_3^2 - 28\omega_{19}\omega_{11}^3 v_3^2$$

$$C_{62} = 12 + 234\omega_{11} v_3^2 - 78\omega_{11}^2 cs^2 + 672 v_3^2 cs^2 + 90\omega_{11}^2 v_3^2 - 216\omega_{11} cs^2 + 6\omega_{11}^3 cs^2 + 404\omega_{11}^2 v_3^2 cs^2 - 132 cs^2 + 144 v_3^4 - 9\omega_{11}^3 v_3^4 - 5\omega_{11}^3 cs^4 + $$
$$144 cs^4 - 18\omega_{11} - 1008\omega_{11} v_3^2 cs^2 - \omega_{11}^3 + 8\omega_{11}^2 - 156 v_3^2 + 10\omega_{11}^3 v_3^2 - 216\omega_{11} v_3^4 + 82\omega_{11}^2 cs^4 - 98\omega_{11}^2 v_3^2 - 34\omega_{11}^3 v_3^2 cs^2 + 198\omega_{11} cs^2$$

$$C_{63} = 12 + 378\omega_{11} v_3^2 - 22\omega_{11}^2 cs^2 + 432 v_3^2 cs^2 + 310\omega_{11}^2 v_3^4 - 36\omega_{11} cs^4 + 2\omega_{11}^3 cs^2 + 252\omega_{11}^2 v_3^2 cs^2 - 36 cs^2 + 504 v_3^4 - 29\omega_{11}^3 v_3^4 - \omega_{11}^3 cs^4 + $$
$$24 cs^4 - 18\omega_{11} - 648\omega_{11} v_3^2 cs^2 - \omega_{11}^3 + 8\omega_{11}^2 - 252 v_3^2 + 14\omega_{11}^3 v_3^2 - 756\omega_{11} v_3^4 + 14\omega_{11}^2 cs^4 - 154\omega_{11}^2 v_3^2 - 18\omega_{11}^3 v_3^2 cs^2 + 54\omega_{11} cs^2$$

2.3 MRT2

2.3.1 Definitions

Collision operator $\boldsymbol{C}$:

$$\boldsymbol{C}\left(\boldsymbol{f}\right) = \mathbf{M}_2^{-1}\mathbf{S}\left(\boldsymbol{\mu}_2^{(eq)} - \mathbf{M}_2\boldsymbol{f}\right),$$

where

$$\mathbf{S} = \mathrm{diag}(\omega_1, \omega_2, \omega_3, \cdots, \omega_{27}),$$

$\omega_1, \omega_2, \cdots, \omega_{27} \in (0, 2)$.

Matrix $\mathbf{M}_2$ corresponds to the transformation matrix to the raw moment basis defined by

$$
\boldsymbol{\mu}_2 =
\begin{pmatrix}
m_{(0,0,0)} \\
m_{(1,0,0)} \\
m_{(0,1,0)} \\
m_{(0,0,1)} \\
m_{(1,1,0)} \\
m_{(1,0,1)} \\
m_{(0,1,1)} \\
m_{(2,0,0)} - m_{(0,2,0)} \\
m_{(2,0,0)} - m_{(0,0,2)} \\
m_{(2,0,0)} + m_{(0,2,0)} + m_{(0,0,2)} \\
m_{(1,2,0)} + m_{(1,0,2)} \\
m_{(2,1,0)} + m_{(0,1,2)} \\
m_{(2,0,1)} + m_{(0,2,1)} \\
m_{(1,2,0)} - m_{(1,0,2)} \\
m_{(2,1,0)} - m_{(0,1,2)} \\
m_{(2,0,1)} - m_{(0,2,1)} \\
m_{(1,1,1)} \\
m_{(2,2,0)} - 2m_{(2,0,2)} + m_{(0,2,2)} \\
m_{(2,2,0)} + m_{(2,0,2)} - 2m_{(0,2,2)} \\
m_{(2,2,0)} + m_{(2,0,2)} + m_{(0,2,2)} \\
m_{(2,1,1)} \\
m_{(1,2,1)} \\
m_{(1,1,2)} \\
m_{(2,2,1)} \\
m_{(2,1,2)} \\
m_{(1,2,2)} \\
m_{(2,2,2)}
\end{pmatrix},
$$

and is given by

$$
\mathbf{M}_2 =
\left(
\begin{smallmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
0 & 1 & 0 & 0 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
0 & 0 & 1 & 0 & 0 & -1 & 0 & 1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\
0 & 0 & 0 & 1 & 0 & 0 & -1 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & -1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\
0 & 1 & -1 & 0 & 1 & -1 & 0 & -1 & -1 & -1 & -1 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 1 & 0 & -1 & 1 & 0 & -1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 1 & 1 & 1 & 1 & 1 & 1 & 2 & 2 & 2 & 2 & 2 & 2 & 2 & 2 & 2 & 2 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -2 & 2 & 2 & 2 & -2 & -2 & -2 & -2 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 2 & 2 & -2 & -2 & 2 & 2 & -2 & -2 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 2 & -2 & 2 & -2 & 2 & -2 & 2 & -2 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & -1 & -1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & -1 & -1 & 1 & 1 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & -1 & 1 & -1 & 1 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -2 & -2 & -2 & -2 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & -2 & -2 & -2 & -2 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 3 & 3 & 3 & 3 & 3 & 3 & 3 & 3 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1
\end{smallmatrix}
\right).
$$

The equilibrium moments $\boldsymbol{\mu}_2^{(eq)}$ are defined by

$$
\boldsymbol{\mu}_2^{(eq)} = \mathbf{M}_2 \mathbf{M}^{-1} \boldsymbol{\mu}^{(eq)},
$$

i.e.,

$$\boldsymbol{\mu}_2^{(eq)} = \begin{pmatrix} \rho \\ \rho v_1 \\ \rho v_2 \\ \rho v_3 \\ \rho v_1 v_2 \\ \rho v_1 v_3 \\ \rho v_2 v_3 \\ \rho(v_1^2 - v_2^2) \\ \rho(v_1^2 - v_3^2) \\ \rho(v_3^2 + v_2^2 + v_1^2 + 3c_s^2) \\ \rho(v_1 v_3^2 + v_1 v_2^2 + 2c_s^2 v_1) \\ \rho(v_2 v_3^2 + v_1^2 v_2 + 2c_s^2 v_2) \\ \rho(v_2^2 v_3 + v_1^2 v_3 + 2c_s^2 v_3) \\ \rho(v_1 v_2^2 - v_1 v_3^2) \\ \rho(v_1^2 v_2 - v_2 v_3^2) \\ \rho(v_1^2 v_3 - v_2^2 v_3) \\ \rho v_1 v_2 v_3 \\ \rho(v_2^2 v_3^2 - 2v_1^2 v_3^2 - c_s^2 v_3^2 + v_1^2 v_2^2 + 2c_s^2 v_2^2 - c_s^2 v_1^2) \\ \rho(-2v_2^2 v_3^2 + v_1^2 v_3^2 - c_s^2 v_3^2 + v_1^2 v_2^2 - c_s^2 v_2^2 + 2c_s^2 v_1^2) \\ \rho(v_2^2 v_3^2 + v_1^2 v_3^2 + 2c_s^2 v_3^2 + v_1^2 v_2^2 + 2c_s^2 v_2^2 + 2c_s^2 v_1^2 + 3c_s^4) \\ \rho(v_1^2 v_2 v_3 + c_s^2 v_2 v_3) \\ \rho(v_1 v_2^2 v_3 + c_s^2 v_1 v_3) \\ \rho(v_1 v_2 v_3^2 + c_s^2 v_1 v_2) \\ \rho(v_1^2 v_2^2 v_3 + c_s^2 v_2^2 v_3 + c_s^2 v_1^2 v_3 + c_s^4 v_3) \\ \rho(v_1^2 v_2 v_3^2 + c_s^2 v_2 v_3^2 + c_s^2 v_1^2 v_2 + c_s^4 v_2) \\ \rho(v_1 v_2^2 v_3^2 + c_s^2 v_1 v_3^2 + c_s^2 v_1 v_2^2 + c_s^4 v_1) \\ \rho(v_1^2 v_2^2 v_3^2 + c_s^2 v_2^2 v_3^2 + c_s^2 v_1^2 v_3^2 + c_s^4 v_3^2 + c_s^2 v_1^2 v_2^2 + c_s^4 v_2^2 + c_s^4 v_1^2 + c_s^6) \end{pmatrix}.$$

2.3.2 Conservation of mass: ρ

📎 attached text file: `output_d3q27_nse_mrt2_symbolic_pde_00.txt`

$\frac{\partial \rho}{\partial t} + \frac{v_1 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{\rho \delta_l}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{\delta_l v_2}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{\rho \delta_l}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_3}{\delta_t} \frac{\partial \rho}{\partial x_3} + \frac{\rho \delta_l}{\delta_t} \frac{\partial v_3}{\partial x_3} + (-1 + 3cs^2 + v_1^2) \frac{v_1 \delta_l^3}{12\delta_t} \frac{\partial^3 \rho}{\partial x_1^3} +$

$(-1 + cs^2 + 3v_1^2) \frac{\rho \delta_l^3}{12\delta_t} \frac{\partial^3 v_1}{\partial x_1^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + 3cs^2 + v_2^2) \frac{\delta_l^3 v_2}{12\delta_t} \frac{\partial^3 \rho}{\partial x_2^3} +$

$(-1 + cs^2 + 3v_2^2) \frac{\rho \delta_l^3}{12\delta_t} \frac{\partial^3 v_2}{\partial x_2^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t} \frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$

$(-1 + 3cs^2 + v_3^2) \frac{\delta_l^3 v_3}{12\delta_t} \frac{\partial^3 \rho}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2) \frac{\rho \delta_l^3}{12\delta_t} \frac{\partial^3 v_3}{\partial x_3^3} +$

$(-2cs^2 - cs^4 \omega_9 + 6v_1^4 - 3v_1^4 \omega_9 - 6v_1^2 + cs^2 \omega_9 - 12cs^2 v_1^2 \omega_9 + 24cs^2 v_1^2 + 3v_1^2 \omega_9 + 2cs^4) \frac{\delta_l^4}{24\omega_9 \delta_t} \frac{\partial^4 \rho}{\partial x_1^4} +$

$(-4 + 6cs^2 + 2\omega_9 + 10v_1^2 - 3cs^2 \omega_9 - 5v_1^2 \omega_9) \frac{\rho v_1 \delta_l^4}{12\omega_9 \delta_t} \frac{\partial^4 v_1}{\partial x_1^4} +$

$(v_1^2 \omega_{12} + 3cs^2 \omega_{12} + \omega_9 - \omega_{12} - 3cs^2 \omega_9 - v_1^2 \omega_9) \frac{v_1 \delta_l^4 v_2}{4\omega_9 \omega_{12} \delta_t} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} +$

$(3v_1^2 \omega_{12} + cs^2 \omega_{12} + \omega_9 - \omega_{12} - cs^2 \omega_9 - 3v_1^2 \omega_9) \frac{\rho \delta_l^4 v_2}{4\omega_9 \omega_{12} \delta_t} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + (-3cs^2 \omega_5 \omega_9 - 6cs^2 \omega_9 \omega_{12} + 3cs^2 \omega_5 \omega_9 \omega_{12} -$

$3\omega_5 v_1^2 \omega_9 + 3\omega_5 \omega_9 + \omega_5 v_1^2 \omega_9 \omega_{12} - \omega_5 \omega_{12} - \omega_5 \omega_9 \omega_{12} + \omega_5 v_1^2 \omega_{12} + 3cs^2 \omega_5 \omega_{12}) \frac{\rho v_1 \delta_l^4}{12\omega_5 \omega_9 \omega_{12} \delta_t} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} +$

$(-2 + \omega_5) \frac{cs^4 \delta_l^4}{6\omega_5 \delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} + (\omega_5 - \omega_{12}) \frac{cs^2 \rho v_1 \delta_l^4}{2\omega_5 \omega_{12} \delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + (\omega_5 - \omega_{15}) \frac{cs^2 \rho \delta_l^4 v_2}{2\omega_5 \omega_{15} \delta_t} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} +$

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$$(\omega_{15}v_2^2 - \omega_{15} - v_2^2\omega_{10} + 3cs^2\omega_{15} + \omega_{10} - 3cs^2\omega_{10})\frac{v_1\delta_l^4 v_2}{4\omega_{15}\delta_t\omega_{10}}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + (-\omega_5\omega_{15}\omega_{10} + 3cs^2\omega_5\omega_{15} + 3\omega_5\omega_{10} -$$

$$\omega_5\omega_{15} - 3cs^2\omega_5\omega_{10} + 3cs^2\omega_5\omega_{15}\omega_{10} - 3\omega_5 v_2^2\omega_{10} + \omega_5\omega_{15}v_2^2 - 6cs^2\omega_{15}\omega_{10} + \omega_5\omega_{15}v_2^2\omega_{10})\frac{\rho\delta_l^4 v_2}{12\omega_5\omega_{15}\delta_t\omega_{10}}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} +$$

$$(3\omega_{15}v_2^2 - \omega_{15} - 3v_2^2\omega_{10} + cs^2\omega_{15} + \omega_{10} - cs^2\omega_{10})\frac{\rho v_1\delta_l^4}{4\omega_{15}\delta_t\omega_{10}}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} +$$

$$(-2cs^2 - 12cs^2 v_2^2\omega_{10} + 24cs^2 v_2^2 - cs^4\omega_{10} - 6v_2^2 + 3v_2^2\omega_{10} + 6v_2^4 - 3v_2^4\omega_{10} + 2cs^4 + cs^2\omega_{10})\frac{\delta_l^4}{24\delta_t\omega_{10}}\frac{\partial^4\rho}{\partial x_2^4} +$$

$$(-4 + 6cs^2 + 10v_2^2 - 5v_2^2\omega_{10} + 2\omega_{10} - 3cs^2\omega_{10})\frac{\rho\delta_l^4 v_2}{12\delta_t\omega_{10}}\frac{\partial^4 v_2}{\partial x_2^4} +$$

$$(\omega_9 - 3cs^2\omega_9 + v_1^2\omega_{13} - v_1^2\omega_9 + 3cs^2\omega_{13} - \omega_{13})\frac{v_1\delta_l^4 v_3}{4\omega_9\delta_t\omega_{13}}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} +$$

$$(\omega_9 - cs^2\omega_9 + 3v_1^2\omega_{13} - 3v_1^2\omega_9 + cs^2\omega_{13} - \omega_{13})\frac{\rho\delta_l^4 v_3}{4\omega_9\delta_t\omega_{13}}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} + (3cs^2\omega_6\omega_{13} - 3cs^2\omega_9\omega_6 - \omega_6\omega_{13} - \omega_9\omega_6\omega_{13} +$$

$$3\omega_9\omega_6 + v_1^2\omega_6\omega_{13} - 3v_1^2\omega_9\omega_6 - 6cs^2\omega_9\omega_{13} + v_1^2\omega_9\omega_6\omega_{13} + 3cs^2\omega_9\omega_6\omega_{13})\frac{\rho v_1\delta_l^4}{12\omega_9\omega_6\delta_t\omega_{13}}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$$

$$(-\omega_8 + \omega_5)\frac{cs^2\rho\delta_l^4 v_3}{2\omega_8\omega_5\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} + (-\omega_8 + \omega_6)\frac{cs^2\rho\delta_l^4 v_2}{2\omega_8\omega_6\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} + (-\omega_8 + \omega_5)\frac{cs^2\rho\delta_l^4 v_3}{2\omega_8\omega_5\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} +$$

$$(-\omega_8 + \omega_7)\frac{cs^2\rho v_1\delta_l^4}{2\omega_8\delta_t\omega_7}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + (v_2^2\omega_{16} - v_2^2\omega_{10} - \omega_{16} + \omega_{10} + 3cs^2\omega_{16} - 3cs^2\omega_{10})\frac{\delta_l^4 v_3 v_2}{4\delta_t\omega_{16}\omega_{10}}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} +$$

$$(3v_2^2\omega_{16} - 3v_2^2\omega_{10} - \omega_{16} + \omega_{10} + cs^2\omega_{16} - cs^2\omega_{10})\frac{\rho\delta_l^4 v_3}{4\delta_t\omega_{16}\omega_{10}}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} + (-3cs^2\omega_{10}\omega_7 - 3v_2^2\omega_{10}\omega_7 + 3cs^2\omega_{16}\omega_{10}\omega_7 +$$

$$v_2^2\omega_{16}\omega_{10}\omega_7 + 3cs^2\omega_{16}\omega_7 + v_2^2\omega_{16}\omega_7 + 3\omega_{10}\omega_7 - \omega_{16}\omega_7 - 6cs^2\omega_{16}\omega_{10} - \omega_{16}\omega_{10}\omega_7)\frac{\rho\delta_l^4 v_2}{12\delta_t\omega_{16}\omega_{10}\omega_7}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} +$$

$$(-2 + \omega_6)\frac{cs^4\delta_l^4}{6\omega_6\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} + (\omega_6 - \omega_{13})\frac{cs^2\rho v_1\delta_l^4}{2\omega_6\delta_t\omega_{13}}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} + (-\omega_{18} + \omega_6)\frac{cs^2\rho\delta_l^4 v_3}{2\omega_{18}\omega_6\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} + (-\omega_8 + \omega_6)\frac{cs^2\rho\delta_l^4 v_2}{2\omega_8\omega_6\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2}$$

$$+ (-\omega_8 + \omega_7)\frac{cs^2\rho v_1\delta_l^4}{2\omega_8\delta_t\omega_7}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} + (-2 + \omega_7)\frac{cs^4\delta_l^4}{6\delta_t\omega_7}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} + (-\omega_{16} + \omega_7)\frac{cs^2\rho\delta_l^4 v_2}{2\delta_t\omega_{16}\omega_7}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} +$$

$$(-\omega_{19} + \omega_7)\frac{cs^2\rho\delta_l^4 v_3}{2\omega_{19}\delta_t\omega_7}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} + (\omega_{18}v_3^2 + \omega_{11} - 3cs^2\omega_{11} - \omega_{18} + 3cs^2\omega_{18} - \omega_{11}v_3^2)\frac{v_1\delta_l^4 v_3}{4\omega_{11}\omega_{18}\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_3^3} +$$

$$(\omega_{18}\omega_6 v_3^2 - \omega_{18}\omega_6 - \omega_{11}\omega_{18}\omega_6 + \omega_{11}\omega_{18}\omega_6 v_3^2 + 3cs^2\omega_{18}\omega_6 - 6cs^2\omega_{11}\omega_{18} + 3cs^2\omega_{11}\omega_{18}\omega_6 - 3cs^2\omega_{11}\omega_6 -$$

$$3\omega_{11}\omega_6 v_3^2 + 3\omega_{11}\omega_6)\frac{\rho\delta_l^4 v_3}{12\omega_{11}\omega_{18}\omega_6\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + (3\omega_{18}v_3^2 + \omega_{11} - cs^2\omega_{11} - \omega_{18} + cs^2\omega_{18} - 3\omega_{11}v_3^2)\frac{\rho v_1\delta_l^4}{4\omega_{11}\omega_{18}\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_3^3} +$$

$$(3cs^2\omega_{19} + \omega_{11} - 3cs^2\omega_{11} - \omega_{19} + v_3^2\omega_{19} - \omega_{11}v_3^2)\frac{\delta_l^4 v_3 v_2}{4\omega_{11}\omega_{19}\delta_t}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} + (3\omega_{11}\omega_7 - 3\omega_{11}v_3^2\omega_7 + 3cs^2\omega_{11}\omega_{19}\omega_7 -$$

$$3cs^2\omega_{11}\omega_7 + v_3^2\omega_{19}\omega_7 - \omega_{11}\omega_{19}\omega_7 + \omega_{11}v_3^2\omega_{19}\omega_7 - \omega_{19}\omega_7 - 6cs^2\omega_{11}\omega_{19} + 3cs^2\omega_{19}\omega_7)\frac{\rho\delta_l^4 v_3}{12\omega_{11}\omega_{19}\delta_t\omega_7}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} +$$

$$(cs^2\omega_{19} + \omega_{11} - cs^2\omega_{11} - \omega_{19} + 3v_3^2\omega_{19} - 3\omega_{11}v_3^2)\frac{\rho\delta_l^4 v_2}{4\omega_{11}\omega_{19}\delta_t}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} +$$

$$(-3\omega_{11}v_3^4 - 2cs^2 + cs^2\omega_{11} + 24cs^2 v_3^2 - 6v_3^2 + 6v_3^4 - 12cs^2\omega_{11}v_3^2 + 3\omega_{11}v_3^2 - cs^4\omega_{11} + 2cs^4)\frac{\delta_l^4}{24\omega_{11}\delta_t}\frac{\partial^4\rho}{\partial x_3^4} +$$

$$(-4 + 2\omega_{11} + 6cs^2 - 3cs^2\omega_{11} + 10v_3^2 - 5\omega_{11}v_3^2)\frac{\rho\delta_l^4 v_3}{12\omega_{11}\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0.$$

2.3.3 Conservation of momentum: ρv_1

📎 attached text file: `output_d3q27_nse_mrt2_symbolic_pde_01.txt`

$$v_1\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_1}{\partial t} + (cs^2 + v_1^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{2\rho v_1\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_1\delta_l v_2}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{\rho\delta_l v_2}{\delta_t}\frac{\partial v_1}{\partial x_2} + \frac{\rho v_1\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{v_1\delta_l v_3}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{\rho\delta_l v_3}{\delta_t}\frac{\partial v_1}{\partial x_3} +$$

$$\frac{\rho v_1\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 + 4cs^2 - 2cs^2\omega_9 + \omega_9 + 6v_1^2 - 3v_1^2\omega_9)\frac{\delta_l^2}{\omega_9\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} + (2 - \omega_9)\frac{3\rho v_1\delta_l^2}{\omega_9\delta_t}\left(\frac{\partial v_1}{\partial x_1}\right)^2 +$$

$$(-2 + \omega_5)\frac{cs^2\delta_l^2}{2\omega_5\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} + (-2 + \omega_5)\frac{cs^2\delta_l^2}{2\omega_5\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_1}{\partial x_2} + (-2 + \omega_6)\frac{cs^2\delta_l^2}{2\omega_6\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_1} + (-2 + \omega_6)\frac{cs^2\delta_l^2}{2\omega_6\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_3} +$$

$$(-2 + 6cs^2 - 3cs^2\omega_9 + \omega_9 + 2v_1^2 - v_1^2\omega_9)\frac{v_1\delta_l^2}{2\omega_9\delta_t}\frac{\partial^2\rho}{\partial x_1^2} + (-2 + 2cs^2 - cs^2\omega_9 + \omega_9 + 6v_1^2 - 3v_1^2\omega_9)\frac{\rho\delta_l^2}{2\omega_9\delta_t}\frac{\partial^2 v_1}{\partial x_1^2} +$$

$$(-2 + \omega_5)\frac{cs^2\rho\delta_l^2}{2\omega_5\delta_t}\frac{\partial^2 v_2}{\partial x_1\partial x_2} + (-2 + \omega_5)\frac{cs^2\rho\delta_l^2}{2\omega_5\delta_t}\frac{\partial^2 v_1}{\partial x_2^2} + (-2 + \omega_6)\frac{cs^2\rho\delta_l^2}{2\omega_6\delta_t}\frac{\partial^2 v_3}{\partial x_1\partial x_3} + (-2 + \omega_6)\frac{cs^2\rho\delta_l^2}{2\omega_6\delta_t}\frac{\partial^2 v_1}{\partial x_3^2} + C_1\frac{\delta_l^3}{12\omega_9^2\delta_t}\frac{\partial^3\rho}{\partial x_1^3}$$

$$+ (-24 + 5cs^2\omega_9^2 + 36cs^2 - 36cs^2\omega_9 + 24\omega_9 + 60v_1^2 + 11v_1^2\omega_9^2 - 4\omega_9^2 - 60v_1^2\omega_9)\frac{\rho v_1\delta_l^3}{6\omega_9^2\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_2\frac{v_1\delta_l^3 v_2}{\omega_5\omega_9^2\omega_{12}\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} +$$

$$C_3\frac{\rho\delta_l^3 v_2}{\omega_5\omega_9^2\omega_{12}\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_2} + C_4\frac{\rho v_1\delta_l^3}{12\omega_5^2\omega_9^2\omega_{12}\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} + (-12 + 12\omega_5 - \omega_5^2)\frac{cs^4\delta_l^3}{6\omega_5^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2^2} +$$

$$(12\omega_5\omega_9 - 12\omega_9\omega_{12} - \omega_5^2\omega_9\omega_{12} - 12\omega_5\omega_{12} + 12\omega_5\omega_9\omega_{12} - 12\omega_5^2\omega_9 + 12\omega_5^2)\frac{cs^2\rho v_1\delta_l^3}{6\omega_5^2\omega_9\omega_{12}\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} +$$

$$(2\omega_5 + \omega_5\omega_{15} - 2\omega_{15} - \omega_5^2)\frac{cs^2\rho\delta_l^3 v_2}{\omega_5^2\omega_{15}\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2^2} \;+\; C_5\frac{v_1\delta_l^3 v_2}{12\omega_5\omega_{15}\delta_t\omega_{10}}\frac{\partial^3\rho}{\partial x_2^3} \;+\; C_6\frac{\rho\delta_l^3 v_2}{6\omega_5^2\omega_{15}\delta_t}\frac{\partial^3 v_1}{\partial x_2^3} \;+\; C_7\frac{\rho v_1\delta_l^3}{12\omega_5\omega_{15}\delta_t\omega_{10}}\frac{\partial^3 v_2}{\partial x_2^3} \;+$$

$$C_8\frac{v_1\delta_l^3 v_3}{\omega_9^2\omega_6\delta_t\omega_{13}}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} \;+\; C_9\frac{\rho\delta_l^3 v_3}{\omega_9^2\omega_6\delta_t\omega_{13}}\frac{\partial^3 v_1}{\partial x_1^2\partial x_3} \;+\; C_{10}\frac{\rho v_1\delta_l^3}{12\omega_9^2\omega_6^2\delta_t\omega_{13}}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} \;+$$

$$(-\omega_8\omega_6 - \omega_5^2\omega_6 + \omega_5\omega_6 + \omega_5^2 + \omega_8\omega_5\omega_6 - \omega_8\omega_5)\frac{cs^2\rho\delta_l^3 v_3}{\omega_8\omega_5^2\omega_6\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2\partial x_3} \;+$$

$$(\omega_6^2 - \omega_8\omega_6 + \omega_5\omega_6 - \omega_5\omega_6^2 + \omega_8\omega_5\omega_6 - \omega_8\omega_5)\frac{cs^2\rho\delta_l^3 v_2}{\omega_8\omega_5\omega_6^2\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_2\partial x_3} \;+$$

$$(-\omega_8\omega_6 - \omega_5^2\omega_6 + \omega_5\omega_6 + \omega_5^2 + \omega_8\omega_5\omega_6 - \omega_8\omega_5)\frac{cs^2\rho\delta_l^3 v_3}{\omega_8\omega_5^2\omega_6\delta_t}\frac{\partial^3 v_1}{\partial x_2^2\partial x_3} \;+$$

$$(-\omega_8\omega_5\omega_6\omega_7 + 6\omega_6\omega_7 - 6\omega_8\omega_6 + 6\omega_5\omega_7 - 6\omega_5\omega_6\omega_7 + 6\omega_8\omega_5\omega_6 - 6\omega_8\omega_5)\frac{cs^2\rho v_1\delta_l^3}{6\omega_8\omega_5\omega_6\delta_t\omega_7}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} \;+$$

$$(-12 - \omega_6^2 + 12\omega_6)\frac{cs^4\delta_l^3}{6\omega_6^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} \;+$$

$$(-12\omega_9\omega_6^2 + 12\omega_6^2 - 12\omega_6\omega_{13} + 12\omega_9\omega_6\omega_{13} + 12\omega_9\omega_6 - \omega_9\omega_6^2\omega_{13} - 12\omega_9\omega_{13})\frac{cs^2\rho v_1\delta_l^3}{6\omega_9\omega_6^2\delta_t\omega_{13}}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} \;+$$

$$(\omega_{18}\omega_6 - \omega_6^2 - 2\omega_{18} + 2\omega_6)\frac{cs^2\rho\delta_l^3 v_3}{\omega_{18}\omega_6^2\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_3^2} \;+\; (\omega_6^2 - \omega_8\omega_6 + \omega_5\omega_6 - \omega_5\omega_6^2 + \omega_8\omega_5\omega_6 - \omega_8\omega_5)\frac{cs^2\rho\delta_l^3 v_2}{\omega_8\omega_5\omega_6^2\delta_t}\frac{\partial^3 v_1}{\partial x_2\partial x_3^2} \;+$$

$$(-\omega_8\omega_5\omega_6\omega_7 + 6\omega_6\omega_7 - 6\omega_8\omega_6 + 6\omega_5\omega_7 - 6\omega_5\omega_6\omega_7 + 6\omega_8\omega_5\omega_6 - 6\omega_8\omega_5)\frac{cs^2\rho v_1\delta_l^3}{6\omega_8\omega_5\omega_6\delta_t\omega_7}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} \;+$$

$$C_{11}\frac{v_1\delta_l^3 v_3}{12\omega_{11}\omega_{18}\omega_6\delta_t}\frac{\partial^3\rho}{\partial x_3^3} \;+\; C_{12}\frac{\rho\delta_l^3 v_3}{6\omega_{18}\omega_6^2\delta_t}\frac{\partial^3 v_1}{\partial x_3^3} \;+\; C_{13}\frac{\rho v_1\delta_l^3}{12\omega_{11}\omega_{18}\omega_6\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} \;+\; C_{14}\frac{v_1\delta_l^4}{12\omega_9^3\delta_t}\frac{\partial^4\rho}{\partial x_1^4} \;+\; C_{15}\frac{\rho\delta_l^4}{12\omega_9^3\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} \;+$$

$$C_{16}\frac{\delta_l^4 v_2}{4\omega_5^2\omega_9^3\omega_{12}^2\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} \;+\; C_{17}\frac{\rho v_1\delta_l^4 v_2}{4\omega_5^2\omega_9^3\omega_{12}^2\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} \;+\; C_{18}\frac{\rho\delta_l^4}{12\omega_5^3\omega_9^3\omega_{12}^2\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} \;+\; C_{19}\frac{v_1\delta_l^4}{12\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} \;+$$

$$C_{20}\frac{\rho\delta_l^4}{12\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} \;+\; C_{21}\frac{\rho v_1\delta_l^4 v_2}{2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2\delta_t\omega_{10}}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} \;+\; C_{22}\frac{\delta_l^4 v_2}{12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\delta_t\omega_{10}}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} \;+$$

$$C_{23}\frac{\rho v_1\delta_l^4 v_2}{12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\delta_t\omega_{10}^2}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} \;+\; C_{24}\frac{\rho\delta_l^4}{12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\delta_t\omega_{10}^2}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} \;+\; C_{25}\frac{v_1\delta_l^4}{24\omega_5^3\omega_{15}^2\delta_t\omega_{10}^2}\frac{\partial^4\rho}{\partial x_2^4} \;+\; C_{26}\frac{\rho\delta_l^4}{24\omega_5^3\omega_{15}^2\delta_t}\frac{\partial^4 v_1}{\partial x_2^4} \;+$$

$$C_{27}\frac{\rho v_1\delta_l^4 v_2}{12\omega_5^2\omega_{15}^2\delta_t\omega_{10}^2}\frac{\partial^4 v_2}{\partial x_2^4} \;+\; C_{28}\frac{\delta_l^4 v_3}{4\omega_9^3\omega_6^2\delta_t\omega_{13}^2}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} \;+\; C_{29}\frac{\rho v_1\delta_l^4 v_3}{4\omega_9^3\omega_6^2\delta_t\omega_{13}^2}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} \;+\; C_{30}\frac{\rho\delta_l^4}{12\omega_9^3\omega_6^3\delta_t\omega_{13}^2}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} \;+$$

$$C_{31}\frac{v_1\delta_l^4 v_3 v_2}{\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\delta_t\omega_{13}^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} \;+\; C_{32}\frac{\rho\delta_l^4 v_3 v_2}{\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\delta_t\omega_{13}^2}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} \;+\; C_{33}\frac{\rho v_1\delta_l^4 v_3}{2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^3\delta_t\omega_{13}^2\omega_7}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} \;+$$

$$C_{34}\frac{\rho v_1\delta_l^4 v_2}{2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}^2\delta_t\omega_{13}^2\omega_7}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} \;+\; C_{35}\frac{2cs^4\delta_l^4 v_3}{\omega_8^2\omega_5^3\omega_6^2\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} \;+\; C_{36}\frac{cs^2\rho v_1\delta_l^4 v_3}{2\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}^2\omega_6^2\delta_t\omega_{13}\omega_7}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} \;+$$

$$C_{37}\frac{cs^2\rho\delta_l^4 v_3 v_2}{\omega_{17}\omega_8^2\omega_5^3\omega_{15}^2\omega_6^2\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3} \;+\; C_{38}\frac{cs^2\rho\delta_l^4}{12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\delta_t\omega_{13}\omega_7^2}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} \;+\; C_{39}\frac{v_1\delta_l^4 v_3 v_2}{4\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\delta_t\omega_{16}\omega_{10}^2\omega_7}\frac{\partial^4\rho}{\partial x_2^2\partial x_3} \;+$$

$$+\; C_{40}\frac{\rho\delta_l^4 v_3 v_2}{2\omega_{17}\omega_8^2\omega_5^3\omega_{15}^2\omega_6^2\delta_t}\frac{\partial^4 v_1}{\partial x_2^3\partial x_3} \;+\; C_{41}\frac{\rho v_1\delta_l^4 v_3}{4\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\delta_t\omega_{16}\omega_{10}^2\omega_7}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} \;+\; C_{42}\frac{\rho v_1\delta_l^4 v_2}{12\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6^2\delta_t\omega_{16}\omega_{10}^2\omega_7}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} \;+$$

$$C_{43}\frac{v_1\delta_l^4}{12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\delta_t\omega_{13}^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} \;+\; C_{44}\frac{\rho\delta_l^4}{12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\delta_t\omega_{13}^2}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} \;+\; C_{45}\frac{\rho v_1\delta_l^4 v_3}{2\omega_{11}\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\delta_t\omega_{13}^2}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} \;+$$

$$C_{46}\frac{\delta_l^4}{2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\delta_t\omega_{13}}\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2} \;+\; C_{47}\frac{\rho\delta_l^4}{2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}\delta_t\omega_{13}^2\omega_7}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2} \;+$$

$$C_{48}\frac{\rho\delta_l^4}{12\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\delta_t\omega_{13}\omega_7^2}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} \;+\; C_{49}\frac{\rho\delta_l^4 v_3}{\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\delta_t\omega_{13}}\frac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2} \;+$$

$$C_{50}\frac{\delta_l^4}{12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2\delta_t\omega_7^2}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} \;+\; C_{51}\frac{\rho\delta_l^4}{4\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3\delta_t}\frac{\partial^4 v_1}{\partial x_2^2\partial x_3^2} \;+$$

$$C_{52}\frac{\rho\delta_l^4 v_2}{2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2\delta_t\omega_{16}\omega_{10}^2\omega_7^2}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} \;+\; C_{53}\frac{\rho\delta_l^4}{4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\delta_t\omega_7^2}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} \;+$$

$$C_{54}\frac{\delta_l^4 v_3}{12\omega_{11}^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\delta_t\omega_{13}}\frac{\partial^4\rho}{\partial x_1\partial x_3^3} \;+\; C_{55}\frac{\rho v_1\delta_l^4 v_3}{12\omega_{11}^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\delta_t\omega_{13}^2}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} \;+\; C_{56}\frac{\rho\delta_l^4}{12\omega_{11}^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\delta_t\omega_{13}}\frac{\partial^4 v_3}{\partial x_1\partial x_3^3} \;+$$

$$C_{57}\frac{v_1\delta_l^4 v_3 v_2}{4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}\delta_t\omega_7}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} \;+\; C_{58}\frac{\rho\delta_l^4 v_3 v_2}{2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_6^3\delta_t}\frac{\partial^4 v_1}{\partial x_2\partial x_3^3} \;+\; C_{59}\frac{\rho v_1\delta_l^4 v_3}{12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\delta_t\omega_7^2}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} \;+$$

$$C_{60}\frac{\rho v_1\delta_l^4 v_2}{4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}\delta_t\omega_7}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} \;+\; C_{61}\frac{v_1\delta_l^4}{24\omega_{11}^2\omega_{18}^2\omega_6^2\delta_t}\frac{\partial^4\rho}{\partial x_3^4} \;+\; C_{62}\frac{\rho\delta_l^4}{24\omega_{18}^2\omega_6^3\delta_t}\frac{\partial^4 v_1}{\partial x_3^4} \;+\; C_{63}\frac{\rho v_1\delta_l^4 v_3}{12\omega_{11}^2\omega_{18}^2\omega_6^2\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$$C_1 = 7v_1^4\omega_9^2 - cs^2\omega_9^2 + 24cs^2 v_1^2\omega_9^2 - 144cs^2 v_1^2\omega_9 + 144cs^2 v_1^2 - 12cs^2 + 36v_1^4 - 36v_1^4\omega_9 + 12cs^2\omega_9 + 12cs^4 - 36v_1^2 - 7v_1^2\omega_9^2 + cs^4\omega_9^2 + 36v_1^2\omega_9 - 12cs^4\omega_9$$

$$C_2 = -3cs^2\omega_9^2 - \omega_5 v_1^2\omega_9 + 3cs^2\omega_5\omega_{12} - \omega_5\omega_9^2 + \omega_5\omega_9 - \omega_9\omega_{12} + \omega_5 v_1^2\omega_9^2 - \omega_5 v_1^2\omega_9\omega_{12} - 3cs^2\omega_5\omega_9\omega_{12} + v_1^2\omega_9\omega_{12} - v_1^2\omega_9^2 - \omega_5\omega_{12} + \omega_5\omega_9\omega_{12} + 3cs^2\omega_5\omega_9^2 + \omega_5 v_1^2\omega_{12} + 3cs^2\omega_9\omega_{12} + \omega_9^2 - 3cs^2\omega_5\omega_9$$

$$C_3 = -cs^2\omega_9^2 - 3\omega_5 v_1^2\omega_9 + cs^2\omega_5\omega_{12} - \omega_5\omega_9^2 + \omega_5\omega_9 - \omega_9\omega_{12} + 3\omega_5 v_1^2\omega_9^2 - 3\omega_5 v_1^2\omega_9\omega_{12} - cs^2\omega_5\omega_9\omega_{12} + 3v_1^2\omega_9\omega_{12} - 3v_1^2\omega_9^2 - \omega_5\omega_{12} + \omega_5\omega_9\omega_{12} + cs^2\omega_5\omega_9^2 + 3\omega_5 v_1^2\omega_{12} + cs^2\omega_9\omega_{12} + \omega_9^2 - cs^2\omega_5\omega_9$$

$C_4 = 12\omega_5^2 v_1^2\omega_{12} - 3\omega_5^2 v_1^2\omega_9^2\omega_{12} - 24cs^2\omega_9^2\omega_{12} + 12\omega_5\omega_9^2 - 12cs^2\omega_5^2\omega_9 - 12\omega_5^2\omega_{12} + 12cs^2\omega_5^2\omega_9 - 18cs^2\omega_5^2\omega_9\omega_{12} - 6\omega_5\omega_9^2\omega_{12} - 12\omega_5 v_1^2\omega_9^2 + 6\omega_5^2\omega_9\omega_{12} + 42cs^2\omega_5\omega_9^2\omega_{12} - 24cs^2\omega_5\omega_9\omega_{12} + 6\omega_5 v_1^2\omega_9^2\omega_{12} + 3\omega_5^2\omega_9^2\omega_{12} + 12\omega_5^2 v_1^2\omega_9 - 11cs^2\omega_5^2\omega_9^2\omega_{12} - 12cs^2\omega_5\omega_9^2 + 12\omega_5^2\omega_9 + 36cs^2\omega_5^2\omega_{12} - 12\omega_5^2\omega_9^2 - 12\omega_5^2 v_1^2\omega_9 - 6\omega_5^2 v_1^2\omega_9\omega_{12}$

$C_5 = -\omega_5\omega_{15}\omega_{10} - 36cs^2\omega_{10} - 6\omega_5\omega_{10} + 3cs^2\omega_5\omega_{15}\omega_{10} + 12\omega_{15}v_2^2 + 6\omega_5\omega_{15} + 36cs^2\omega_{15} - 12\omega_{15} - 12v_2^2\omega_{10} + 6\omega_5 v_2^2\omega_{10} - 6\omega_5\omega_{15}v_2^2 + 18cs^2\omega_5\omega_{10} - 18cs^2\omega_5\omega_{15} + 12\omega_{10} + \omega_5\omega_{15}v_2^2\omega_{10}$

$C_6 = -6cs^2\omega_5 - 3cs^2\omega_5^2\omega_{15} + 6\omega_5 - 3\omega_5\omega_{15} - 12cs^2\omega_{15} + 3cs^2\omega_5^2 + 3\omega_5^2 v_2^2 - \omega_5^2\omega_{15}v_2^2 - 6\omega_5 v_2^2 + 3\omega_5\omega_{15}v_2^2 - 3\omega_5^2 + \omega_5^2\omega_{15} + 15cs^2\omega_5\omega_{15}$

$C_7 = -\omega_5\omega_{15}\omega_{10} - 12cs^2\omega_{10} - 6\omega_5\omega_{10} + cs^2\omega_5\omega_{15}\omega_{10} + 36\omega_{15}v_2^2 + 6\omega_5\omega_{15} + 12cs^2\omega_{15} - 12\omega_{15} - 36v_2^2\omega_{10} + 18\omega_5 v_2^2\omega_{10} - 18\omega_5\omega_{15}v_2^2 + 6cs^2\omega_5\omega_{10} - 6cs^2\omega_5\omega_{15} + 12\omega_{10} + 3\omega_5\omega_{15}v_2^2\omega_{10}$

$C_8 = -3cs^2\omega_9^2 + 3cs^2\omega_9^2\omega_6 + v_1^2\omega_9\omega_{13} - \omega_6\omega_{13} + v_1^2\omega_9^2\omega_6 + \omega_9\omega_6\omega_{13} + \omega_9\omega_6 + 3cs^2\omega_9\omega_{13} - 3cs^2\omega_9\omega_6\omega_{13} - \omega_9^2\omega_6 + v_1^2\omega_6\omega_{13} - v_1^2\omega_9^2 - v_1^2\omega_9\omega_6 + \omega_9^2 - v_1^2\omega_9\omega_6\omega_{13} + 3cs^2\omega_6\omega_{13} - 3cs^2\omega_9\omega_6 - \omega_9\omega_{13}$

$C_9 = -cs^2\omega_9^2 + cs^2\omega_9^2\omega_6 + 3v_1^2\omega_9\omega_{13} - \omega_6\omega_{13} + 3v_1^2\omega_9^2\omega_6 + \omega_9\omega_6\omega_{13} + \omega_9\omega_6 + cs^2\omega_9\omega_{13} - cs^2\omega_9\omega_6\omega_{13} - \omega_9^2\omega_6 + 3v_1^2\omega_6\omega_{13} - 3v_1^2\omega_9^2 - 3v_1^2\omega_9\omega_6 + \omega_9^2 - 3v_1^2\omega_9\omega_6\omega_{13} + cs^2\omega_6\omega_{13} - cs^2\omega_9\omega_6 - \omega_9\omega_{13}$

$C_{10} = 6v_1^2\omega_9\omega_6\omega_{13} + 12\omega_9\omega_6^2 - 12cs^2\omega_9^2\omega_6 - 6v_1^2\omega_9\omega_6^2\omega_{13} + 36cs^2\omega_6^2\omega_{13} + 12v_1^2\omega_9^2\omega_6^2 - 12v_1^2\omega_9^2\omega_6 - 11cs^2\omega_9^2\omega_6^2\omega_{13} + 12cs^2\omega_9^2\omega_6^2 + 12v_1^2\omega_6^2\omega_{13} + 3\omega_9^2\omega_6^2\omega_{13} - 24cs^2\omega_9\omega_6\omega_{13} - 12cs^2\omega_9\omega_6^2 + 12\omega_9^2\omega_6 - 24cs^2\omega_9^2\omega_{13} - 18cs^2\omega_9\omega_6^2\omega_{13} - 6\omega_9^2\omega_6\omega_{13} - 12\omega_6^2\omega_{13} + 6\omega_9\omega_6^2\omega_{13} + 42cs^2\omega_9^2\omega_6\omega_{13} - 12v_1^2\omega_9\omega_6^2 - 3v_1^2\omega_9^2\omega_6^2\omega_{13} - 12\omega_9\omega_6^2$

$C_{11} = -6\omega_{18}\omega_6 v_3^2 + 6\omega_{18}\omega_6 - \omega_{11}\omega_{18}\omega_6 + 12\omega_{18}v_3^2 + 12\omega_{11} + \omega_{11}\omega_{18}\omega_6 v_3^2 + 36cs^2\omega_{18} - 12\omega_{18} - 18cs^2\omega_{18}\omega_6 + 18\omega_{11}cs^2\omega_6 + 3\omega_{11}cs^2\omega_{18}\omega_6 + 6\omega_{11}\omega_6 v_3^2 - 36\omega_{11}cs^2 - 6\omega_{11}\omega_6 - 12\omega_{11}v_3^2$

$C_{12} = 3\omega_{18}\omega_6 v_3^2 - 3\omega_{18}\omega_6 - 3\omega_6^2 + 3\omega_6^2 v_3^2 - 12cs^2\omega_{18} + \omega_{18}\omega_6^2 + 6\omega_6 + 15cs^2\omega_{18}\omega_6 - 6cs^2\omega_6 - 6\omega_6 v_3^2 + 3cs^2\omega_6^2 - \omega_{18}\omega_6^2 v_3^2 - 3cs^2\omega_{18}\omega_6^2$

$C_{13} = -18\omega_{18}\omega_6 v_3^2 + 6\omega_{18}\omega_6 - \omega_{11}\omega_{18}\omega_6 + 36\omega_{18}v_3^2 + 12\omega_{11} + 3\omega_{11}\omega_{18}\omega_6 v_3^2 + 12cs^2\omega_{18} - 12\omega_{18} - 6cs^2\omega_{18}\omega_6 + 6\omega_{11}cs^2\omega_6 + \omega_{11}cs^2\omega_{18}\omega_6 + 18\omega_{11}\omega_6 v_3^2 - 12\omega_{11}cs^2 - 6\omega_{11}\omega_6 - 36\omega_{11}v_3^2$

$C_{14} = 12 + 90v_1^4\omega_9^2 - 78cs^2\omega_9^2 - 34cs^2 v_1^2\omega_9^3 + 6cs^2\omega_9^3 - 9v_1^4\omega_9^3 + 404cs^2 v_1^2\omega_9^2 - 1008cs^2 v_1^2\omega_9 + 672cs^2 v_1^2 - 132cs^2 + 144v_1^4 - 216v_1^4\omega_9 + 198cs^2\omega_9 - 18\omega_9 + 144cs^4 - 5cs^4\omega_9^3 - 156v_1^2 + 10v_1^2\omega_9^3 - 98v_1^2\omega_9^2 + 82cs^4\omega_9^2 + 8\omega_9^2 + 234v_1^2\omega_9 - 216cs^4\omega_9 - \omega_9^3$

$C_{15} = 12 + 310v_1^4\omega_9^2 - 22cs^2\omega_9^2 - 18cs^2 v_1^2\omega_9^3 + 2cs^2\omega_9^3 - 29v_1^4\omega_9^3 + 252cs^2 v_1^2\omega_9^2 - 648cs^2 v_1^2\omega_9 + 432cs^2 v_1^2 - 36cs^2 + 504v_1^4 - 756v_1^4\omega_9 + 54cs^2\omega_9 - 18\omega_9 + 24cs^4 - cs^4\omega_9^3 - 252v_1^2 + 14v_1^2\omega_9^3 - 154v_1^2\omega_9^2 + 14cs^4\omega_9^2 + 8\omega_9^2 + 378v_1^2\omega_9 - 36cs^4\omega_9 - \omega_9^3$

$C_{16} = -13\omega_5^2 v_1^4\omega_9^3\omega_{12} - 36cs^2 v_1^2\omega_9^3\omega_{12} - 8v_1^2\omega_9^2\omega_{12}^2 - 4cs^4\omega_5^2\omega_9 + 4cs^4\omega_9^2\omega_{12}^2 - 51cs^2\omega_5^2 v_1^2\omega_9^3\omega_{12} + 8cs^2\omega_5\omega_9^2\omega_{12}^2 - 20\omega_5 v_1^2\omega_9\omega_{12}^2 - 32\omega_5^2 v_1^2\omega_9^2\omega_{12} + 4\omega_5^2 v_1^4\omega_9^3 + 36cs^2 v_1^2\omega_9^2\omega_{12} + 8v_1^2\omega_9^3\omega_{12} + 8cs^4\omega_5^2\omega_9^2\omega_{12} + 4cs^4\omega_5^2\omega_9^3 + 13\omega_5^2 v_1^4\omega_9^2\omega_{12} - 4\omega_5^2 v_1^4\omega_9^2 - 4cs^4\omega_9^3\omega_{12} + 51cs^2\omega_5^2 v_1^2\omega_9^2\omega_{12} - 8cs^2\omega_5\omega_9^3\omega_{12} + 12cs^2\omega_5^2 v_1^2\omega_9\omega_{12} + 13\omega_5^3 v_1^2\omega_9^3\omega_{12} + 72cs^2\omega_5 v_1^2\omega_9\omega_{12}^2 + 120cs^2\omega_5 v_1^2\omega_9^2\omega_{12} + 4cs^2\omega_5^2\omega_9^2 + 8v_1^4\omega_9^3\omega_{12} + 4cs^4\omega_5^2\omega_9\omega_{12} + 20\omega_5 v_1^4\omega_9\omega_{12}^2 + 4cs^4\omega_5^3\omega_9\omega_{12}^2 - 4cs^2\omega_9^2\omega_{12}^2 + 96cs^2\omega_5 v_1^2\omega_{12}^2 - 24cs^2\omega_5 v_1^2\omega_9^3 + 32\omega_5 v_1^4\omega_9^2\omega_{12} - 8v_1^4\omega_9^3\omega_{12} - 4cs^2\omega_5^2\omega_9^3 - 13\omega_5^3 v_1^2\omega_9^2\omega_{12} + 4\omega_5 v_1^4\omega_9^3 + 4cs^4\omega_5\omega_9\omega_{12} + 4cs^4\omega_5^3\omega_9\omega_{12}^2 - 4cs^2\omega_5^3\omega_9\omega_{12} + 4cs^2\omega_9^3\omega_{12} - 24\omega_5 v_1^2\omega_{12}^2 + 16\omega_5 v_1^2\omega_9^2\omega_{12} + 4cs^2\omega_5\omega_9^3 + 84cs^2\omega_5 v_1^2\omega_9^3\omega_{12} + 36\omega_5^2 v_1^2\omega_9\omega_{12}^2 + 4\omega_5^2 v_1^2\omega_9^2 + 24cs^2\omega_5 v_1^2\omega_9^3 + 20\omega_5 v_1^4\omega_9^3\omega_{12} - 8cs^4\omega_5\omega_9^2\omega_{12}^2 - 84cs^2\omega_5 v_1^2\omega_9^2\omega_{12} - 8cs^2\omega_5^2\omega_{12} - 8cs^2\omega_5^2\omega_9^2\omega_{12} - 72cs^2\omega_5^2 v_1^2\omega_9\omega_{12} - 12cs^4\omega_5\omega_9\omega_{12}^2 + 8cs^4\omega_5\omega_9^3\omega_{12} - 20\omega_5 v_1^4\omega_9^2\omega_{12} - 20\omega_5^2 v_1^4\omega_9\omega_{12} - 24cs^2\omega_5^2 v_1^2\omega_9 - 4\omega_5^2 v_1^4\omega_9^3 - 4cs^4\omega_5\omega_9^3 - 16\omega_5 v_1^4\omega_9^3\omega_{12} - 4cs^2\omega_5^2\omega_9\omega_{12} - 36\omega_5^2 v_1^4\omega_9\omega_{12} - 4\omega_5 v_1^4\omega_9^3 - 48cs^2\omega_5 v_1^2\omega_9^2\omega_{12} - 4cs^2\omega_5^2\omega_9^2\omega_{12} - 20\omega_5 v_1^2\omega_9^3\omega_{12} + 24cs^2 v_1^4\omega_{12}^2 - 144cs^2\omega_5^2 v_1^2\omega_9\omega_{12} + 8cs^4\omega_5^2\omega_{12} + 4cs^2\omega_5^2\omega_9^3\omega_{12} - 4cs^2\omega_5\omega_9\omega_{12}^2 + 20\omega_5 v_1^2\omega_9^2\omega_{12} + 20\omega_5^2 v_1\omega_9\omega_{12}$

$C_{17} = 28v_1^2\omega_9^2\omega_{12} + 8\omega_5\omega_9^3 - 44cs^2\omega_5\omega_9^2\omega_{12}^2 + 64\omega_5 v_1^2\omega_9\omega_{12}^2 - 28\omega_5\omega_9^3\omega_{12} + 48\omega_5\omega_9^2\omega_{12} + 104\omega_5^2 v_1^2\omega_9\omega_{12} - 28v_1^2\omega_9^3\omega_{12} - 32\omega_5^2\omega_{12}^2 + 44cs^2\omega_5\omega_9^3\omega_{12} + 28\omega_5\omega_9^2\omega_{12} - 72cs^2\omega_5\omega_9^2\omega_{12} - 43\omega_5^2 v_1^2\omega_9^3\omega_{12} - 16cs^2\omega_5^2\omega_9 - 32cs^2\omega_5^2\omega_9\omega_{12} + 16\omega_5\omega_9^2\omega_{12} + 20cs^2\omega_9^2\omega_{12} + 24cs^2\omega_5\omega_9\omega_{12} - 16cs^2\omega_5\omega_9^2\omega_{12} + 16cs^2\omega_5^2\omega_9^3 + 43\omega_5^2 v_1^2\omega_9^2\omega_{12} - 16\omega_5 v_1^2\omega_9^3 - 20cs^2\omega_9^3\omega_{12} + 80\omega_5^2 v_1^2\omega_{12} - 48v_1^2\omega_5\omega_9^2\omega_{12} - 16cs^2\omega_5\omega_9^3 - 40\omega_5^2\omega_9^2\omega_{12} - 120\omega_5^2 v_1^2\omega_9\omega_{12}^2 - 16\omega_5^2 v_1^2\omega_9 + 48cs^2\omega_5^2\omega_{12} + 56cs^2\omega_5^2\omega_9^2\omega_{12} + 16\omega_5 v_1^2\omega_9^3 - 12\omega_9^2\omega_{12} + 17\omega_5^2\omega_9^3\omega_{12} + 25cs^2\omega_5^2\omega_9^2\omega_{12} + 68\omega_5 v_1^2\omega_9^3\omega_{12} - 24\omega_5\omega_9\omega_{12}^2 + 8\omega_5^2\omega_9 + 12\omega_9^3\omega_{12} - 17\omega_5^2\omega_9^2\omega_{12} - 25cs^2\omega_5^2\omega_9^3\omega_{12} + 32cs^2\omega_5\omega_9\omega_{12}^2 - 8\omega_5^2\omega_9^3 - 68\omega_5 v_1^2\omega_9^2\omega_{12} - 64\omega_5 v_1^2\omega_9\omega_{12}$

$C_{18} = -12cs^4\omega_5^3\omega_9\omega_{12} + 48\omega_5^2 v_1^4\omega_9^3\omega_{12} - 19\omega_5^3 v_1^2\omega_9^2\omega_{12} - 12\omega_5^3 v_1^2\omega_9^3 + 13cs^4\omega_5^2\omega_9^3\omega_{12} - 12cs^2\omega_5^3 v_1^2\omega_9^3 + 12cs^2\omega_5^3 v_1^2\omega_9^3\omega_{12} + 30cs^2\omega_5^2 v_1^2\omega_9^3\omega_{12} + 24\omega_5^2 v_1^4\omega_9\omega_{12} + 4\omega_5^3 v_1^4\omega_9^3\omega_{12} + 6cs^2\omega_5^3\omega_9^3\omega_{12} - 12\omega_5^2 v_1^4\omega_9^3 + 12cs^2\omega_5^3 v_1^2\omega_9^3 + 12cs^4\omega_5^2\omega_9^3\omega_{12} + 54cs^2\omega_5^3 v_1^2\omega_9\omega_{12} + 12\omega_5^3 v_1^2\omega_9^3 + 27\omega_5^3 v_1^2\omega_9\omega_{12} + 12\omega_5^2 v_1^4\omega_9^2\omega_{12} + 60\omega_5^3 v_1^4\omega_9^3\omega_{12} + 18\omega_5^2 v_1^2\omega_9^3\omega_{12} + 162cs^2\omega_5^2 v_1^2\omega_9\omega_{12} - 12cs^2\omega_5\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_9^3\omega_{12} - 48\omega_5^2 v_1^2\omega_9^3\omega_{12} + 19\omega_5^3 v_1^4\omega_9^2\omega_{12} - 6cs^2\omega_5^3\omega_9^3\omega_{12} - 12cs^2\omega_5^2 v_1^2\omega_9\omega_{12} + 12cs^4\omega_5^3\omega_9\omega_{12} + 6cs^2\omega_5\omega_9^3\omega_{12} + 6cs^4\omega_5^2\omega_9^2\omega_{12} + 60cs^2\omega_5^3 v_1^2\omega_9\omega_{12} - 24\omega_5^2 v_1^4\omega_9^2\omega_{12} - 4\omega_5^3 v_1^2\omega_9^3\omega_{12} - 81cs^2\omega_5^2 v_1^2\omega_9^3\omega_{12} - 27\omega_5^3 v_1^4\omega_9^3\omega_{12} - 12\omega_5^2 v_1^2\omega_9^2\omega_{12} + 72\omega_5^3 v_1^4\omega_{12} - cs^2\omega_5^3\omega_9^2\omega_{12} - 60\omega_5^3 v_1^2\omega_9^2\omega_{12} - 18\omega_5^2 v_1^4\omega_9^3\omega_{12} - 48cs^2 v_1^2\omega_9^2\omega_{12} - 18cs^4\omega_5^2\omega_9^3\omega_{12} - 21cs^2\omega_5^3 v_1^2\omega_9^3\omega_{12} - 5cs^2\omega_5^3\omega_9^3\omega_{12} - 12\omega_5^3 v_1^4\omega_9^3 + 12cs^2\omega_5^3\omega_9\omega_{12} - 12cs^2\omega_5 v_1^2\omega_9^3\omega_{12} + 36\omega_5^3 v_1^2\omega_9\omega_{12} - 12cs^2\omega_5^3 v_1^2\omega_9^3 - 6cs^4\omega_5^3\omega_9^2\omega_{12} - 24\omega_5 v_1^4\omega_9^3\omega_{12} - 48cs^2\omega_5 v_1^2\omega_9^2\omega_{12} - 90\omega_5^3 v_1^4\omega_9\omega_{12} - 12\omega_5 v_1^2\omega_9^3\omega_{12}^2 + 12\omega_5^3 v_1^4\omega_9^3 - 12cs^2\omega_5^2\omega_9\omega_{12} - 306cs^2\omega_5^3 v_1^2\omega_9\omega_{12} - 12cs^4\omega_5\omega_9\omega_{12} + 12cs^4\omega_5\omega_9^3\omega_{12} + 12cs^4\omega_5^3\omega_{12} + 12\omega_5^3 v_1^2\omega_9^3 - cs^4\omega_5^3\omega_9^3\omega_{12} - 36cs^2\omega_5^3 v_1^2\omega_9\omega_{12} - 24cs^4\omega_5\omega_9^3\omega_{12} - 72\omega_5^3 v_1^2\omega_{12} + 6cs^4\omega_5^3\omega_9^3\omega_{12} - 36\omega_5^3 v_1^4\omega_9\omega_{12} - 6cs^2\omega_5^2\omega_9\omega_{12} + 24\omega_5 v_1^2\omega_9^3\omega_{12} - 108cs^2\omega_5^2 v_1^2\omega_9\omega_{12} + 252cs^2\omega_5^3 v_1^2\omega_{12} + 90\omega_5^3 v_1^2\omega_9\omega_{12} + cs^4\omega_5^3\omega_9^2\omega_{12} + 12\omega_5 v_1^4\omega_9^3\omega_{12} + 18cs^2\omega_5^2\omega_9^3\omega_{12} + 102cs^2\omega_5 v_1^2\omega_9^3\omega_{12} - 12cs^2\omega_5^3\omega_{12}^2$

$C_{19} = 150cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 36cs^2\omega_5^2\omega_9^3\omega_{12}v_2^2 - 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 36cs^4\omega_5^2\omega_9^3\omega_{12}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}^2 v_2^2 + 72cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 v_2^2 - 12cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2 v_2^2 - 6cs^2\omega_5^3 v_1^2\omega_9^3\omega_{12}^2 + 108cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 36cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12}v_2^2 + 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2 + 24\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 v_2^2 + 12cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2 + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2 v_2^2 + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 +$

$6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2 - 12cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 12\omega_5^2v_1^2\omega_{15}\omega_9^3\omega_{12}^2v_2 - 54cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2 + 36cs^4\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}^2v_2 - 42cs^4\omega_5^4\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^4\omega_{12}^2 + 24\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^3v_2 + 18cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2v_2 + 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2 - 84cs^4\omega_5^4\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 12cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12}^2 - 12cs^2\omega_5^2v_1^2\omega_{15}\omega_9^3\omega_{12}^2 + 6cs^2\omega_5^3\omega_9^3\omega_{12}^2 + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_5^2\omega_{21}v_1^2\omega_9^2\omega_{12}^2v_2 - 36cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2v_2 + 72cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2 - 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2 + 6\omega_5^3\omega_9^3\omega_{12}^2v_2 - 36cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^3v_2 - 36cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3v_2 + 12cs^2\omega_5^2v_1^2\omega_{15}\omega_9^3\omega_{12} + 18cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12} - 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 - 36\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 12\omega_5^2\omega_{15}\omega_9^3\omega_{12}^2v_2 - 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9 - 24\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2 - 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12} - 6\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2v_2 + 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 12\omega_5^3\omega_9^3\omega_{12}^2v_2 - 96cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^3\omega_{12}^2 - 88cs^4\omega_5^4\omega_{21}\omega_{15}\omega_9\omega_9^2 - 72cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2 - 24\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2 + 6cs^2\omega_5^3\omega_{21}v_1^2\omega_9^3\omega_{12} + 36cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2 + 12cs^2\omega_5^2v_1^2\omega_9^3\omega_{12}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2 + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + 18\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2 + 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3 + 36cs^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2v_2^2 + 12\omega_5^3v_1^2\omega_9^3\omega_{12}^2v_2 - 72cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 18cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12} + 180cs^4\omega_5\omega_{21}\omega_{15}\omega_9\omega_9^3\omega_{12} - 18cs^4\omega_5^3\omega_9^3\omega_{12}^2v_2 + 12\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 - 12\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 24\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 5cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 6\omega_5^3\omega_{21}v_1^2\omega_9^3\omega_{12}^2v_2 - 12cs^2\omega_5^2\omega_9^3\omega_{12} - 18cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} + cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 12cs^2\omega_5^2\omega_{15}\omega_9\omega_{12} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2 - 18cs^2\omega_5^3\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3v_2 + 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3 + 18cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 - 36cs^4\omega_5^2\omega_{21}\omega_9^2\omega_9^2 + 6\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}^2v_2 + 36cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9^2v_2^2 + 36cs^4\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2 - 6\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2v_2^2 + 12\omega_5^2\omega_{21}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 12cs^2\omega_5^2\omega_{21}\omega_9\omega_9^2\omega_{12} - 6cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 12cs^2\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3 + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 + 36cs^4\omega_5^3\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12} - 42cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12} - cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 18cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12} - 12\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 - 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2 - 12cs^2\omega_5^3\omega_{15}\omega_9\omega_{12} - 6cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}v_2^2 - 36cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 - 36cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}v_2^2 - 12cs^2\omega_5^3\omega_{21}v_1^2\omega_9^2\omega_{12} - 6\omega_5^3v_1^2\omega_9^3\omega_{12}^2v_2^2 - 18cs^4\omega_5^3\omega_9^3\omega_{12} - 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3 - 36cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 + 12cs^2\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12} + 12\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 - 36cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2v_2^2 + 6cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 + 12\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}^2v_2^2 - 12\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 - 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2v_2 - 24cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 + 12cs^4\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3v_2^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3 - 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12} - 36cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} - 18cs^4\omega_5^3\omega_{15}\omega_9^2\omega_9^2 - 6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 + 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 2cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_9^2 - 36cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 18cs^4\omega_5^3\omega_{21}\omega_9^2\omega_9^2 + 36cs^2\omega_5^3\omega_{15}\omega_9^3v_2 - 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3 - 48cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9^2 + 6cs^2\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 18cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_9^2v_2^2 - 36cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2v_2^2 + 18cs^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2v_2^2 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3 + 30cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 6cs^2\omega_5^3\omega_{21}\omega_9^2\omega_9^2 + 2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2v_2^2 + 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2 - 6cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 - 36cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2$

$C_{20} = 24cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 12cs^2\omega_5^2\omega_9^3\omega_{12}^2v_2^2 + 24cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 12cs^4\omega_5^2\omega_9^3\omega_{12}^2v_2^2 + 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}^2v_2^2 + 24cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 - 84cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}^2 - 18cs^2\omega_5^3v_1^2\omega_9^3\omega_{12}^2 + 36cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2v_2 + 12cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12}v_2^2 + 108cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 - 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12} + 24\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 12cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}v_2^2 + 60cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 6\omega_5^3\omega_{15}\omega_9^3\omega_9^2\omega_{12}v_2^2 + 60cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 36\omega_5^2v_1^2\omega_{15}\omega_9^3\omega_{12}^2v_2^2 - 18cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 - 18\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_9^2v_2^2 - 24cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 24cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9^2 + 24\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 6cs^2\omega_5^3\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12}^2v_2^2 - 12cs^4\omega_5^4\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12} - 42cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 36cs^2\omega_5^2v_1^2\omega_{15}\omega_9^3\omega_{12} + 6cs^2\omega_5^3\omega_9^3\omega_{12} - 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 36\omega_5^2\omega_{21}v_1^2\omega_9^2\omega_{12}^2v_2^2 - 12cs^2\omega_5^2\omega_{21}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 24cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 18cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2 + 6\omega_5^3\omega_9^3\omega_{12}^2v_2^2 + 6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2 - 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^3v_2^2 - 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3v_2^2 + 36cs^2\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12} - 132cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 - 36\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 12\omega_5^2\omega_{15}\omega_9^3\omega_{12}v_2^2 + 24cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9 - 24\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 72cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2 - 6\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2v_2^2 - 12\omega_5^2\omega_9^3\omega_{12}^2v_2^2 - 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 + 84cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 48cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 4cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_9^2\omega_{12}^2v_2^2 - 24cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_9^2\omega_{12}^2v_2^2 - 72cs^2\omega_5^2v_1^2\omega_{15}\omega_9^3\omega_{12}^2v_2^2 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 18cs^2\omega_5^3\omega_{21}v_1^2\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}v_2^2 + 36cs^2\omega_5^3v_1^2\omega_9^3\omega_{12}^2 - 36cs^2\omega_5^3\omega_{15}\omega_9^2\omega_9^2v_2^2 + 18cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2v_2^2 - 24cs^2\omega_5^3v_1^2\omega_{15}\omega_9^3 + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2 + 36\omega_5^3v_1^2\omega_9^3\omega_{12}^2v_2^2 - 24cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 + 180cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2 + 18cs^4\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - 6cs^2\omega_5^3\omega_9^3\omega_{12}^2v_2^2 + 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 - 36\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 - 24\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_9^2\omega_{12}v_2^2 - cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} + 18\omega_5^3\omega_{21}v_1^2\omega_9^2\omega_{12}^2v_2^2 - 12cs^2\omega_5^2\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12} - 12cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12}v_2^2 - 6cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2 + 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3v_2^2 + 6cs^4\omega_5^3\omega_{15}\omega_9^3\omega_9^2 - 108cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2 - 12cs^4\omega_5^3\omega_{21}\omega_9^2\omega_9^2 + 18\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}^2v_2^2 + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2v_2^2 + 12cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9\omega_{12}^2v_2^2 - 6\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2v_2^2 + 12\omega_5^2\omega_{21}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 72\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 12cs^2\omega_5^2\omega_{21}\omega_9\omega_9^2\omega_{12} - 6cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 36cs^2\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 + 12cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2 - 144cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2 - 12\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 - 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 - 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} - 18cs^2\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12} - 36cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}v_2^2 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 - 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2 - 36cs^2\omega_5^2\omega_{21}v_1^2\omega_9^2\omega_{12} - 18\omega_5^3v_1^2\omega_9^3\omega_{12}^2v_2^2 - 6cs^4\omega_5^3\omega_9^3\omega_{12} + 24cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 + 36cs^2\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12} + 36\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12}v_2^2 + 6cs^2\omega_5^3\omega_{15}\omega_9^2\omega_9^2 + 36\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 - 12\omega_5^3\omega_{15}\omega_9^2\omega_{12}v_2^2 - 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2 - 72\omega_5\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12}^2 - 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2v_2^2 - 12\omega_5\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12}^2v_2^2 + 72\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12}v_2^2 - 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 - 6cs^4\omega_5^3\omega_{15}\omega_9^3\omega_9^2 - 6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9^2 - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 18cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12} - 12cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 6cs^4\omega_5^3\omega_{21}\omega_9^2\omega_{12} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3v_2 - 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12} + 18cs^2\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12} + 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_9^2\omega_{12}v_2^2 - 12cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}v_2^2 + 6cs^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2v_2^2 + 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12} - 6cs^2\omega_5^3\omega_{21}\omega_9^2\omega_{12} + 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12} + 12cs^2\omega_5^2\omega_{15}\omega_9^3\omega_{12} + 78cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_{12} - 54\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2 + 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2 - 12cs^4\omega_5^3\omega_{15}\omega_9^3\omega_{12} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}v_2^2$

$C_{21} = 6\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 2\omega_5^3v_1^2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - 4\omega_5^2v_1^2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10} - 15cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} + 2\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} + 2\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10} - 6cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} + 2\omega_5^2\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2\omega_{10} + 12cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}^2\omega_{10} + 2cs^2\omega_5^3\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + \omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10} + 9\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 11cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10} + 4cs^2\omega_5^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 13cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2\omega_{10} - 2\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}^2\omega_{10} + \omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^3\omega_9^2\omega_{12}\omega_{10} - 4\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 4cs^2\omega_5^2\omega_{21}\omega_9^3\omega_{12}^2\omega_{10} + 3\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10} + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2\omega_{10} - 4\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{10} - 4\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{10} - 8cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{10} - 6cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 5\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_9\omega_{12}^2\omega_{10} + 4cs^2\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - 3\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 2\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_9^2\omega_{12}^2\omega_{10} - 4\omega_5^3v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 4\omega_5^3\omega_{15}\omega_9^3\omega_{12}\omega_{10} - 4cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 4cs^2\omega_5^3\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 24cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 2\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 4\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - 7\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 9\omega_5^3\omega_{21}^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 4\omega_5^3\omega_{15}^2\omega_9^2\omega_{10} + 4\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 3\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 4\omega_5^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - \omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + \omega_5^3\omega_{15}^2\omega_9^3\omega_9^2\omega_{10} - 2cs^2\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2\omega_{10} - 4cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12} + 4\omega_5^3v_1^2\omega_{15}\omega_9^3\omega_{12}^2\omega_{10} + 2cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} - 5cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 2\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 8cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{10} + 26cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 4\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{10} - 2cs^2\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} + 4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_9\omega_{12}\omega_{10} - 2cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2 - 16cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - \omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_9^2\omega_{12}\omega_{10} + 2\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_9^2\omega_{12}\omega_{10} + 2cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{12} + 2\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 2\omega_5^3\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 2\omega_5^3v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 2cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_9\omega_{12}\omega_{10} - 4\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{10} - 8cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 4cs^2\omega_5^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 8cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{10} + 3cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - \omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10} + 3\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 2\omega_5^3\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 5\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_9\omega_{12}^2\omega_{10} - 2\omega_5\omega_{21}\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10} + 4\omega_5^2\omega_{21}\omega_{15}^2\omega_9^3\omega_{10} - 6\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} +$

$$8cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^3\omega_{12}^2\omega_{10} + 8cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 2cs^2\omega_5^3\omega_{21}\omega_9^3\omega_{12}^2\omega_{10} - 4\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} + 4\omega_5^3v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} + 4\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} -$$
$$8cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 4\omega_5^3\omega_{21}^2v_1^2\omega_{15}\omega_9^3\omega_{12}\omega_{10} + 7\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10} - 4cs^2\omega_5^3\omega_{15}^3\omega_9\omega_{12}\omega_{10} - 2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} - 4\omega_5^3\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}$$

$C_{22} = 54cs^4\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 5cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10} - 6cs^2\omega_5^3\omega_{21}\omega_9\omega_{12}\omega_{10}^2 + 3cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 36cs^4\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 +$
$36cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} - 12cs^2\omega_5^2\omega_{15}\omega_9\omega_{10}^2 + 36cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{10} - 36cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_{10} + 18cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 +$
$156cs^4\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5^3v_1^2\omega_{15}^2v_2^2\omega_{10}^2 + 72cs^2\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 12cs^2\omega_5^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 -$
$12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 36cs^4\omega_5^2\omega_{15}^2\omega_9\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{10} - 24\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10} - 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{10} - 12\omega_5^3v_1^2\omega_{15}^2\omega_9v_2^2\omega_{10}^2 +$
$18cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 48\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 6cs^2\omega_5^2\omega_{21}\omega_{15}\omega_{12}v_2^2\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_{10} +$
$18cs^2\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10} + 12cs^2\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9v_2^2\omega_{10} + 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 +$
$12cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9v_2^2\omega_{10}^2 + 36cs^2\omega_5^3\omega_{21}^2v_1^2\omega_{15}\omega_9\omega_{12} - 9\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} -$
$6cs^2\omega_5^3\omega_{21}^2\omega_{12}v_2^2\omega_{10}^2 + 144cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 36cs^2\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 12cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 36cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_{10} -$
$3cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9v_2^2\omega_{10} - 18cs^4\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 36cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 36cs^4\omega_5^3\omega_{15}^2\omega_{10}^2 +$
$6cs^2\omega_5^3\omega_{21}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 12cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{10} - 6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 45cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 -$
$18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 12cs^2\omega_5^2\omega_{15}\omega_9v_2^2\omega_{10}^2 + 15cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 -$
$36cs^4\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 72cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} + 12cs^2\omega_5^3\omega_{15}\omega_9\omega_{10}^2 + 6cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 +$
$36cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^2 - 12\omega_5^3v_1^2\omega_{15}^2\omega_9\omega_{10} - 96cs^4\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 + 6\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 - 6\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10}^2 +$
$18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 36cs^4\omega_5^3\omega_{15}\omega_9\omega_{10}^2 - 60cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12} -$
$24\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 + 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2 - 18cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12} +$
$6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 12\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 12cs^2\omega_5^3\omega_{15}\omega_9v_2^2\omega_{10}^2 - 12cs^2\omega_5^3\omega_{21}\omega_{15}^2v_2^2\omega_{10} - 18cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 +$
$12cs^4\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 24\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 12\omega_5^2v_1^2\omega_{15}\omega_9v_2^2\omega_{10} + 6\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}v_2^2\omega_{10} + 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} -$
$6\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9v_2^2\omega_{10} - 6cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 36cs^2\omega_5^2\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10} - cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} +$
$24\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}v_2^2\omega_{10} + 24\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} + 36cs^4\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10} - 36cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} - 12cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10} -$
$18cs^4\omega_5^3\omega_{15}\omega_{12}\omega_{10} - 12\omega_5^3v_1^2\omega_{15}^2\omega_{10} + 6cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} - 48\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} -$
$18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} - 12cs^2\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 12\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 9\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 12\omega_5^3v_1^2\omega_{15}\omega_9\omega_{10} -$
$15cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{10} - 36cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} - 36\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{10} - 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 6cs^2\omega_5^3\omega_{15}\omega_9v_2^2\omega_{10} +$
$27cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} - 12cs^2\omega_5^3\omega_{15}^2\omega_{10} + 12\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 3cs^4\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} +$
$6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 12cs^2\omega_5^3\omega_{15}^2v_2^2\omega_{10} - 18cs^2\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} + 36cs^2\omega_5^2v_1^2\omega_{15}\omega_9\omega_{10}^2 - 108cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} -$
$18cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} - 36cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{10} + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} + 18cs^4\omega_5^3\omega_{21}\omega_{15}\omega_{12}\omega_{10} + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 +$
$12cs^2\omega_5^2\omega_{21}\omega_9\omega_{12}\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10}^2 - 6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 72cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} + 18cs^4\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 +$
$15\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2v_2^2\omega_{10} - 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 6\omega_5^3v_1^2\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2 -$
$42cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2 + 5cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} - 6cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 72cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 -$
$6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} - 15\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 12cs^4\omega_5^2\omega_{21}\omega_9\omega_{12}\omega_{10}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}v_2^2\omega_{10} + 36cs^2\omega_5^3v_1^2\omega_{15}\omega_{10}^2 +$
$12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} - 12cs^2\omega_5^2\omega_{21}\omega_9\omega_{12}v_2^2\omega_{10} - 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_{12}\omega_{10} + 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}$

$C_{23} = -66cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 24cs^2\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 24\omega_5\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10} -$
$12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} + 24\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} - 12cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}^2\omega_{10} + 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} -$
$6\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 12\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 24cs^2\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2\omega_{10} + 48cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} -$
$24cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2 + 18\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 36\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} -$
$18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 24cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10} + 24\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 - 12cs^2\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} -$
$24\omega_5^2\omega_{15}\omega_9^2\omega_{12}\omega_{10} + 60cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} + 24cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{10} + 24\omega_5^2\omega_{21}\omega_9\omega_{12}^2\omega_{10} - 12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5\omega_{15}\omega_9\omega_{12}^2\omega_{10} -$
$24cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 + 6cs^2\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} +$
$156cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 18\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 96cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2\omega_{10} + 24cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{10} -$
$42cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5^3\omega_{15}^2\omega_{12}v_2^2\omega_{10} - 12\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 4\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} +$
$12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2 + 72cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 24cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} -$
$12\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2\omega_{10} + 24cs^2\omega_5\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 90cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2 -$
$84cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} + 24\omega_5^3\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 18\omega_5^3\omega_{21}\omega_{15}\omega_9^2v_2^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} + 24\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} -$
$12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} - 72cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} + \omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} + 12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} - 18\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} +$
$12\omega_5^3\omega_{15}\omega_9\omega_{12}^2\omega_{10} - 24cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} - 24cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{10} + 3cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 36\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} +$
$12\omega_5^3\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10} + 24cs^2\omega_5\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} + 84cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} +$
$12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} - 66cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 4\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 36cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2 +$
$12\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} - 132cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 24cs^2\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} -$
$24\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} + 24\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 24cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}^2\omega_{10} + 66\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} -$
$48cs^2\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2\omega_{10} - \omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} - 36cs^2\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}$

$C_{24} = 18cs^4\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 15cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 6cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12cs^4\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} -$
$12cs^2\omega_5^2\omega_{15}\omega_9\omega_{10}^2 + 12cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{10} - 12cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_{10} + 6cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 18cs^4\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} +$
$36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 + 36\omega_5^3v_1^2\omega_{15}^2v_2^2\omega_{10}^2 + 24cs^2\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 36cs^2\omega_5^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 15cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 +$
$12cs^4\omega_5^2\omega_{15}^2\omega_9\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{10} - 24\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10} - 12cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{10} - 36\omega_5^3v_1^2\omega_{15}^2\omega_9v_2^2\omega_{10}^2 + 6cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} +$
$144\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9v_2^2\omega_{10}^2 + 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_{12}v_2^2\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 12cs^2\omega_5^2\omega_{21}\omega_{15}\omega_{10} + 6cs^2\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10}^2 +$
$12cs^2\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_{10} + cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} - 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9v_2^2\omega_{10} - 102cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 36cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 -$
$36cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9v_2^2\omega_{10} + 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12} - 9\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} - 18cs^2\omega_5^3\omega_{15}^2v_2^2\omega_{10} + 48cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 +$
$12cs^2\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 12cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 12cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_{10} + 30cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 36\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9v_2^2\omega_{10} -$
$6cs^4\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 12cs^4\omega_5^3\omega_{15}^2\omega_{10} - 12cs^2\omega_5^3\omega_{21}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{10} - 6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 -$
$15cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} - 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} + 36cs^2\omega_5^2\omega_{15}\omega_9v_2^2\omega_{10} +$

$$6cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12cs^4\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 24cs^2\omega_5^2\omega_{15}^2v_1^2\omega_{12}\omega_{10} + 12cs^2\omega_5^3\omega_{15}^2\omega_9\omega_{10}^2 + 6cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 -$$
$$108\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10} + 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} - 12\omega_5^2v_1^2\omega_{15}\omega_9\omega_{10}^2 - 12cs^4\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 + 6\omega_5^3v_1^2\omega_{15}^2\omega_{12}\omega_{10}^2 - 6\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10}^2 +$$
$$54cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 12cs^4\omega_5^3\omega_{12}\omega_9\omega_{10} - 5cs^4\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} - 72\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} +$$
$$24\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 18\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}v_2^2 - 6cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12} + 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} -$$
$$36\omega_5^2v_1^2\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10} - 36cs^2\omega_5^3\omega_{15}\omega_9v_2^2\omega_{10} - 36cs^2\omega_5^3\omega_{21}\omega_{15}v_2^2\omega_{10} - 6cs^2\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 12cs^4\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 -$$
$$24\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 36\omega_5^2v_1^2\omega_{15}^2\omega_9v_2^2\omega_{10} + 18\omega_5^3\omega_{21}v_1^4\omega_9\omega_{12}v_2^2\omega_{10} + 6\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10} - 18\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} +$$
$$36cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9v_2^2\omega_{10} - 18cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 12cs^2\omega_5^2\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10} + 72\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} + 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^2 +$$
$$12cs^4\omega_5\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12cs^2\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 36cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 6cs^4\omega_5^3\omega_{15}\omega_{12}\omega_{10}^2 - 12\omega_5^3v_1^2\omega_{15}\omega_{10}^2 + 18cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} -$$
$$6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} - 48\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 18cs^2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 12cs^2\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 36\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 +$$
$$27\omega_5^3\omega_{21}v_1^4\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 5cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{10} - 12cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} + 12\omega_5^3v_1^2\omega_{15}\omega_9\omega_{10}^2 - 12cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} -$$
$$72\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 6cs^2\omega_5^3\omega_{15}\omega_{12}\omega_{10}^2 + 9cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{10} - 12cs^2\omega_5^3\omega_{15}\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10} +$$
$$6\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12} - cs^4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 48cs^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 36cs^2\omega_5^3\omega_{15}v_2^2\omega_{10}^2 - 6cs^2\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_{10}^2 +$$
$$12cs^2\omega_5^2v_1^2\omega_{15}\omega_9\omega_{10}^2 - 36cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 6cs^2\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} - 12cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{10} - 12cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 +$$
$$6cs^4\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}\omega_{10} + 60cs^2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}\omega_{10}^2 - 18\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 24cs^2\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^2 +$$
$$6cs^4\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 15\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 36\omega_5^3v_1^2\omega_{15}^2v_2^2\omega_{10} + 60cs^2\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5^2v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 +$$
$$18\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 18cs^4\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2 + 36\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}v_2^2 + 5cs^2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} - 6cs^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 -$$
$$24cs^2\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}^2 - 18\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}v_2^2\omega_{10} - 45\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 36\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2 + 12cs^2\omega_5^3v_1^2\omega_{15}\omega_{10}^2 +$$
$$12cs^2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{10} + 24cs^2\omega_5^2\omega_{21}\omega_9\omega_{12}v_2^2\omega_{10}^2 - 6cs^2\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}\omega_{10} + 72\omega_5\omega_{21}v_1^4\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}$$

$C_{25} = 96\omega_5\omega_{15}v_2^4\omega_{10}^2 - 14cs^2\omega_5^2\omega_{15}^2\omega_{10} - 12cs^4\omega_5\omega_{15}\omega_{10}^2 + 72cs^2\omega_5\omega_{15}v_2^2\omega_{10} + 24cs^2\omega_{15}\omega_{10}^2 + 72cs^2\omega_5^2v_2^2\omega_{10} - 12cs^4\omega_5^2\omega_{15}^2 +$
$96\omega_5\omega_{15}^2v_2^2\omega_{10} + 36\omega_5^2\omega_{15}^2v_2^4\omega_{10} - 12cs^2\omega_5^2\omega_{10}^2 - 12\omega_5^2v_2^2\omega_{10}^2 + 30\omega_5^2\omega_{15}v_2^2\omega_{10}^2 - 48cs^4\omega_5\omega_{15}^2\omega_{10} + 48\omega_{15}^2v_2^4\omega_{10} - 24\omega_5^2\omega_{15}v_2^2\omega_{10} -$
$36\omega_5^2\omega_{15}^2v_2^4 - 432cs^2\omega_5\omega_{15}^2v_2^2\omega_{10} - 72\omega_5\omega_{15}^2v_2^2 - 3\omega_5^2\omega_{15}^2v_2^4\omega_{10} - 24cs^4\omega_{15}^2\omega_{10} + 48\omega_{15}v_2^2\omega_{10} + 12cs^2\omega_5^2\omega_{15} - 24\omega_5v_2^4\omega_{10} - 48cs^2\omega_5\omega_{15}\omega_{10} -$
$126cs^2\omega_5^2\omega_{15}v_2^2\omega_{10} + 12cs^4\omega_5^2\omega_{10} - 48\omega_5\omega_{15}v_2^4\omega_{10} - 216cs^2\omega_{15}v_2^2\omega_{10} + cs^2\omega_5^2\omega_{15}^2\omega_{10} + 288cs^2\omega_5\omega_{15}^2v_2^2 - 144cs^2\omega_5\omega_{15}v_2^2\omega_{10} -$
$36\omega_5^2\omega_{15}^2v_2^2\omega_{10} + 72\omega_5\omega_{15}^2v_2^4 - 24cs^4\omega_5\omega_{10}^2 - 24cs^2\omega_{15}^2\omega_{10} + 14cs^4\omega_5^2\omega_{15}\omega_{10} + 12cs^2\omega_5\omega_{15}\omega_{10}^2 + 12\omega_5^2v_2^4\omega_{10} + 36\omega_5^2\omega_{15}^2v_2^2 -$
$30\omega_5^2\omega_{15}v_2^4\omega_{10} - 96\omega_5\omega_{15}^2v_2^4\omega_{10} - 12cs^2\omega_5^2\omega_{15}^2v_2^2\omega_{10} - 144cs^2\omega_5^2\omega_{15}^2v_2^2 - 24cs^2\omega_5\omega_{15}^2 - 96\omega_5\omega_{15}^2v_2^4\omega_{10} + 48cs^2\omega_5\omega_{15}^2\omega_{10} + 24cs^4\omega_{15}^2\omega_{10} +$
$24cs^2\omega_5\omega_{10}^2 + 216cs^2\omega_{15}^2v_2^2\omega_{10} - 144cs^2\omega_5v_2^2\omega_{10}^2 + 48\omega_5\omega_{15}v_2^2\omega_{10} + 48cs^4\omega_5\omega_{15}^2\omega_{10} + 150cs^2\omega_5^2\omega_{15}^2v_2^2\omega_{10} - 48\omega_{15}^2v_2^2\omega_{10} + 24\omega_5^2\omega_{15}v_2^2\omega_{10} +$
$432cs^2\omega_5\omega_{15}v_2^2\omega_{10}^2 + 3\omega_5^2\omega_{15}^2v_2^2\omega_{10}^2 + 24cs^4\omega_5\omega_{15}^2 - 48\omega_{15}v_2^4\omega_{10}^2 + 24\omega_5v_2^2\omega_{10}^2 - cs^4\omega_5^2\omega_{15}^2\omega_{10}$

$C_{26} = cs^2\omega_5^3\omega_{15} + 6cs^2\omega_5^3\omega_{15}v_2^2 - 18\omega_5^3\omega_{15}v_2^4 + 24cs^4\omega_5^2\omega_{15} - 12\omega_5^3v_2^2 + 24cs^2\omega_5^2\omega_{15} - 3\omega_5^2\omega_{15}^2v_2^4 + 6cs^4\omega_5^3\omega_{15} - 96cs^2\omega_{15}^2v_2^2 - 3cs^4\omega_5^3\omega_{15}^2 -$
$24\omega_5^2\omega_{15}^2v_2^4 + 48cs^2\omega_5^3\omega_{15}v_2^2 - 24\omega_5\omega_{15}^2v_2^2 - 8cs^2\omega_5^2\omega_{15}^2 - 48\omega_5\omega_{15}v_2^2 - 24cs^4\omega_5\omega_{15} - 6cs^2\omega_5^3\omega_{15} + 24\omega_5^2v_2^2 - 72\omega_5^2\omega_{15}v_2^2 + 156cs^2\omega_5\omega_{15}^2v_2^2 +$
$24\omega_5\omega_{15}^2v_2^4 + 24cs^4\omega_5\omega_{15} - 24cs^2\omega_5\omega_{15}v_2^2 + 24\omega_5^2\omega_{15}^2v_2^2 - 24\omega_5^2v_2^4 + 72\omega_5^2\omega_{15}v_2^4 + 48\omega_5\omega_{15}v_2^2 - 72cs^2\omega_5^2\omega_{15}^2v_2^2 + 12cs^2\omega_5^3v_2^2 + 12cs^2\omega_5\omega_{15}^2 +$
$24cs^4\omega_{15}^2 + 18\omega_5^3\omega_{15}v_2^2 - 24cs^2\omega_5\omega_{15} - 12cs^2\omega_5^3\omega_{15}v_2^2 - 24cs^2\omega_5^2v_2^2 + 12\omega_5^3v_2^4 - 48cs^4\omega_5\omega_{15} + 3\omega_5^3\omega_{15}v_2^4$

$C_{27} = 39cs^2\omega_5^2\omega_{15}^2\omega_{10} + 24\omega_5\omega_{15}\omega_{10} - 60cs^2\omega_{15}v_2^2\omega_{10} - 36\omega_{15}^2\omega_{10} - 168\omega_5\omega_{15}^2v_2^2\omega_{10} - 48\omega_5\omega_{15}^2 + 24cs^2\omega_5^2\omega_{10} - 25\omega_5^2\omega_{15}^2\omega_{10} -$
$24cs^2\omega_5\omega_{15}\omega_{10} + 24\omega_5^2v_2^2\omega_{10} - 51\omega_5^2\omega_{15}\omega_{15}v_2^2\omega_{10} + 36\omega_5^2\omega_{15}v_2^2\omega_{10} + 120\omega_5\omega_{15}^2v_2^2 + 24\omega_5\omega_{10}^2 - 84\omega_{15}v_2^2\omega_{10} - 36cs^2\omega_5^2\omega_{15} + 120cs^2\omega_5\omega_{15}\omega_{10} +$
$2\omega_5^2\omega_{15}^2\omega_{10} - 72\omega_5\omega_{15}\omega_{10} - 3cs^2\omega_5^2\omega_{15}^2\omega_{10} + 61\omega_5^3\omega_{15}^2v_2^2\omega_{10} + 36\omega_{15}\omega_{10}^2 + 60cs^2\omega_{15}^2\omega_{10} - 33cs^2\omega_5^2\omega_{15}\omega_{10} - 60\omega_5^2\omega_{15}v_2^2 + 168\omega_5\omega_{15}v_2^2\omega_{10} +$
$21\omega_5^2\omega_{15}\omega_{10} + 72cs^2\omega_5\omega_{15}^2 - 12\omega_5^2\omega_{10}^2 - 120cs^2\omega_5\omega_{15}^2\omega_{10} - 12\omega_5\omega_{15}\omega_{10} - 48cs^2\omega_5\omega_{10}^2 + 24\omega_5^2\omega_{15} - 72\omega_5\omega_{15}v_2^2\omega_{10} + 72\omega_5\omega_{15}^2\omega_{10} +$
$12cs^2\omega_5^2\omega_{15}\omega_{10} + 84\omega_{15}^2v_2^2\omega_{10} - 5\omega_5^2\omega_{15}^2v_2^2\omega_{10} - 48\omega_5v_2^2\omega_{10}^2$

$C_{28} =$
$-4cs^2\omega_9\omega_6\omega_{13}^2 - 51cs^2v_1^2\omega_9^3\omega_6^2\omega_{13} + 16v_1^2\omega_9\omega_6\omega_{13} + 8cs^4\omega_6^2\omega_{13}^2 - 8cs^2\omega_9^3\omega_6\omega_{13} - 144cs^2v_1^2\omega_9\omega_6^2\omega_{13}^2 - 4cs^4\omega_9^3\omega_6 + 4v_1^2\omega_9^3\omega_6 - 24cs^2v_1^2\omega_9^2\omega_6^2 +$
$13v_1^4\omega_9^2\omega_6^2\omega_{13}^2 - 24v_1^2\omega_6^2\omega_{13}^2 - 4cs^4\omega_9\omega_6^2\omega_{13} + 4v_1^4\omega_9^3\omega_6^2 - 84cs^2v_1^2\omega_9^2\omega_6\omega_{13} - 4cs^4\omega_9^2\omega_6^2 - 4cs^2\omega_9^2\omega_6^2\omega_{13}^2 + 20v_1^2\omega_9\omega_6\omega_{13}^2 + 20v_1^4\omega_9\omega_6\omega_{13}^2 +$
$96cs^2v_1^2\omega_6^2\omega_{13}^2 + 20v_1^4\omega_3\omega_6\omega_{13} - 4cs^2\omega_9^3\omega_6 + 4v_1^2\omega_9^3\omega_6 - 24cs^2v_1^3\omega_9\omega_6 - 8cs^2\omega_6^2\omega_{13}^2 - 8cs^4\omega_9^2\omega_6\omega_{13} + 4cs^2\omega_9^3\omega_6 + 24cs^2v_1^2\omega_9^3\omega_6 - 4v_1^4\omega_9^3\omega_6 -$
$48cs^2v_1^2\omega_9^2\omega_6\omega_{13} + 13v_1^2\omega_9^3\omega_6^2\omega_{13} - 8cs^2\omega_9^2\omega_6^2\omega_{13} + 24v_1^4\omega_6^2\omega_{13}^2 + 36v_1^2\omega_9\omega_6^2\omega_{13}^2 + 4cs^2\omega_9^2\omega_6^2 - 4cs^4\omega_9^3\omega_6^2\omega_{13} - 4v_1^2\omega_9^3\omega_6^2 + 32v_1^4\omega_9\omega_6^2\omega_{13}^2 -$
$12cs^2\omega_9\omega_6^2\omega_{13}^2 + 20v_1^2\omega_6^2\omega_{13}^2 - 4v_1^4\omega_9^3\omega_6^2 + 4cs^4\omega_9\omega_6^2 - 72cs^2v_1^2\omega_9\omega_6^2\omega_{13} + 8cs^4\omega_9^3\omega_6\omega_{13} + 36cs^2v_1^2\omega_9^2\omega_6^2\omega_{13}^2 + 8v_1^4\omega_9^3\omega_6^2 + 4cs^4\omega_9\omega_6^2\omega_{13} -$
$16v_1^4\omega_9^2\omega_6\omega_{13} - 13v_1^4\omega_9^2\omega_6^2\omega_{13}^2 + 4cs^2\omega_9\omega_6\omega_{13}^2 - 4cs^4\omega_9^3\omega_{13} + 4cs^4\omega_9^2\omega_6^2\omega_{13}^2 - 20v_1^4\omega_9^2\omega_6\omega_{13} - 36cs^2v_1^2\omega_9^2\omega_6^2 - 8v_1^2\omega_9^2\omega_6^2\omega_{13} + 120cs^2v_1^2\omega_9^2\omega_6\omega_{13}^2 +$
$4cs^4\omega_9^2\omega_6^2\omega_{13} - 20v_1^2\omega_9^3\omega_6\omega_{13} - 20v_1^2\omega_9\omega_6\omega_{13}^2 + 51cs^2v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 8v_1^4\omega_9^3\omega_{13} + 8cs^2\omega_9\omega_6\omega_{13}^2 + 8cs^4\omega_9^2\omega_6^2\omega_{13}^2 - 36v_1^4\omega_9\omega_6^2\omega_{13}^2 + 4cs^2\omega_9^3\omega_{13} -$
$13v_1^4\omega_9^3\omega_6\omega_{13} + 84cs^2v_1^2\omega_9^3\omega_6\omega_{13} - 32v_1^2\omega_9^2\omega_6^2\omega_{13} + 12cs^2\omega_9\omega_6^2\omega_{13}^2 + 72cs^2v_1^2\omega_9\omega_6\omega_{13}^2 + 8v_1^4\omega_9^2\omega_{13}^2 + 4cs^2\omega_9^3\omega_6^2\omega_{13} - 4cs^2\omega_9^3\omega_{13}^2 - 20v_1^4\omega_9^3\omega_6\omega_{13}$

$C_{29} = 32cs^2\omega_9\omega_6\omega_{13}^2 - 17\omega_9^2\omega_6^2\omega_{13}^2 - 48v_1^2\omega_9^2\omega_6\omega_{13} + 44cs^2\omega_9^3\omega_6\omega_{13} - 16v_1^2\omega_9^3\omega_6 + 80v_1^2\omega_6^2\omega_{13}^2 - 28\omega_9^3\omega_6\omega_{13} - 24\omega_9\omega_6\omega_{13}^2 +$
$25cs^2\omega_9^2\omega_6^2\omega_{13} - 64v_1^2\omega_9\omega_6^2\omega_{13}^2 + 16cs^2\omega_9^3\omega_6^2 - 16v_1^2\omega_9^2\omega_6^2 + 48cs^2\omega_6^2\omega_{13}^2 - 16cs^2\omega_9^3\omega_6 + 12\omega_9^3\omega_{13}^2 - 43v_1^2\omega_9^3\omega_6^2\omega_{13} + 56cs^2\omega_9^2\omega_6^2\omega_{13} -$
$120v_1^2\omega_9\omega_6\omega_{13}^2 - 16cs^2\omega_9^2\omega_6^2 - 12\omega_9^2\omega_{13}^2 + 16v_1^2\omega_9^3\omega_6^2 - 40\omega_9^3\omega_6^2\omega_{13} - 68v_1^2\omega_9^3\omega_6\omega_{13}^2 - 28v_1^2\omega_9^3\omega_{13}^2 + 43v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 32cs^2\omega_9\omega_6^2\omega_{13}^2 +$
$16\omega_9^3\omega_6\omega_{13} + 28v_1^2\omega_9^2\omega_{13}^2 - 8\omega_9^3\omega_6^2 + 68v_1^2\omega_9^3\omega_6\omega_{13} + 64v_1^2\omega_9\omega_6\omega_{13}^2 + 24\omega_9\omega_6^2\omega_{13}^2 - 16cs^2\omega_9^2\omega_6\omega_{13} + 17\omega_9^3\omega_6^2\omega_{13} - 44cs^2\omega_9^2\omega_6^2\omega_{13} +$
$48\omega_9^2\omega_6^2\omega_{13}^2 - 32\omega_6^2\omega_{13}^2 + 8\omega_9^3\omega_6 - 20cs^2\omega_9^3\omega_{13}^2 + 104v_1^2\omega_9^2\omega_6^2\omega_{13} + 28\omega_9^2\omega_6\omega_{13} - 72cs^2\omega_9\omega_6^2\omega_{13}^2 - 25cs^2\omega_9^3\omega_6^2\omega_{13} + 8\omega_9^3\omega_6^2 + 20cs^2\omega_9^2\omega_6^2$

$C_{30} = 72v_1^4\omega_6^3\omega_{13}^2 + 6cs^2\omega_9^2\omega_6^3\omega_{13} + 30cs^2v_1^2\omega_9^3\omega_6^2\omega_{13} + 90v_1^2\omega_9\omega_6^3\omega_{13}^2 - 12cs^2\omega_9^3\omega_6\omega_{13} + 12v_1^4\omega_9^3\omega_6^2 - 108cs^2v_1^2\omega_9\omega_6^2\omega_{13}^2 + 27v_1^2\omega_9^3\omega_6\omega_{13}^2 +$
$12v_1^2\omega_9^2\omega_6^3 + 13cs^4\omega_9^2\omega_6^2\omega_{13}^2 - 12cs^2\omega_9^3\omega_{13}^2 + 12v_1^4\omega_9\omega_6^2\omega_{13}^2 - 12v_1^4\omega_9^3\omega_6^2 - 36cs^2v_1^2\omega_9\omega_6^3\omega_{13}^2 + 18v_1^4\omega_9^2\omega_6^2\omega_{13}^2 - 48cs^2v_1^2\omega_9^2\omega_6\omega_{13}^2 - 6cs^2\omega_9^2\omega_6^2\omega_{13}^2 +$
$12cs^2v_1^2\omega_9^3\omega_6^2\omega_{13} + 60v_1^4\omega_9^2\omega_6^3\omega_{13} - 12cs^4\omega_9\omega_6^2\omega_{13}^2 - 24v_1^4\omega_9^3\omega_6\omega_{13} - 12cs^2v_1^2\omega_9^2\omega_6^3 + 6cs^4\omega_9^3\omega_6^2\omega_{13} + 19v_1^4\omega_9^2\omega_6^2\omega_{13} - 72v_1^2\omega_9^3\omega_6\omega_{13} - 12v_1^2\omega_9^3\omega_6^2 -$
$12v_1^4\omega_9\omega_6\omega_{13}^2 - cs^4\omega_9^3\omega_6^2\omega_{13}^2 - 12cs^2v_1^2\omega_9^3\omega_6^2 - 48v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 306cs^2v_1^2\omega_9\omega_6^2\omega_{13}^2 - 12v_1^4\omega_9^3\omega_6^2 - 12cs^2\omega_9^2\omega_6^3\omega_{13} + 12cs^4\omega_9^3\omega_{13}^2 - 21cs^2v_1^2\omega_9^3\omega_6^2\omega_{13} +$
$12cs^2v_1^2\omega_9^3\omega_6^2 - 18cs^4\omega_9^3\omega_6^2\omega_{13} + 12v_1^2\omega_9^3\omega_6^2 - 24v_1^4\omega_9^2\omega_6^2\omega_{13} - 12cs^4\omega_9\omega_6^2\omega_{13}^2 + 252cs^2v_1^2\omega_9^2\omega_6^2\omega_{13} - cs^2\omega_9^3\omega_6^2\omega_{13} + 36v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 81cs^2v_1^2\omega_9^2\omega_6^3\omega_{13} +$
$6cs^2\omega_9^3\omega_6\omega_{13}^2 - 4v_1^2\omega_9^3\omega_6^3\omega_{13}^2 + 12cs^4\omega_9^3\omega_6\omega_{13} - 27v_1^4\omega_9^3\omega_6\omega_{13} - 6cs^4\omega_9^2\omega_6^3 - 90v_1^4\omega_9\omega_6^3\omega_{13}^2 - 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2 + 102cs^2v_1^2\omega_9^3\omega_6\omega_{13}^2 +$
$60cs^2v_1^2\omega_9^2\omega_6^3\omega_{13}^2 - 5cs^2\omega_9^3\omega_6^2\omega_{13} + 6cs^4\omega_9^2\omega_6^3\omega_{13} - 18v_1^4\omega_9^3\omega_6^2\omega_{13} - 12cs^2v_1^2\omega_9^2\omega_6^2\omega_{13} + 24v_1^2\omega_9^3\omega_6\omega_{13} - 6cs^2\omega_9^3\omega_6^3\omega_{13} - 60v_1^2\omega_9^2\omega_6^3\omega_{13}^2 +$
$12cs^2\omega_9\omega_6^3\omega_{13}^2 - 12v_1^4\omega_9^3\omega_6\omega_{13} + 162cs^2v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 19v_1^2\omega_9^2\omega_6^3\omega_{13} + 12cs^4\omega_9^2\omega_6^2\omega_{13} - 48cs^2v_1^2\omega_9^3\omega_{13}^2 + 48v_1^4\omega_9^2\omega_6^2\omega_{13}^2 - 12cs^2v_1^2\omega_9^3\omega_6\omega_{13} +$
$24v_1^2\omega_9^2\omega_6^2\omega_{13}^2 + 12cs^2\omega_9\omega_6^2\omega_{13}^2 + 12cs^4\omega_9^3\omega_{13}^2 + 54cs^2v_1^2\omega_9^3\omega_6^2\omega_{13} + 18cs^2\omega_9^3\omega_6^2\omega_{13} - 24cs^4\omega_9^3\omega_6\omega_{13} + 4v_1^4\omega_9^3\omega_6^3\omega_{13}^2 + cs^4\omega_9^3\omega_6^3\omega_{13}^2 - 36v_1^4\omega_9\omega_9\omega_6^3\omega_{13}$

$C_{31} = -3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 3\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2 + \omega_{14}\omega_8\omega_5\omega_9^3\omega_6^2\omega_{13}^2 + 3\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13} -$
$\omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} + \omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_{13} - \omega_{14}\omega_5^3\omega_9\omega_{12}\omega_6\omega_{13}^2 - 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_{13} -$
$3cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 + 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_6^2\omega_{13}^2 + 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_6^2\omega_{13} + 6\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 -$
$3\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} - \omega_{14}\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6 + 2\omega_{14}\omega_8\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2 - \omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 +$
$3\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 + \omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 + \omega_{14}\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 - \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13} - 3\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} + 3cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 +$
$6\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} + 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} - 3\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_6\omega_{13} -$
$\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2 - \omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13} - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_5^2 v_1^2\omega_9^2\omega_{12}\omega_6 - \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} +$
$\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} + \omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_6^2\omega_{13} - \omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 -$
$3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13} + \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2 +$
$2\omega_{14}\omega_8\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6 + 2\omega_{14}\omega_8\omega_5\omega_9^3 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13} +$
$2\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6 - \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2 - 6\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} -$
$3\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{12}^2\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_6^2\omega_{13} -$
$3\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5^2 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 + 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} + \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} -$
$2\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^2\omega_6^2\omega_{13} - 3\omega_{14}\omega_8 cs^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} -$
$\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_{13} + 6\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} -$
$3\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6 - \omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 3\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6 +$
$\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 2\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2\omega_{13} + 6\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5^3\omega_9^3\omega_6^2\omega_{13} - 3\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} -$
$2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13} - 3\omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_8\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} + \omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13} - \omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} +$
$2\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_{12}^2\omega_6^2\omega_{13} - 6\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} +$
$\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2 - 2\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} -$
$3\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - \omega_8\omega_5^2 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_6^2\omega_{13} + 6\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} +$
$\omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_{13} + \omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 9\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} -$
$\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6 + 3\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 3\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} -$
$2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} + 3\omega_{14}\omega_8 cs^2\omega_5^2\omega_{12}\omega_6^2\omega_{13} - \omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}cs^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} +$
$\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13} + 3\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} +$
$3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6 + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_9\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_9\omega_{12}\omega_6^2\omega_{13} + 3cs^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13} -$
$3\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8 cs^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13} - 3\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6 - 2\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}$

$C_{32} = -\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 9\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 + \omega_{14}\omega_8\omega_5\omega_9^3\omega_6^2\omega_{13}^2 + \omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} -$
$3\omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} + \omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5^3\omega_9\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_{13} - cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 +$
$\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} + \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_6^2\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_{12}\omega_6^2\omega_{13} - \omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13} -$
$\omega_{14}\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6 + 6\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} - 3\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13} +$
$3\omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} + cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 + 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} +$
$\omega_{14}\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} + \omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_6\omega_{13} - 3\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8\omega_5\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13} -$
$2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6 - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 3\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} +$
$3\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} - 3\omega_{14}\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_6^2\omega_{13} - \omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} -$
$\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} + 6\omega_{14}\omega_8\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} +$
$\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6 + 6\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}^2 + 6\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} -$
$\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6 - 2\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} - \omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} -$
$3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 6\omega_{14}\omega_8\omega_5 v_1^2\omega_{12}^2\omega_6^2\omega_{13} + 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_6^2\omega_{13} - \omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} +$
$3\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} + 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} + \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 6\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^2\omega_6^2\omega_{13} -$
$\omega_{14}\omega_8 cs^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13} + 3\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_{13} +$
$2\omega_{14}\omega_8 cs^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 2\omega_{14}\omega_8\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 2\omega_{14}\omega_8\omega_5\omega_9^3\omega_6^2\omega_{13} +$
$3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6 - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} + \omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6 + 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} -$
$2\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8\omega_5^3\omega_9^3\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13} +$
$\omega_{14}\omega_8\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_6^2\omega_{13} - 3\omega_8\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13} - \omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} +$
$3\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - 3\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} - 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + \omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} -$
$2\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - 3\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 3\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} + \omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} -$
$3\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_6^2\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13} -$
$3\omega_{14}\omega_5^2 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_6^2\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} +$
$\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6 + 3\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 3\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 2\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} +$
$3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} + \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 3\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}cs^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13} -$
$\omega_{14}\omega_8\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13} + \omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 3\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13} + 6\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6 +$
$\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} + \omega_{14}\omega_8\omega_9^3\omega_{12}\omega_6^2\omega_{13} + cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} - \omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13} +$
$\omega_{14}\omega_8 cs^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13} - \omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - 3\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6 - 6\omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}$

$C_{33} = -\omega_{14}\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2 -$
$8\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 5\omega_{14}\omega_8\omega_5^3 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$
$\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2 - 8\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$
$2\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8\omega_5 v_1^2\omega_5^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$
$2\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_7 + 8\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$
$4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 + 5\omega_{14}\omega_8\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$
$2\omega_8\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 + 4\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$
$4\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 8\omega_{14}\omega_8 cs^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$

$$6\omega_{14}\omega_8^2 cs^2\omega_9^3\omega_{12}^3\omega_{12}^2\omega_6^2\omega_7 + 2\omega_8^2\omega_5^2\omega_9^3\omega_{12}^3\omega_6^2\omega_{13}^3\omega_7 + 2\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^3\omega_7 - 2\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^3\omega_7 + 2\omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$15\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^3\omega_5^3\omega_9^3\omega_{12}^3\omega_{13}\omega_7 + 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$2\omega_{14} cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8^2\omega_5^2 v_1^3\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 3\omega_{14} cs^2\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + \omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$$
$$3\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^3 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2\omega_5^3\omega_{12}^3\omega_6^2\omega_{13}^2\omega_7 +$$
$$2\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 15\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_9^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_7 -$$
$$2\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8\omega_8 cs^2\omega_5^2 v_1^3\omega_9^3\omega_{12}^3\omega_6^2\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8^2\omega_5^3 v_1^2 v_1^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3 v_1^3\omega_9\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_7 - 2\omega_8\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2\omega_5^3 v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 +$$
$$9\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3 v_1^3\omega_9\omega_{12}^2\omega_6^2\omega_7 + 2\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 +$$
$$9\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14} cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 +$$
$$2\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^3\omega_5^3\omega_9^3\omega_{12}\omega_6^3\omega_7 - 13\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_6^2\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 +$$
$$\omega_{14}\omega_8\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^3\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$$
$$2\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 9\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_{12}^2\omega_6^2\omega_7 + 2\omega_{14}\omega_8\omega_5^2\omega_9^3\omega_9^2\omega_6^2\omega_{13}^2\omega_7 -$$
$$4\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^2\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$$
$$2\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 11\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$2\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}^2\omega_6^2\omega_{13} - 2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 3\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 +$$
$$2\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 3\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_7 -$$
$$2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^2\omega_{12}^2\omega_{13}^2\omega_7 + 3\omega_{14}\omega_8^2\omega_5^3 v_1^3\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$$
$$2\omega_8^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 + 8\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2 cs^2\omega_5^3\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 -$$
$$2\omega_8^2\omega_5^3\omega_9^3\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_9^3\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8\omega_5^3\omega_9^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$2\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 11\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_8\omega_5^3 v_1^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_7 -$$
$$2\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 6\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_7 -$$
$$4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14} cs^2\omega_5^2\omega_9^3\omega_{12}^3\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$2\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13} - 4\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_7 - 3\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$4\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_7 + 2\omega_8^2\omega_5^3 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$$
$$2\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_7 - 2\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7$$

$C_{34} = -2\omega_8^2\omega_5\omega_9^3\omega_{12}^3\omega_6^3\omega_{13}^2\omega_7 - \omega_{14}\omega_8\omega_5^2 v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 - 9\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 +$
$2\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_9\omega_{12}\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2\omega_5^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 -$
$2\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_7 + 2\omega_{14}\omega_8\omega_5 v_1^3\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 8\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8\omega_5\omega_9\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_6^3\omega_{13}^2\omega_7 -$
$\omega_{14}\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13} - 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_7 - 4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_7 + 2\omega_8^2\omega_5^3\omega_9^2\omega_{12}\omega_6^3\omega_{13}^3\omega_7 +$
$4\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_9^3\omega_9^3\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^3\omega_{13}\omega_7 + 2\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8^2\omega_5\omega_9^3\omega_9\omega_{12}^3\omega_6^2\omega_{13}^2\omega_7 -$
$3\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2 cs^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 +$
$8\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7 + 2\omega_8^2\omega_5 v_1^3\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8^2\omega_5^3 v_1^3\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7 +$
$2\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^3\omega_6^2\omega_{13}^2\omega_7 + 5\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^3\omega_7 + 2\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 +$
$2\omega_{14} cs^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8 cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^3\omega_7 - 2\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_7 +$
$2\omega_{14} cs^2\omega_5\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 + 2\omega_8\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_6\omega_{13}\omega_7 + 2\omega_8\omega_5^3 v_1^3\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13}^2\omega_7 +$
$2\omega_{14}\omega_8^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_7 + \omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2 cs^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 9\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 11\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 +$
$2\omega_8^2\omega_5^3\omega_9\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$
$15\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 - 2\omega_8\omega_5\omega_9^3\omega_{12}^3\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13} + 6\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14} cs^2\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 +$
$\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 + \omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 -$
$2\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^3\omega_7 + 3\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_9^3\omega_{12}\omega_6^3\omega_{13} + 2\omega_8^2\omega_5 v_1^3\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13}^2\omega_7 +$
$3\omega_{14}\omega_8^2 v_1^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 3\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5 v_1^3\omega_9\omega_{12}\omega_6\omega_7 + 11\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 +$
$\omega_{14}\omega_8^2\omega_5\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3\omega_9^3\omega_{12}\omega_6^3\omega_{13}\omega_7 - 2\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8^2\omega_5^3 v_1^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 +$
$3\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + \omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_7 + 4\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9^3\omega_9^3\omega_6^2\omega_{13}^2\omega_7 -$
$\omega_{14}\omega_8\omega_5 v_1^3\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7 +$
$4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_7 - 6\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_9\omega_6^3\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 +$
$4\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_9\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_9\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7 -$
$13\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8^2 cs^2\omega_5\omega_9\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_9^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$
$4\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^3\omega_9\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2 -$
$2\omega_8^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_9^3\omega_{12}\omega_6^3\omega_{13}\omega_7 - 8\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14} cs^2\omega_5^2\omega_9\omega_9\omega_{12}^3\omega_6^3\omega_{13}\omega_7 + 6\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_6^3\omega_{13}^2\omega_7 +$
$\omega_{14}\omega_8^2 v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^2 v_1^3\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5^2 v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_7 + 12\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7 + 2\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$
$2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_8^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 15\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7 +$
$2\omega_{14}\omega_8^2 v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13} + 2\omega_8^2 cs^2\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2 v_1^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$
$5\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^3\omega_{13}\omega_7 - 2\omega_8^2\omega_5^2 v_1^3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 +$
$8\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7 - 6\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_9\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 2\omega_8 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 -$
$8\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7 +$
$2\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^3\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_6\omega_{13}^2\omega_7 + 2\omega_{14} cs^2\omega_5^3\omega_9^3\omega_{12}\omega_6^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8 cs^2\omega_5^3\omega_9\omega_9\omega_{12}^2\omega_6\omega_7 -$
$4\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_9^3\omega_{12}\omega_6\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13} - 2\omega_8\omega_5 v_1^3\omega_9^3\omega_{12}\omega_6^3\omega_{13}\omega_7 - 4\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 2\omega_8^2 cs^2\omega_5^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$
$9\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5 v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + \omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 - 2\omega_8^2\omega_5\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8 cs^2\omega_5\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7$

$C_{35} = \omega_5^2\omega_6^2 + \omega_5^3\omega_6 - \omega_8^2\omega_5\omega_6 + \omega_8\omega_5^3\omega_6^2 - 2\omega_8\omega_5^3\omega_6 + 3\omega_8^2\omega_5\omega_6 - \omega_5^3\omega_6^2 - 2\omega_8\omega_5^2\omega_6 - \omega_8^2\omega_5 + \omega_8\omega_5\omega_6 + \omega_8\omega_5^3 - \omega_8^2\omega_5^2\omega_6 - 2\omega_8^2\omega_6 + 2\omega_8^2\omega_5\omega_6$

$C_{36} = -4\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6\omega_{13} + 4\omega_8\omega_5^3\omega_6^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 4\omega_8^2\omega_5^3\omega_6^2\omega_{12}\omega_6\omega_{13}\omega_7 -$
$4\omega_{14}\omega_8\omega_5^3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 5\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}^2\omega_6^2\omega_7 +$

$$12\omega_{14}\omega_5^2\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} + 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_6^2\omega_{13}\omega_7 - 8\omega_{14}\omega_8\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 -$$
$$5\omega_{14}\omega_8^2\omega_3^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 4\omega_8^3\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 2\omega_{14}\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 +$$
$$4\omega_{14}\omega_8\omega_5^3\omega_9\omega_{12}^2\omega_{13}\omega_7 + 8\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_8^3\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_7 - 4\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13} +$$
$$4\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_6^2\omega_{13}\omega_7 - 4\omega_8^2\omega_5^3\omega_9^2\omega_{12}^2\omega_6\omega_7 + 4\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 -$$
$$2\omega_{14}\omega_8^3\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 + 8\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 - 10\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 8\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 +$$
$$4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13} - 4\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 -$$
$$4\omega_8^2\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 - 4\omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_7 - 8\omega_{14}\omega_8^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 - 8\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 +$$
$$4\omega_{14}\omega_8\omega_5^3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5^3\omega_9^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^3\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 8\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 -$$
$$4\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 4\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 6\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 - 4\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_7 - 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}\omega_7$$

$C_{37} = -\omega_8^2\omega_5^3\omega_{15}^2\omega_6^2 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 - 2\omega_8\omega_5^2\omega_{15}^2\omega_6 - 3\omega_{17}\omega_8^2\omega_5\omega_{15}^2\omega_6 + 2\omega_{17}\omega_8^2\omega_5^2\omega_6^2 + 5\omega_{17}\omega_8^2\omega_5\omega_{15}^2\omega_6^2 -$
$2\omega_8^2\omega_5^2\omega_{15}\omega_6^2 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 - \omega_{17}\omega_8^2\omega_5^3\omega_6^2 + \omega_{17}\omega_8\omega_5^3\omega_{15} + \omega_8^2\omega_5^3\omega_{15}\omega_6 + \omega_{17}\omega_5^2\omega_{15}^2\omega_6 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6^2 +$
$2\omega_8\omega_5^3\omega_{15}^2\omega_6^2 + \omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6 + 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 - \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 + \omega_{17}\omega_5^3\omega_{15}^2\omega_6 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6^2 - \omega_{17}\omega_5^3\omega_{15}^2\omega_6 - 2\omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6 +$
$3\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6^2 + \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 - 2\omega_8\omega_5^3\omega_{15}^2\omega_6 - 4\omega_{17}\omega_8^2\omega_{15}^2\omega_6^2 + \omega_8^2\omega_5^3\omega_{15}\omega_6^2 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}^2 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6$

$C_{38} = -12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_{12}\omega_6^3\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7 + 12\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 -$
$6\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6\omega_6^2\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 48\omega_{17}\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12} v_2^2\omega_{13}\omega_7^2 + 10\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 6\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 12\omega_{17}\omega_{14}\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 2\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 - 6\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 + 24\omega_{17}\omega_{14}\omega_8\omega_5\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 +$
$24\omega_{17}\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 24\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{13}\omega_7 + 12\omega_{17}\omega_{14}\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_8 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 -$
$12\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_8^3\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 24\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 +$
$36\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 12\omega_{17}\omega_{14}\omega_8 c s^2 \omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_8^2 c s^2 \omega_5^2\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^3\omega_7 +$
$12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8^3\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 + 36\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7 - 24\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 -$
$12\omega_{14}\omega_8^2 c s^2 \omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 18\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 48\omega_{17}\omega_{14}\omega_8\omega_8^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 +$
$12\omega_{17}\omega_8^2 c s^2 \omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 -$
$24\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 24\omega_{17}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 +$
$12\omega_{17}\omega_{14}\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 -$
$\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_7 + 12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 -$
$18\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 36\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 +$
$18\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6\omega_6^2\omega_7^2 + 12\omega_{17}\omega_8 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_9\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_7 + 12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8 c s^2 \omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 24\omega_{17}\omega_{14}\omega_8\omega_5 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^3\omega_7^2 + 12\omega_{17}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6 v_2^2\omega_{13}\omega_7^2 - 18\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 24\omega_{17}\omega_{14}\omega_8\omega_8^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2 +$
$12\omega_{14}\omega_8^2 c s^2 \omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13} + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7 +$
$6\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 18\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7^2 +$
$12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_7 - 24\omega_{17}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 +$
$24\omega_{17}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 + 24\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_6^2 v_2^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_7^2 +$
$6\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_7 - 12\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 30\omega_{17}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 24\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_7 - 6\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_6^3\omega_{13}\omega_7^2 -$
$6\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13} + 12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_9^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_6^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5^3\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13} +$
$12\omega_{17}\omega_{14}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_{12}\omega_6^3\omega_7 - 24\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8 c s^2 \omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 -$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_9\omega_{12}\omega_6^3 v_2^2\omega_{13}\omega_7^2 - 24\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^3\omega_{13}\omega_7^2 + 12\omega_{17}\omega_8^2 c s^2 \omega_5^3\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_7^2$

$C_{39} = -12\omega_{17}\omega_8 c s^2 \omega_5\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8 c s^2 \omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$6\omega_8 c s^2 \omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17} c s^2 \omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{16}^2\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2 - 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 9\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}\omega_6\omega_{10}^2\omega_7 -$
$4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_7 - 12 c s^2 \omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}^3 v_2^2\omega_{10}^2 - 4\omega_{17}\omega_5^2\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 -$
$2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{10}^2\omega_7 - 12\omega_{17} c s^2 \omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$4\omega_{17}\omega_8\omega_5\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10} + 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + 8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$3\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 - 4\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 6\omega_8 c s^2 \omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 2\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$12 c s^2 \omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_7 - 6\omega_8 c s^2 \omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8 c s^2 \omega_5\omega_{15}^2\omega_6\omega_{10}^2\omega_7 +$
$4\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 8\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 -$
$6\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 + 12\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}^2\omega_{16}\omega_{10} + 12\omega_8 c s^2 \omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10} + 4\omega_{17}\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{16}\omega_{10} +$
$4\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 3\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8 c s^2 \omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10}^2 - 4\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$2\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10} - 4\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17} c s^2 \omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 - 12\omega_8 c s^2 \omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 +$
$3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8 c s^2 \omega_5^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{10}^2 + 2\omega_{17}\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}^2\omega_6\omega_{10}^2 +$
$12 c s^2 \omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 + 24\omega_{17}\omega_8 c s^2 \omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8 c s^2 \omega_5\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 -$
$4\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}^2\omega_{10} + 2\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{10} + 2\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$12\omega_{17}\omega_8 c s^2 \omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10} - 4\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 +$

$$4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10} + 12\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10} + 4\omega_{17}\omega_8\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 + 2\omega_8\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{10}^2 -$$
$$24\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 - 8\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{10}^2\omega_7 - 4\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$$
$$2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_6 v_2^2\omega_{16}\omega_{10} + 9\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{10}^2\omega_7 -$$
$$4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8^2\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 - 6\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_7 - 2\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 6\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_{10}^2\omega_7 -$$
$$12\omega_{17}\omega_8 cs^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 -$$
$$2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{10}^2 + 6\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 -$$
$$4\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_7 + 4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_7 + 3\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{10}^2\omega_7$$

$C_{40} = -\omega_8^2\omega_5^3\omega_{15}^2\omega_6^2 + \omega_8^2\omega_5^3\omega_{15}^2\omega_6^2 v_2^2 + \omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6^2 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6^2 v_2^2 - 5\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6^2 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 - 2\omega_8\omega_5^3\omega_{15}^2\omega_6^2 v_2^2 - $
$2\omega_8\omega_5^2\omega_{15}^2\omega_6^2 - 11\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6^2 - 8\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}^2\omega_6 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6^2 v_2^2 - \omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6^2 + 2\omega_{17}\omega_8^2\omega_5^2\omega_6^2 - 2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2 - $
$2\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2 + \omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6 + 2\omega_{17} cs^2\omega_5^3\omega_{15}^2\omega_6 - \omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6^2 + \omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6^2 v_2^2 - 2\omega_{17} cs^2\omega_5^3\omega_{15}\omega_6^2 - $
$\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6^2 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2 + 2\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6^2 + 2\omega_8\omega_5^2\omega_{15}^2\omega_6^2 v_2^2 + 4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_6 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6^2 + \omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6 v_2^2 - $
$2\omega_{17}\omega_8^2\omega_5^2\omega_6^2 v_2^2 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 - \omega_{17}\omega_8^2\omega_5^3\omega_6^2 + 7\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}^2\omega_6 + \omega_8^2\omega_5^3\omega_{15}\omega_6 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_2^2 - 2\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2 + $
$2\omega_8 cs^2\omega_5^3\omega_{15}\omega_6 - 2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6 + \omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6^2 + 2\omega_8^2\omega_5^3\omega_{15}^2\omega_6^2 + 2\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 + 5\omega_{17}\omega_8 cs^2\omega_5^3\omega_{15}^2\omega_6^2 - \omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6 v_2^2 - $
$\omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6^2 + \omega_{17}\omega_8^2 cs^2\omega_5^3\omega_6^2 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 - 6\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6 - \omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6 + 2\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2 - \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2 - $
$\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6^2 + 2\omega_8\omega_5^3\omega_{15}^2\omega_6 v_2^2 + \omega_8^2 cs^2\omega_5^3\omega_{15}^2\omega_6^2 + \omega_{17}\omega_8^2\omega_5^3\omega_6^2 v_2^2 + \omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6 + 13\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}^2\omega_6^2 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2 - $
$\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2 + \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 - 2\omega_8\omega_5^3\omega_{15}^2\omega_6 + 6\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6^2 + \omega_8^2\omega_5^3\omega_{15}\omega_6^2 - 7\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6 + 2\omega_{17}\omega_8 cs^2\omega_5^3\omega_{15} - $
$\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2 - 2\omega_8 cs^2\omega_5^3\omega_{15}\omega_6^2 - 2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_6^2 - \omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 + 2\omega_{17} cs^2\omega_5^2\omega_{15}^2\omega_6^2 + \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2 + 4\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2$

$C_{41} = -4\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8 cs^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 + 12\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 +$
$2\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17} cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6^2\omega_{10} - 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 3\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{10}^2\omega_7 -$
$4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_7 - 4 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{10} - 12\omega_{17}\omega_5\omega_{15}^2 v_2^2\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 -$
$2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{10}\omega_7 - 4\omega_{17} cs^2\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$12\omega_{17}\omega_8\omega_5\omega_{15}^2 v_2^2\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10} + 4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{10}\omega_7 + 24\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{10}\omega_7 + 2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 2\omega_8 cs^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 6\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$4 cs^2\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 + 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_7 - 2\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{10}^2\omega_7 +$
$12\omega_5^2\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{16}\omega_{10}\omega_7 - 12\omega_{17}\omega_8\omega_5\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 8\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 -$
$2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_{16}\omega_{10} + 4\omega_8 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10} + 12\omega_{17}\omega_8^2\omega_{15}^2 v_2^2\omega_{16}\omega_{10} +$
$4\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 9\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8 cs^2\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10} - 12\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10} - 12\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17} cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_8 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 +$
$9\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10}\omega_7 + 2\omega_{17}\omega_8 cs^2\omega_5^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{10} + 2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{10} +$
$4 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 + 8\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_{16}\omega_{10}\omega_7 -$
$4\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_{10} + 2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10} + 6\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10} - 4\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_6\omega_{10}\omega_7 - 8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 +$
$12\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10} + 4\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10} + 4\omega_{17}\omega_8\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 + 6\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{10} -$
$8\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 - 24\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8^2\omega_{15}^2\omega_{10}^2\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{10}\omega_7 - 12\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10} + 3\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{10}^2\omega_7 -$
$4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{10}^2\omega_7 + 12\omega_{17}\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_7 - 6\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_{10}^2\omega_7 -$
$4\omega_{17}\omega_8 cs^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 12\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{10}\omega_7 + 12\omega_{17}\omega_8^2\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7 -$
$6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{10} + 2\omega_{17} cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7 -$
$12\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8 cs^2\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_7 + 12\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_7 + 3\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{10}^2\omega_7$

$C_{42} = -6\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 + 54\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 + 12\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$12\omega_{17} cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2 + 24\omega_{17}\omega_8 cs^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 -$
$12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8^2\omega_5^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2\omega_{10}^2\omega_7 - 6\omega_8\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$12\omega_8\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7 - 12\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$36\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 36\omega_{17}\omega_8^2 cs^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2 + 9\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$
$12\omega_{17}\omega_8^2\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 24\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10} - 12\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_8^2 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 +$
$12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 3\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17} cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 -$
$54\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 6\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 18\omega_{17}\omega_8^2 cs^2\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 +$
$12\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 6\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 6\omega_8^2\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 3\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8^2\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 +$
$\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{10}^2\omega_7 - 42\omega_{17}\omega_8 cs^2\omega_8^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 - 9\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 -$
$12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}^2\omega_5\omega_{15}\omega_6^2\omega_6\omega_{10}^2\omega_7 + 18\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{10}^2\omega_7 -$
$12\omega_{17} cs^2\omega_8^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_8 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 24\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 18\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$9\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2\omega_{10}^2\omega_7 + 6\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 9\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7 - 36\omega_{17}\omega_8^2 cs^2\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7 + 6\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$12\omega_{17}\omega_8^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 6\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 36\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}^2\omega_6^2\omega_{16}\omega_7 + 12\omega_8 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7 +$
$6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_7 + 6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 6\omega_{17} cs^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 54\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 +$
$24\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8^2\omega_5\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8^2\omega_5\omega_6\omega_{10}^2\omega_7 +$
$4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{10}^2\omega_7 + 12\omega_8\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$12\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 24\omega_{17}\omega_8^2 cs^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 42\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 +$
$6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_7 - 18\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_7 - 18\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{10}^2\omega_7 +$
$6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 30\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$12\omega_{17}\omega_8^2\omega_5\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 54\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 12\omega_8\omega_5\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 +$
$12\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_7 - 24\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10} - 12\omega_{17}\omega_8\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 +$

$$12\omega_8\omega_5^2\omega_{15}^2\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 3\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 + 12\omega_{17}\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2 + 12\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7^2 -$$
$$12\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 + 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7^2 - 6\omega_8^2 cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 6\omega_8\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 +$$
$$24\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}^2\omega_6^2\omega_{16}^2\omega_{10}^2 - 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{10}^2\omega_7^2 - 12\omega_8\omega_5^2\omega_{15}^2\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 - 12\omega_8 cs^2\omega_5^2\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 +$$
$$6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8^2\omega_5\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 36\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2 +$$
$$12\omega_{17} cs^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2 - 12\omega_{17}\omega_8^2\omega_5\omega_{15}^2\omega_6^2 v_2^2\omega_{10}^2\omega_7^2 + 18\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7$$

$C_{43} = 12cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22} + 12cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 18cs^2\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 6v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 36cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{13} - 6cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 -$
$12\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13} + 18cs^2\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12cs^4\omega_{18}\omega_9^2\omega_6^2\omega_{22} - 12v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 36cs^4\omega_9^3\omega_6^2\omega_{13} - 36cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2 -$
$88cs^4\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 - 36cs^2\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13} + 108cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{13} + 18cs^4\omega_9^3\omega_6^2\omega_{22}\omega_{13} + 18cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 -$
$12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6\omega_{13} - 12v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2 + 12cs^4\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 12cs^2\omega_{18}\omega_6^3\omega_{22}\omega_{13}^2 + 72cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13}^2 -$
$6cs^2 v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 18cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} - 12v_1^2\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 + 12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} -$
$6cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2 + 36cs^2\omega_9^3\omega_6^2 v_3^2\omega_{13} - 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} - 12cs^2 v_1^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 18v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 36cs^4\omega_{18}\omega_9^3\omega_{22}\omega_{13}^2 -$
$2cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 18cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} + 12cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{13} + 12v_1^2\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13} - 12v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 18cs^4\omega_9^3\omega_6^3\omega_{13}^2 +$
$12v_1^2\omega_9^3\omega_6^2 v_3^2\omega_{13} - 36cs^4\omega_{18}\omega_9^3\omega_6\omega_{13} - 6cs^2 v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{13} - 24v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13} + 36cs^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 12v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} +$
$12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} - 96cs^4\omega_{18}\omega_9^3\omega_{22}\omega_{13} - 18cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 36cs^4\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 36\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} -$
$6cs^2 v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^2\omega_6 v_3^2 + 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} - 24v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 18cs^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 12cs^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 -$
$42cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 12\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 + 12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 - 24\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 150cs^4\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 + 36cs^2\omega_{18}\omega_9^3\omega_{22}\omega_{13}^2 -$
$36cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} + 12cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 + 12cs^2 v_1^2\omega_9^3\omega_6\omega_{13}^2 + 36cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 36cs^4\omega_9^3\omega_6\omega_{13}^2 - 36cs^2\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13}^2 +$
$24v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^2 v_3^2 + 36cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 6v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 72cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 6cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2 -$
$cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 18cs^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{13} - 12v_1^2\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13}^2 +$
$12cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} - 18cs^4\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 12cs^2\omega_9^3\omega_6^2\omega_{13} + 12v_1^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} -$
$18cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 12v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2 - 36cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 12v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} - 12cs^4\omega_{18}\omega_9^3\omega_6^3\omega_{22} + 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 +$
$12cs^4\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 18\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 12cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 36cs^4\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 36cs^2\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13} + 72cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13} +$
$5cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 42cs^4\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 72cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22} - 6\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 84cs^4\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} +$
$12\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{13} + 12\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2 + 12v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 12cs^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 36cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} -$
$6cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{13} - 36cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} - 12\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2 + 24\omega_{18}\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13} + 12cs^2 v_1^2\omega_{18}\omega_9\omega_6^2\omega_{13} -$
$6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 36v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13} + 180cs^4\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13} - 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22} - 12\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2 -$
$12cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 30cs^4\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 6cs^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 6\omega_9^3\omega_6^3 v_3^2\omega_{13} +$
$18cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 36cs^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 6cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{13} + 36cs^4\omega_{18}\omega_9^2\omega_6^3\omega_{13} - 24\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} + 18cs^2 v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} -$
$54cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 48cs^4\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} + 2cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} - 6v_1^2\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6\omega_{13} +$
$6cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 12v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 12v_1^2\omega_{18}\omega_9^2\omega_6\omega_{22}v_3^2 - 12\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 18cs^2 v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 24\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} -$
$6v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 12cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{22} + 24v_1^2\omega_{18}\omega_9^2\omega_6\omega_{22}v_3^2\omega_{13} + 12cs^2 v_1^2\omega_{18}\omega_9^3\omega_{22}\omega_{13} + 6v_1^2\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13}^2$

$C_{44} = -6cs^2\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 12cs^4\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 18v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 12cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{13} - 6cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13} +$
$6cs^2\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 36v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12cs^4\omega_9^3\omega_6^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2 - 4cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 - 12cs^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} +$
$36cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{13} + 6cs^4\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 6cs^4\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2 + 60cs^2 v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 36cs^2 v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{13} -$
$36v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2 + 24cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 18cs^2 v_1^2\omega_9\omega_6^3\omega_{13}^2 - 144cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} +$
$36v_1^2\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13} - 6cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2 + 12cs^2\omega_9^3\omega_6^2 v_3^2\omega_{13} + 24cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} - 84cs^2 v_1^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 54v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 -$
$18cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} + 24cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} + 12cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{13} + 36v_1^2\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13} - 36v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 6cs^4\omega_9^3\omega_6^3\omega_{13}^2 +$
$36v_1^2\omega_9^3\omega_6^2 v_3^2\omega_{13} - 12cs^4\omega_{18}\omega_9^3\omega_6\omega_{13} - 18cs^2 v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{13} - 72v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13} + 12cs^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 36v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} +$
$84cs^2 v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} - 12cs^4\omega_{18}\omega_9^3\omega_{22}\omega_{13} + 6cs^4\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 36\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} +$
$78cs^2 v_1^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2 - 24cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} - 72v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 6cs^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 36cs^2 v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 -$
$24cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 12\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 + 12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 - 108cs^2 v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 24\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 24cs^4\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 +$
$12cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 - 12cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} - 6cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 36cs^2 v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + 12cs^2\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13} - 12cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 -$
$12cs^2\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 72v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 12cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 18v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 -$
$24cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13} + 6cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2 + 60cs^2 v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} - 6cs^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 -$
$36cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{13} - 36v_1^2\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 12cs^2\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} - 6cs^4\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2 - 48cs^2 v_1^2\omega_{18}\omega_9^3\omega_{22}\omega_{13} - 6\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 -$
$42cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 12cs^2\omega_9^3\omega_6^2\omega_{13} + 36v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 12cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 36v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2 - 12cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} -$
$36v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} + 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 12cs^4\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 18\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 72cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 12cs^4\omega_9^2\omega_6^2\omega_{22}\omega_{13} +$
$12cs^2\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13} + 24cs^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - cs^4\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 12cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 24cs^2\omega_{18}\omega_9^2\omega_6\omega_{22}v_3^2\omega_{13} -$
$6\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 12cs^4\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 36cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{13} + 12\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2 + 36v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} +$
$12cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 12cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} - 6cs^4\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 12cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2 - 12\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 +$
$6cs^2\omega_9^3\omega_6^3\omega_{13} + 24\omega_{18}\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13} + 36cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{13} - 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 108v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} + 18cs^4\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} -$
$12\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 24cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22} - 12\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2 + 18cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} +$
$12cs^4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} + 18cs^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 6\omega_9^3\omega_6^3 v_3^2\omega_{13} + 6cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} + 18cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{13} +$
$12cs^4\omega_{18}\omega_9^2\omega_6^2\omega_{13} - 24\omega_{18}\omega_9^3\omega_6^3\omega_{22}v_3^2\omega_{13} - 132cs^2 v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 18cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 12cs^4\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} +$
$6cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 18v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 12cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{13} - 12cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} - 36v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 36v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2 -$
$12\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 180cs^2 v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 24\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} - 18v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13} + 72v_1^2\omega_{18}\omega_9^2\omega_6\omega_{22}v_3^2\omega_{13} + 18v_1^2\omega_9^3\omega_6\omega_{22}v_3^2\omega_{13}^2$

$C_{45} = 12\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_{22}\omega_{13}^2 + 2cs^2\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2 - \omega_{11}cs^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 + \omega_{11}v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2 + 2\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 +$
$2\omega_{11}\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}^2 + \omega_{11}\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 + 11\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 4\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{13} + 2\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{13} + 4\omega_{11}\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} -$
$4\omega_{11}\omega_{18}^2\omega_9^3\omega_6^3\omega_{22} + 7\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 2\omega_{11}\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 15\omega_{11}cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 8\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{22} +$
$2\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13} - 6\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13} - 4\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6^2\omega_{13} + 4cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} + 4\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^2\omega_{13} +$
$8\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 + 2\omega_{11}\omega_{18}\omega_9^3\omega_6^3\omega_{13} + 4\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6^2\omega_{13} + 2\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13} - 4\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{13} - 3\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13} -$

$8\omega_{11}cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}+\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2+5\omega_{11}\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2-24\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2-4\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}-4\omega_{11}\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}+$
$4\omega_{11}cs^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2-8\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2-4\omega_{11}\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}-9\omega_{11}\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}^2+2\omega_{11}v_1^2\omega_{18}^3\omega_9^3\omega_6^3\omega_{13}-16\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_{22}\omega_{13}^2-$
$4\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}+4\omega_{11}v_1^2\omega_{18}^3\omega_9^3\omega_6^2\omega_{22}^2+3\omega_{11}\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2+2\omega_{11}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2+2\omega_{11}cs^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}+4\omega_{11}\omega_{18}^3\omega_9^2\omega_6^2\omega_{22}-$
$2cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2-2\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2-4\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}-4\omega_{11}\omega_{18}^3\omega_9^2\omega_6^3\omega_{13}-\omega_{11}v_1^2\omega_{18}^3\omega_9^2\omega_6^2\omega_{22}\omega_{13}-\omega_{11}\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2-$
$2\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}+4\omega_{11}\omega_{18}^2\omega_9\omega_6^3\omega_{22}+2\omega_{11}cs^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2+12\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}+8\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6\omega_{22}-$
$5\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}-2\omega_{11}\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}+26\omega_{11}cs^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}+4\omega_{11}v_1^2\omega_{18}^3\omega_9^3\omega_6^2\omega_{13}^2-2\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{22}^2+6\omega_{11}\omega_{18}^3\omega_9^3\omega_6\omega_{22}\omega_{13}+$
$4\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}-4\omega_{11}v_1^2\omega_{18}^3\omega_9^3\omega_6^2\omega_{22}-2\omega_{11}\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2-4\omega_{11}\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}-7\omega_{11}\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2-2\omega_{11}v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2+$
$3\omega_{11}cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2-4\omega_{11}v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}-6\omega_{11}cs^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2-8\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}-4cs^2\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2-$
$5\omega_{11}v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2+13\omega_{11}cs^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}-\omega_{11}\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}+3\omega_{11}\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}+4\omega_{11}\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}-2\omega_{11}cs^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2+$
$4\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}-2\omega_{11}\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2-6\omega_{11}cs^2\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}-2\omega_{11}v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2+4\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^3\omega_{13}-2\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2+$
$8\omega_{11}cs^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2-3\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2+4\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}-2\omega_{11}v_1^2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2+9\omega_{11}v_1^2\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2+4\omega_{11}\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}^2$

$C_{46}=-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^3\omega_{13}-$
$2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13}-2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2-$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^3v_2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}+\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}+$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2^2+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}-2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2-2\omega_{20}\omega_8\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+$
$\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-$
$2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2^2+4\omega_{20}\omega_{14}cs^4\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}-2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2+$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2v_2\omega_{13}-2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2-$
$2\omega_{20}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2+2\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2+$
$\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}-2\omega_{20}\omega_8cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}-$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2v_2-2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}+$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_{12}\omega_6^3v_3^2v_2-\omega_{14}\omega_8^2cs^2\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13}+$
$2\omega_{20}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}+2\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}-$
$2\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2^2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+4\omega_{20}\omega_{14}\omega_8cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2\omega_{13}+$
$2\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2^2\omega_{13}+4\omega_{20}\omega_{14}\omega_8cs^4\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}-$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2^2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}+$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}+2\omega_{20}\omega_8cs^2\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}-2\omega_{20}\omega_8^2\omega_5v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2-8\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_{22}v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2^2-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2-$
$2\omega_{20}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2+2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+$
$2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-2\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2-$
$\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}+$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2v_2^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2^2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}+$
$2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13}+2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+$
$2\omega_{20}\omega_8^2\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2v_2-$
$\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+2\omega_{20}\omega_8^2\omega_5v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}-$
$8\omega_{20}\omega_{14}\omega_8cs^4\omega_5\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^2-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}+$
$\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2^2-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^2v_2^2-$
$2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_8^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}+$
$\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}-$
$2\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}+\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+2\omega_{20}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}-$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2-2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2^2+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{13}-$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}-2\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2^2\omega_{13}+$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2+2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}-$
$4\omega_{20}\omega_{14}cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}+$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}+2\omega_{14}\omega_8\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}+$
$\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13}+2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{13}+$
$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2+2\omega_{20}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+2\omega_{20}\omega_8cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-$
$2\omega_{20}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2^2-\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}-$
$4\omega_{20}\omega_{14}\omega_8^2cs^4\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}-2\omega_{20}\omega_8\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2+$
$2\omega_{20}\omega_8cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_{12}\omega_6^3v_2\omega_{13}+12\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2\omega_{13}+$
$8\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}-\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2-$
$\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13}-2\omega_{20}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-$
$\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}-2\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+$
$2\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_9\omega_{12}\omega_6^3v_2^2\omega_{13}+$
$2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}+2\omega_{20}\omega_{14}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}-2\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}+$
$2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2v_2+\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-2\omega_{20}\omega_8\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}-$
$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+2\omega_{20}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}-$
$2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}-\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2^2\omega_{13}+\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}+$

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$$\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13} - 2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} + 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} +$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} +$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} - \omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} -$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} - \omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} -$$
$$2\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13} +$$
$$2\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2 + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3 v_2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 - 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} -$$
$$2\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3 v_3^2 - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2 -$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3 v_3^2 v_2^2 +$$
$$2\omega_{20}\omega_8^3 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^3 v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2 - 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3 v_2^2 - 8\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13} +$$
$$\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2 - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{13} -$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2 - 2\omega_{14}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3 v_3^2 v_2 -$$
$$2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} +$$
$$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2 + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2 -$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2 + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2^2 + 2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13} -$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2 + \omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3 v_3^2 v_2^2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} + 2\omega_{20}\omega_8\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} -$$
$$2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2 + 2\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 + 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13} +$$
$$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3 v_3^2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2 +$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2 + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13} +$$
$$2\omega_{14}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} - \omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2 v_2 - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^3 v_3^2 v_2^2 -$$
$$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2 + 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2 - \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3 v_3^2 v_2\omega_{13} -$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 4\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} -$$
$$2\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_2 v_2\omega_{13} -$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3 v_3^2 v_2 -$$
$$4\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2 v_2\omega_{13} - 2\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} -$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} +$$
$$2\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{14}\omega_8 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} -$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{13} -$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3 v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13} - 4\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13} -$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} +$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2^2 + 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2 -$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} - \omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13} +$$
$$4\omega_{20}\omega_{14}\omega_8 cs^4\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} + \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^3 v_2^2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3 v_2 + 2\omega_{14}\omega_8\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13} + 2\omega_{14}\omega_8 cs^2\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} -$$
$$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2 v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13}$$

$C_{47} = \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3 v_2^2 v_2\omega_{13}\omega_7 - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 -$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 -$
$4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2 v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13}^2\omega_7 - 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13}\omega_7 +$
$4\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2 v_2\omega_{13}\omega_7 - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}^2\omega_7 +$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 +$
$4\omega_{14}\omega_8\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2 v_2 - 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}^2\omega_7 +$
$\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2^2 v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3 v_3^2\omega_{13}^2\omega_7 +$
$4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_2 v_2\omega_{13}^2\omega_7 - 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}\omega_7 -$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 v_2^2\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2\omega_9^2\omega_{12}\omega_6^3 v_3^2\omega_{13}^2\omega_7 -$
$12\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 + \omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3 v_3^2\omega_{13}^2\omega_7 +$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 -$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13}\omega_7 + 2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2 v_2\omega_{13}\omega_7 - 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 -$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2 v_2\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2 v_2\omega_{13}\omega_7 -$
$4\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2 v_2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2 v_2\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}^2\omega_7 +$
$2\omega_{20}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8 cs^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_2 v_2\omega_{13}^2\omega_7 +$
$8\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13}\omega_7 - 2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}\omega_7 - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_2^2 v_2\omega_{13}\omega_7 -$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2^2 v_2\omega_{13}\omega_7 - 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_2^2 v_2\omega_{13}\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2 v_2\omega_{13}\omega_7 +$
$2\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2 v_2\omega_{13}\omega_7 - 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2 -$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_9^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3 v_2\omega_{13}\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13}\omega_7 +$
$4\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8 cs^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_8\omega_5 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 -$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7 -$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 + 9\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 -$
$2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9^2\omega_{12}\omega_6^3 v_3^2 v_2\omega_{13}^2\omega_7 -$

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$$2\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6^3v_3^3v_2^2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^3v_2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2 + 2\omega_{20}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^3\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 +$$

$$\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7 +$$

$$4\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2v_2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_2\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2\omega_5^2v_1\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^3v_2^2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3v_2\omega_{13}\omega_7 -$$

$$2\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7 + 4\omega_{20}\omega_8^2\omega_5v_1\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2v_2^2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^3v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_8^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 -$$

$$\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 - 8\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2v_2^2\omega_{13}^2\omega_7 -$$

$$8\omega_{20}\omega_{14}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^3v_2\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 +$$

$$\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^3\omega_{13}^2\omega_7 - 4\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 -$$

$$4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 + \omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13}^2\omega_7 -$$

$$2\omega_{14}\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2 -$$

$$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2 +$$

$$4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3v_2\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{22}v_3^3\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + \omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 +$$

$$4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7 - \omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3v_2^2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2v_2\omega_{13}^2 + 4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2v_2\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6v_3^2v_2\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6v_3^3v_2^2\omega_{13}^2\omega_7 -$$

$$4\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^3\omega_{13}\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^3v_2\omega_{13}\omega_7 - \omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3\omega_{13}\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^3v_2\omega_{13}\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_2^2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 - 4\omega_{14}cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2v_2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 +$$

$$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}^2 - 2\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 -$$

$$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 + 8\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^3v_2^2\omega_{13}\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^3v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^3v_2^2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 + 6\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}^2\omega_7 +$$

$$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^3v_2^2\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 -$$

$$2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^3\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^3v_2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 +$$

$$4\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_2v_2\omega_{13}^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^3v_2^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{22}v_2^2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_2\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 8\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 +$$

$$4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9^2\omega_{12}\omega_6^3v_2\omega_{13}\omega_7 - 2\omega_{20}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 +$$

$$4\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 - 2\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 +$$

$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}\omega_7 -$$

$$4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_9^3\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 -$$

$$4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8cs^2\omega_5v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^2\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 -$$

$$\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^3\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 - \omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_8^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2cs^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 -$$

$$2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 +$$

$$4\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7 - 2\omega_{20}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}^2\omega_7 -$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2^2\omega_{13}\omega_7 + 2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_9^3\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^3\omega_{13}^2\omega_7 +$$

$$4\omega_{14}\omega_8^2v_1\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^3\omega_{13}\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2v_2\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^2\omega_{22}v_2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^3\omega_{13}\omega_7 + \omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3\omega_{13}^2\omega_7 - 4\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 + 4\omega_{20}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}cs^2\omega_5v_1\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 +$$

$$2\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}cs^2\omega_5^2\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}\omega_7 +$$

$$\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^3v_2^2\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9^2\omega_{12}\omega_6\omega_{22}v_2v_2\omega_{13}^2\omega_7$$

$C_{48} = -60\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_8^2\omega_5^3v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2v_2v_7 - 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^3\omega_{13}\omega_7 + 12\omega_{20}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^3v_2\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^3v_3^3\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 + 24\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2v_2\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 -$

$$12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 24\omega_{20}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 36\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7 +$$
$$24\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2cs^4\omega_5^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 18\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_7^2 + 12\omega_{14}\omega_8^3\omega_5^3v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8cs^2\omega_5v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_8^2cs^4\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 -$$
$$6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 +$$
$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_7^2 + 12\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_7^2 - 18\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 -$$
$$12\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_7^2 -$$
$$12\omega_{20}\omega_8\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3v_3^2\omega_7^2 -$$
$$48\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8cs^4\omega_5^3\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^3\omega_5^3v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7 + 12\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 -$$
$$24\omega_{20}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8^2cs^4\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$24\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_7^2 - 12\omega_{20}\omega_8^3\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^3\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 24\omega_{14}\omega_8\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 -$$
$$6\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 36\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^2\omega_{22}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_7^2 + 12\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$24\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_{12}\omega_6^3v_3^2v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^3\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7 + 24\omega_{20}\omega_8^3\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 -$$
$$24\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_7^2 -$$
$$18\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 - 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_{12}\omega_6^3v_2\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^3\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12}\omega_6^3v_3^2\omega_7^2 +$$
$$24\omega_{20}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_{22}\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_7^2 +$$
$$12\omega_{20}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 + 24\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7 +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_7^2 - 18\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7 -$$
$$12\omega_{20}\omega_{14}cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} - 12\omega_{20}\omega_{14}cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_8cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$6\omega_{14}\omega_8^2\omega_5^3v_1\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_7^2 -$$
$$12\omega_{14}\omega_8\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^3\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8\omega_5^3v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{14}\omega_8^2cs^2\omega_5^2v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7 -$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8^2\omega_5^3v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1\omega_9\omega_{12}\omega_6^3v_3^2v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7 - 24\omega_{20}\omega_8^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 24\omega_{14}\omega_8cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7 + 12\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} - 6\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3v_2\omega_7^2 +$$
$$12\omega_{20}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 42\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$12\omega_{14}\omega_8cs^2\omega_5^3v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8\omega_5^3v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 +$$

$$12\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2\omega_7^2 -$$
$$24\omega_{20}\omega_{14}\omega_8^4\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_7 -$$
$$12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_7^2 + 18\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_3\omega_7^2 +$$
$$24\omega_{20}\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_{18}\omega_{12}\omega_6^2\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$36\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 - 12\omega_{20}\omega_{14} cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 -$$
$$12\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8 cs^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 60\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 -$$
$$24\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2\omega_7^2 -$$
$$24\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_{18}\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_8 cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 -$$
$$6\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_7^2 + 6\omega_{14}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 -$$
$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{18}\omega_{12}\omega_6^3 v_3^2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_8^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_8^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{13}\omega_7^2 +$$
$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_7^2 + 12\omega_{20}\omega_8^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_7^2 - 24\omega_{20}\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_7^2 -$$
$$24\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 + 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 v_3\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3 v_2\omega_{13}\omega_7^2 +$$
$$12\omega_{20}\omega_8 cs^2\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$24\omega_{20}\omega_8\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7 + 10\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7 -$$
$$12\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_7 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{12}\omega_6^3 v_3^2 v_2\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} - 12\omega_{20}\omega_8^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3\omega_9\omega_{12}\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$24\omega_{20}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7^2 + 12\omega_{14}\omega_8^2 cs^2\omega_5^3 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7$$

$C_{49} = 2\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_8 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} + 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13} +$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22} -$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2\omega_{13} -$
$2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}^2\omega_{12}\omega_6^3 v_2 + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_8 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} +$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6\omega_{22}v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2\omega_{13} +$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2 v_2 + \omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 - 6\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} +$
$2\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2 v_2\omega_{13} +$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_8^2 cs^2 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22} +$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3 - 2\omega_{20}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} +$
$\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_{12}\omega_6^3 v_2\omega_{13} -$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} +$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2^2 + \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} +$
$\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2 - 2\omega_{20}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} +$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{13} + 2\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22} +$
$2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_8^2 v_1^2\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2 + \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3 v_2^2\omega_{13} - \omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} -$
$2\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} +$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22} + 2\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} +$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} + \omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} -$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2 - 3\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3 v_2^2 +$
$2\omega_{20}\omega_8\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2 -$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3 - 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2\omega_{13} -$
$2\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 + \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} +$
$\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2 v_2 - 2\omega_{20}\omega_8^2 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 - 2\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} -$
$2\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} +$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 2\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} -$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2 - 2\omega_{20}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2\omega_{13} -$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_9\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 +$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6\omega_{22}v_2 -$
$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} +$
$3\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2^2 +$
$2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} + 2\omega_{20}\omega_8 cs^2\omega_5\omega_{18}^2\omega_9\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} -$
$2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 3\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2\omega_{18}^2\omega_9\omega_{12}\omega_6\omega_{22}v_2 v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13} +$
$2\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - \omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^2 v_2\omega_{13} +$
$2\omega_{20}\omega_8 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 6\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} +$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2 - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2\omega_{13} - \omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} -$
$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{13} -$

$$2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_8 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3 + \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_6^3\omega_{22}v_2^2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} -$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2 v_2 + \omega_{20}\omega_{14} cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2 +$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{13} + \omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} -$$
$$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22} + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} -$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2 v_2\omega_{13} - 2\omega_{14}\omega_8\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} +$$
$$\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2^2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} -$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22} + 2\omega_{20}\omega_8\omega_5 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_2\omega_{13} + \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - \omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^3 v_2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3 v_2^2 + 2\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} +$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^2 v_2\omega_{13} - 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}^2\omega_6^3\omega_{22}v_2^2\omega_{13} -$$
$$\omega_{20}\omega_{14} cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_6^2 v_2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^3\omega_{22}v_2 v_2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2 v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3 v_2 +$$
$$2\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_2 v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} -$$
$$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2 v_2\omega_{13} + 5\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_8^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 -$$
$$\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{12}\omega_6^3 v_2 + 2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 - 2\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} +$$
$$2\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} + 2\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2 +$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2 v_2\omega_{13} - 4\omega_{20}\omega_{14}\omega_8 cs^2\omega_5\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2^2 +$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2 v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}v_2 +$$
$$2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}v_2^2 + 2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13} + 2\omega_{20}\omega_8 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13} +$$
$$\omega_{14}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} - \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2 -$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 4\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_9\omega_{12}\omega_{22}v_2\omega_{13} - 2\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} +$$
$$2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13} + \omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 v_1\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{13} -$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}v_2^2\omega_{13} - 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2\omega_{18}^2\omega_{12}\omega_6^3\omega_{22}v_2$$

$C_{50} = -12\omega_{20}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 -$
$12\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6 v_2^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 - 12\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 +$
$12\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 6\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{15}\omega_6^2 v_3^2\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 +$
$6\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 + 24\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_6^2 - 12\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 - 6\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 -$
$3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_3\omega_7^2 + 3\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 6\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 + 12\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 +$
$12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}^2\omega_6 v_3 v_2^2\omega_7^2 + 6\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_7^2 + 24\omega_{20}\omega_{17}\omega_8 cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 -$
$24\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 - 12\omega_{20}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 + 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 + 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 +$
$48\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_6\omega_7 - 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 + 6\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_3\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 -$
$3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{15}\omega_6^2 v_3\omega_7^2 - 6\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_2^2\omega_7^2 - 12\omega_{20}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 +$
$6\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 - 24\omega_{20}\omega_{17}\omega_8 cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_6\omega_7 +$
$24\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 + 12\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 -$
$12\omega_{20}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 + 12\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_2^2\omega_7^2 - 12\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 - 48\omega_{20}\omega_{17}\omega_8 cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 -$
$3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_7^2 - 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 - 6\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 +$
$12\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 - 6\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_3\omega_7^2 - 6\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_7^2 -$
$12\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 12\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{17}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 -$
$12\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 + 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 -$
$6\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 - 12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 + 6\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 24\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_6 +$
$12\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 6\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 + 6\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 - 12\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_2^2\omega_7^2 +$
$12\omega_{20}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 + 6\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 + 12\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_2^2\omega_7^2 + 12\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 +$
$12\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 + 24\omega_{20}\omega_{17} cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 + 3\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 +$
$6\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 + 6\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 +$
$12\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 - 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 + 12\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 -$
$6\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_3\omega_7^2 + 24\omega_{20}\omega_{17}\omega_8 cs^4 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 -$
$24\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_7 + 6\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2\omega_7^2 +$
$12\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 + 12\omega_{20}\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_7^2 - 12\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 +$
$12\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_7^2 + 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 - 24\omega_{20}\omega_{17} cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 +$
$12\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 6\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2\omega_7^2 - 3\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 +$
$48\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7 + 3\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_7^2 -$
$6\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3^2\omega_7^2 - 12\omega_{17}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 +$
$6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_2^2\omega_7^2 - 3\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^4 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 - 12\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 +$
$6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_2^2\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 6\omega_{17}\omega_8^2 cs^2\omega_5 v_1^2\omega_{15}\omega_6^2 v_3\omega_7^2 +$
$3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{15}\omega_6^2 v_2^2\omega_7^2 + 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 - 28\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_6\omega_7 + 12\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 -$
$48\omega_{20}\omega_{17}\omega_8 cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_6\omega_7 - 6\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 + 12\omega_{20}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 + 12\omega_{20}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 -$
$6\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_7^2 + 6\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 -$
$12\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 - 12\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 + 12\omega_{17}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 + 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3^2\omega_7^2 +$
$12\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 + 6\omega_{17}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 - 6\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_2^2\omega_7^2 + 12\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6\omega_{19}v_3\omega_7^2 -$
$12\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 + 12\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_7^2 + 12\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 -$
$12\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_7^2 + 12\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6 v_2^2\omega_7^2 + 12\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 -$
$6\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3^2 v_2^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 6\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 -$

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$6\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 12\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_7^2 +$
$24\omega_{20}\omega_{17}cs^4\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 - 6\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_7^2 - 6\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_7^2 + 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_6^2 v_2^2\omega_7^2 +$
$3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{15}\omega_6^2 v_3^2\omega_7^2 + 12\omega_{20}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_7^2 - 12\omega_{17}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2 - 12\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_7^2 +$
$12\omega_{20}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_2^2\omega_7^2 - 12\omega_{17}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 - 6\omega_{20}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3\omega_7^2$

$C_{51} = -4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3^2 + 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 - 4\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_2^2 - 12\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_{15}\omega_6^2 +$
$8\omega_{20}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 + 4\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_6^2 - 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15} v_2^2 + 4\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 + 4\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_6^3 v_3 v_2^2 +$
$4\omega_{20}\omega_{17}\omega_8 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^2 - 8\omega_{20}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 - 4\omega_{20}\omega_8\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_6^3 v_3 v_2^2 +$
$6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_2^2 + 4\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^2 - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 - 8\omega_{20}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_6^3 v_3 +$
$4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 + 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^2 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6 -$
$4\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 - 16\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 + 4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^3 v_3 v_2^2 +$
$4\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 - 4\omega_{20}\omega_{17}\omega_8 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 + \omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_6^3 v_2^2 + 8\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2 +$
$2\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_{15}\omega_6 - 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 - 4\omega_{17}\omega_8 cs^4\omega_5^2\omega_{18}\omega_{15}\omega_6^3 + \omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_6^3 v_3 + 8\omega_{20}\omega_{17}\omega_8 cs^2\omega_{18}\omega_{15}\omega_6^2 v_3^2 +$
$2\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2 - 8\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 - 2\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 + 4\omega_{20}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 -$
$2\omega_{20}\omega_8^2\omega_5^3\omega_{18}\omega_6^3 v_3^2 v_2^2 - 8\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 8\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 - 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_2^2 -$
$2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^3 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{15}\omega_6^3 v_3 + 8\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 - 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 +$
$4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 + 4\omega_{17}\omega_8\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 + 4\omega_{17}\omega_8\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 + 4\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{15}\omega_6^3 + 4\omega_{20}\omega_{17}\omega_8 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 -$
$4\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 + 4\omega_{17}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 8\omega_{20}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 2\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 + 2\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_2^2 -$
$8\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 + 2\omega_{20}\omega_8 cs^2\omega_5^4\omega_5^3\omega_{18}\omega_6^3 + 6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^3 v_3 +$
$4\omega_{17}\omega_8 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 - 4\omega_{20}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 - 8\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^3 v_3 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^2\omega_{15}\omega_6^3 + 8\omega_{20}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_2^2 -$
$8\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 4\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_2^2 - 8\omega_{20}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 - 8\omega_{17}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 -$
$4\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_6^3 v_3^2 v_2^2 - 2\omega_{20}\omega_8\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2 + 2\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^2 - 4\omega_{17}\omega_8 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^2 +$
$4\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_{15}\omega_6 - 4\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 + 8\omega_{20}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2 +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 + 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^2 v_2^2 + 8\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3 +$
$4\omega_{20}\omega_{17}cs^2\omega_5^2\omega_8^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 + \omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^3 v_3^2 v_2^2 + 8\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 - 4\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2 -$
$2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_2^2 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 - 4\omega_{20}\omega_8 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 + 8\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 8\omega_{20}\omega_{17}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^3 v_2^2 +$
$4\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}\omega_{15}\omega_6^3 v_3^2 - 4\omega_{20}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 - 4\omega_{17}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_2^2 + 4\omega_{17}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^3 v_2^2 +$
$4\omega_{20}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 + 4\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_{15}\omega_6 + 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 v_3^2 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 -$
$4\omega_{20}\omega_{17}cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 + 4\omega_{20}\omega_8^2 cs^4\omega_5^2\omega_{18}\omega_{15}\omega_6^2 - 12\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2 + 4\omega_{20}\omega_8\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 v_2^2 +$
$4\omega_{20}\omega_8\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 + 4\omega_{20}\omega_8 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 + 4\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + \omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6^3 v_3^2 - 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 +$
$2\omega_{20}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 - \omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_2^2 - \omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3 - 2\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_6^3 -$
$8\omega_{20}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 - 8\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 + \omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6^3 v_2^2 + \omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_6^3 v_3^2 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^4\omega_5\omega_{18}\omega_{15}\omega_6^3 +$
$4\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{15}\omega_6^3 v_3 + 4\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^3 v_3^2 - 4\omega_{20}\omega_{17}cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 - 8\omega_{20}\omega_8\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2 - 2\omega_{20}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_6^3 v_3^2 -$
$4\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 - 16\omega_{20}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 - \omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 -$
$4\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{15}\omega_6^2 + 4\omega_{20}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_6^3 v_3 - 4\omega_{20}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 8\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6 v_3^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^3 v_3^2 -$
$4\omega_{20}\omega_8 cs^4\omega_5^2\omega_{18}\omega_{15}\omega_6^3 - 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3^2 + 4\omega_{17}\omega_8 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_2^2 - 2\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6^2 v_2^2 - 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 -$
$2\omega_{20}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6^3 + 4\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 - 8\omega_{17}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 + 8\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 4\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^3 v_3 v_2^2 -$
$8\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2 + 4\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_6^3 v_3 + 8\omega_{17}\omega_8\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 +$
$2\omega_{20}\omega_8^2\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 + 4\omega_{20}\omega_8^2\omega_5\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2 - 8\omega_{20}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 + 2\omega_{20}\omega_8^2 cs^4\omega_5^3\omega_{18}\omega_{15}\omega_6 + 4\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2 +$
$4\omega_{20}\omega_{17}cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_2^2 + 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3^2 - 8\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6^2 v_2^2 - 4\omega_{20}\omega_8 cs^4\omega_5^3\omega_{18}\omega_6^3 -$
$2\omega_{17}\omega_8^2 cs^4\omega_5^3\omega_{15}\omega_6^3 + 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 - 2\omega_{20}\omega_8^2 cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 + 4\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3^2 +$
$8\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2 + 4\omega_{20}\omega_{17}cs^2\omega_5^3\omega_{18}\omega_{15}\omega_6^2 v_3^2 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2 + 8\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^3 v_3 v_2^2 - 4\omega_{17}\omega_8\omega_5^3\omega_{18}\omega_{15}\omega_6^3 v_3^2 v_2^2$

$C_{52} = -\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$2\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 - 4\omega_{17}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_{16}\omega_{10}\omega_7 +$
$2\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 -$
$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 + 3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{10}\omega_7^2 + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 +$
$2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 - 4\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10} +$
$4\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2 -$
$4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 +$
$2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 - \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 -$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 +$
$2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_7 - 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2 +$
$6\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7 + 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 +$
$4\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7 + 2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 -$
$2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 - 4\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7 - 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{10}\omega_7 +$
$\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7 - 8\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 - 10\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 +$
$4\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 - 4\omega_{20}\omega_8^2 cs^2\omega_5\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7 +$
$\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 - 2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 4\omega_{20}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 -$
$4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7 + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 - 4\omega_{20}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7 +$
$2\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 +$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7 - 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6\omega_6\omega_7 - 2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$2\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7 + 4\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7 + 4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2 +$

$4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{16}\omega_{10}\omega_7^2+4\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2-4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3^2\omega_{16}\omega_{10}\omega_7^2+4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2+$
$4\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2+2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7^2-4\omega_{20}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2+$
$2\omega_{20}\omega_{17} cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2-\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2-4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2+$
$4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{10}\omega_7+2\omega_{20}\omega_{17} cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7+4\omega_{20}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7-$
$2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7+4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{10}\omega_7+4\omega_{20}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3^2\omega_{16}\omega_{10}\omega_7-$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7+\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7+4\omega_{20}\omega_{17}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7+$
$2\omega_{20}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7-2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7+4\omega_{20}\omega_{17}\omega_8 cs^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7+$
$\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_6^2\omega_{16}\omega_{10}\omega_7-4\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2-2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2-$
$4\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2+4\omega_{17}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3^2\omega_{16}\omega_{10}\omega_7^2-2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_6^2\omega_{16}\omega_{10}\omega_7+$
$\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2+4\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2-4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}-$
$4\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7-3\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7+4\omega_{17}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7-$
$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2-4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}+2\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2+$
$2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7^2-2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2-4\omega_{17}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2-$
$2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6\omega_{10}\omega_7^2-4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{10}\omega_7^2-\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2-$
$4\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2+4\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2-2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7^2+4\omega_{20}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2-$
$4\omega_{20}\omega_{17}\omega_8^2 cs^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7-2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2+2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2-$
$2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3^2\omega_{16}\omega_{10}\omega_7^2-4\omega_{17}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2-\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2-$
$2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_7^2+2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2+2\omega_{20}\omega_{17}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2+$
$4\omega_{17}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{16}\omega_{10}\omega_7^2-4\omega_{20}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7^2+4\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2-$
$4\omega_{17}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3^2\omega_{16}\omega_{10}\omega_7^2+4\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{16}\omega_{10}\omega_7^2+6\omega_{20}\omega_{17}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2$

$C_{53}=-4\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15} v_3\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+$
$4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7+\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2+2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6\omega_{19}\omega_7^2+$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-4\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2+$
$4\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2-$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2+4\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-$
$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7-4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2-4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3\omega_{19}\omega_7^2-$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2-$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6\omega_{19}\omega_7^2-4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-$
$4\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3\omega_{19}\omega_7^2+6\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2+2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+$
$8\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2+12\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2-8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}-$
$8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}-4\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2+$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+4\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-8\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2+8\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2+2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-8\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+$
$4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15} v_3\omega_{19}\omega_7^2+2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2-$
$4\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2-8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7+$
$2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2-4\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_{19}\omega_7^2+2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_{19}\omega_7^2-$
$8\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2+4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2-$
$4\omega_{20}\omega_{11} cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2-2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2-4\omega_{17}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2+$
$4\omega_{20}\omega_{17}\omega_{11} cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2+2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2+$
$4\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_{19}\omega_7^2+2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{15}\omega_6^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2+$
$2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2+$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2-8\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2-2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+$
$2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2+4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2-$
$4\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2+8\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2-$
$8\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2+4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_7+$
$4\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2-8\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2+8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7+4\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2-\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2-$
$8\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2+4\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-4\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2-$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2-4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2-$
$4\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2+8\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2-16\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2-$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{15}\omega_6^2\omega_{19}\omega_7^2-20\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2-8\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2-$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7+4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2-$
$2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-4\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2-4\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{15}\omega_6 v_{19}\omega_7^2-$
$2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_{19}\omega_7^2-2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_{19}\omega_7^2-2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6 v_{19}\omega_7^2+$
$2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2-2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2-2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6\omega_{19}\omega_7^2+$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2-8\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2+2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2+$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2-\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_2^2\omega_{19}\omega_7^2+$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2+4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7+4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7+$
$4\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2+4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2-8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_7^2+$

$8\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2 +$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2 +$
$4\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 8\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_6^2 v_3\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 v_1^2\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2 -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2 +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7 + 4\omega_{20}\omega_{17}\omega_{11} cs^2\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3\omega_{19}\omega_7^2 -$
$2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2\omega_{18}\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_{11} cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2 + 8\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}\omega_{15}\omega_6 v_3 v_2^2\omega_{19}\omega_7^2 +$
$2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + 8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 +$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2$

$C_{54} = -36\omega_{11} cs^4\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 6\omega_{11} v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 60\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 36\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$
$24\omega_{11}^2 v_1^2\omega_{18}\omega_6^2\omega_{22} v_3^2\omega_{13} + 6\omega_{11}^2 v_1^2\omega_{18}^2\omega_6^3\omega_{13} + 36\omega_{11}^2 cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^2 - 96\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_{22}\omega_{13} + 6\omega_{11}^2 v_1^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} +$
$36\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 15\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} + 12\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13} - 18\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13} -$
$36\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6^3 - 6\omega_{11}^2 cs^4\omega_9\omega_6^3\omega_{22}\omega_{13} + 72\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 36\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{13} +$
$12\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 36\omega_{11}^2 cs^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^2\omega_{13} - 6 v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} + 12\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} +$
$36 cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2\omega_{18}^2\omega_6^3 v_3^2 - 6\omega_{11}^2 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 42\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13} +$
$12\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} v_3^2 + 12\omega_{11} v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} - 36\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_6^2\omega_{13} + 24\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 36\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_6^3 -$
$18\omega_{11}^2 cs^4\omega_{18}^2\omega_6^3\omega_{13} - 5\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} - 6\omega_{11}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 12 v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} - 18\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{13} +$
$15\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} - 6\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{13} + 24\omega_{11}^2 v_1^2\omega_{18}\omega_6^2\omega_{22}\omega_{13} + 144\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 18\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13} +$
$5\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^2 + 12\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13} + 27\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} +$
$18\omega_{11}^2 cs^4\omega_{18}^2\omega_9\omega_6^3\omega_{13} + 18\omega_{11} cs^4\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22} v_3^2\omega_{13} - 12\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6^2\omega_{22} v_3^2 - 12 v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} +$
$18\omega_{11} cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11} cs^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 36\omega_{11} cs^2 v_1^2\omega_{18}\omega_6^3\omega_{22} + 6\omega_{11} cs^2\omega_{18}^2\omega_6^3\omega_{22} v_3^2\omega_{13} -$
$18\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} + 6\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} + 12\omega_{11} cs^2\omega_{18}^2\omega_6^3\omega_{22} + 12\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^3 + 48\omega_{21}^2 v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} -$
$15\omega_{11} cs^4\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} - 36\omega_{11}^2 cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{13} + 15\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3 v_3^2 -$
$12\omega_{11} v_1^2\omega_{18}^2\omega_6^3\omega_{22} v_3^2 + 12\omega_{11}^2 cs^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 72\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 36\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} + 12\omega_{11}^2 v_1^2\omega_{18}^2\omega_6^3 v_3^2 -$
$6\omega_{11}^2 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} - 12\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 6\omega_{11} v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11} v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} -$
$72\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_6^2\omega_{22} - 12\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2\omega_{18}^2\omega_6^3 + 12\omega_{11}^2 cs^4\omega_9\omega_6^2\omega_{22}\omega_{13} - 18 cs^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} +$
$6\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 6\omega_{11} v_1^2\omega_{18}^2\omega_6^3\omega_{22} v_3^2\omega_{13} + 6\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} + 18\omega_{11}^2 cs^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} - \omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} +$
$18\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} + 36\omega_{11} cs^4\omega_{18}\omega_9\omega_6^2\omega_{22} - 36\omega_{11} cs^4\omega_{18}\omega_9\omega_6^2\omega_{22} + \omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} +$
$3\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2 v_3^2 - 24\omega_{11} v_1^2\omega_{18}\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} + 3\omega_{11}^2 cs^4\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} +$
$6\omega_{11}^2 cs^2\omega_{18}^2\omega_6^3\omega_{13} - 36\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22} - 9\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} - 12\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{13} +$
$72\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13} - 24\omega_{11} v_1^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 12\omega_{21}^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{13} + 156\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} -$
$12\omega_{11}^2 v_1^2\omega_{18}^2\omega_6^3 + 12\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} - 12\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13} - 3\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} + 12\omega_{11} v_1^2\omega_{18}^2\omega_6^3\omega_{22} + 12\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3 +$
$54\omega_{11} cs^4\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 36\omega_{11} cs^4\omega_{18}^2\omega_9\omega_6^2 + 36\omega_{11}^2 cs^4\omega_{18}^2\omega_6^3 + 12\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} v_3^2 + 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} -$
$36\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3 v_3^2 + 18\omega_{11}^2 cs^2 v_1^2\omega_{18}^2\omega_6^3\omega_{13} + 6 v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 36\omega_{11}^2 cs^2 v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22} -$
$12\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^2 - 12\omega_{11} v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} - 18\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_6^3\omega_{13} - 18\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11} cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} -$
$12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 6\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} + 9\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} - 108\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 24\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13} -$
$48\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13} + 36\omega_{11} cs^4\omega_{18}^2\omega_9\omega_6^3\omega_{22} + 24\omega_{11} v_1^2\omega_{18}\omega_6^2\omega_{22} v_3^2\omega_{13} - 12\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^3 v_3^2 -$
$12\omega_{11} cs^2\omega_{18}^2\omega_6^3\omega_{22} v_3^2 + 12\omega_{11}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 45\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} +$
$6\omega_{11}^2 cs^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} - 36\omega_{11}^2 cs^4\omega_{18}^2\omega_9\omega_6^3 - 36\omega_{11} cs^4\omega_{18}^2\omega_6^3\omega_{22} - 6\omega_{11}^2 cs^2\omega_{18}^2\omega_6^3 v_3^2\omega_{13} - 18\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_6\omega_{13}$

$C_{55} = 12\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} + 60\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{22} v_3^2\omega_{21}^2 -$
$42\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 - 24\omega_{11}^2\omega_{18}\omega_9^2\omega_6^3\omega_{13} + 24\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2\omega_{13} - 24\omega_{11}^2\omega_9^2\omega_6^2\omega_{22} v_3^2\omega_{13} + 156\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} +$
$24\omega_{11}^2 cs^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} + 24\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{22} + 12\omega_{11}^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2 +$
$12\omega_{11}^2\omega_{18}\omega_9^2\omega_6^3\omega_{22} v_3^2\omega_{13} + 48\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 66\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 -$
$24\omega_{11}^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} - 12\omega_{11} cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} - 36\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 12\omega_{11}\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13}^2 +$
$12\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 24\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9^2\omega_6^3\omega_{22} v_3^2\omega_{13} + 12\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 24\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22} +$
$24\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{13} + \omega_{11}^2\omega_{18}\omega_9^2\omega_6^3\omega_{22} v_3^2\omega_{13}^2 - 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} + 84\omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 66\omega_{11}\omega_{18}\omega_9^3\omega_6\omega_{22} v_3^2\omega_{13}^2 +$
$12\omega_{11}^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 - 24\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}\omega_{18}^2\omega_9^2\omega_6\omega_{22} v_3^2\omega_{13}^2 - 48\omega_{11}^2 cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 36 cs^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} -$
$24\omega_{11}^2\omega_{18}\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} + 24\omega_{11}^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{13} - 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} + 3\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} +$
$18\omega_{11}^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11}^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}^2 + 72\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 6\omega_{11}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}^2 - 12\omega_{11}^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 +$
$24\omega_{11}^2\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13} + 24\omega_{11}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 6\omega_{11} cs^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}^2\omega_9^2\omega_6^2\omega_{22} v_3^2\omega_{13} - 12\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}^2\omega_{13} -$
$24\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{13} - 72\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 18\omega_{11}\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 4\omega_{11}\omega_{18}^2\omega_9^2\omega_6^2\omega_{22} v_3^2\omega_{13} - 24\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{13} -$
$84\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13} + 24\omega_{11}^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} - \omega_{11}^2\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} - 132\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} -$
$12\omega_{11}\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 24\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{13} - 96\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_{22}\omega_{13} - 24\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} +$
$12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 66\omega_{11}^2 cs^2\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 24\omega_{11}\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{13} - 36\omega_{11}\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13} -$
$12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 4\omega_{11}\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} - 24\omega_{11}^2 cs^2\omega_{18}^2\omega_6\omega_{22}\omega_{13} -$
$12\omega_{11}^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 18 cs^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 24\omega_{11}^2 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} +$
$36\omega_{11}^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 24\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{13} + 24\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6\omega_{13} + 12\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{13} + 90\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} -$
$18\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22} v_3^2\omega_{13} - 24\omega_{11}^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} + 6\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} - 6\omega_{11}\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 6\omega_{18}^2\omega_9^2\omega_6^3\omega_{22} v_3^2\omega_{13}$

$C_{56} = -12\omega_{11} cs^4\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 6\omega_{11} v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 5\omega_{11}^2 cs^4\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 36\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$
$72\omega_{11}^2 v_1^2\omega_{18}\omega_6^2\omega_{22} v_3^2\omega_{13} + 6\omega_{11}^2 v_1^2\omega_{18}^2\omega_6^3\omega_{13} + 12\omega_{11}^2 cs^2 v_1^2\omega_{18}^2\omega_9\omega_6^2 - 12\omega_{11}^2 cs^4\omega_{18}\omega_9\omega_{22}\omega_{13} + 18\omega_{11}^2 v_1^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} +$
$12\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6^2\omega_{13} - 45\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13} + 36\omega_{11}^2 v_1^2\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13} + 18\omega_{11}^2 cs^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 72\omega_{11} v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13} -$
$12\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_9\omega_6^3 + 24\omega_{11} cs^2 v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 36\omega_{11}^2 v_1^2\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{13} + \omega_{11}^2 cs^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$

$12\omega_{11}^2 cs^2 v_1^2 \omega_9 \omega_6^2 \omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{13} - 18 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22} v_3^2 \omega_{13} + 12\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22}\omega_{13} + 12 cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22}\omega_{13} +$
$36\omega_{11}^2 cs^2 \omega_{18}^2 \omega_6^3 v_3^2 - 18\omega_{11}^2 cs^4 \omega_{18} \omega_9 \omega_6^2 \omega_{22}\omega_{13} + 60\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6 \omega_{22} v_3^2 \omega_{13} + 36\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} v_3^2 + 12\omega_{11} v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22}\omega_{13} -$
$12\omega_{11}^2 cs^4 \omega_{18} \omega_9 \omega_6^2 \omega_{13} + 24\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6 \omega_{22}\omega_{13} + 12\omega_{11}^2 cs^2 v_1^2 \omega_{18}^2 \omega_6^3 - 6\omega_{11} cs^4 \omega_{18}^2 \omega_6^3 \omega_{13} - 15\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} v_3^2 \omega_{13} -$
$6\omega_{11}^2 v_1^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} + 36 v_1^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} v_3^2 \omega_{13} - 6\omega_{11}^2 cs^2 v_1^2 \omega_{18} \omega_9 \omega_6^3 \omega_{13} + 15\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22}\omega_{13} - 18\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6^3 v_3^2 \omega_{13} +$
$24\omega_{11}^2 v_1^2 \omega_{18} \omega_6^2 \omega_{22}\omega_{13} + 48\omega_{11}^2 cs^2 v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22}\omega_{13} + 54\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} v_3^2 \omega_{13} + 5\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6^2 +$
$60\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} v_3^2 \omega_{13} + 9\omega_{11} cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} + 12\omega_{11}^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{13} + 6\omega_{11}^2 cs^4 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{13} + 6\omega_{11} cs^4 \omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13} +$
$36\omega_{11}^2 v_1^2 \omega_{18} \omega_6^3 \omega_{22} v_3^2 \omega_{13} - 36\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} v_3^2 - 12 v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22}\omega_{13} + 6\omega_{11} cs^2 v_1^2 \omega_{18} \omega_9 \omega_6^3 \omega_{22}\omega_{13} - 6\omega_{11} cs^2 \omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13} -$
$6\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{13} - 12\omega_{11} cs^2 v_1^2 \omega_{18} \omega_6^3 \omega_{22} + 18\omega_{11} cs^2 \omega_{18}^2 \omega_6^3 \omega_{22} v_3^2 \omega_{13} - 6\omega_{11} cs^2 v_1^2 \omega_{18} \omega_6^3 \omega_{22}\omega_{13} + 18\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6^3 v_3^2 \omega_{13} +$
$12\omega_{11} cs^2 \omega_{18}^2 \omega_6^3 \omega_{22} + 12\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6^3 + 144\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22} v_3^2 \omega_{13} - 5\omega_{11} cs^4 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} - 36\omega_{11}^2 v_1^2 \omega_9 \omega_6^2 \omega_{22} v_3^2 \omega_{13} -$
$12\omega_{11}^2 cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{13} + 6\omega_{11} cs^4 \omega_{18} \omega_9 \omega_6^2 \omega_{22}\omega_{13} - 36\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 v_3^2 - 36\omega_{11} v_1^2 \omega_{18} \omega_6^3 \omega_{22} v_3^2 - 24\omega_{11}^2 cs^2 v_1^2 \omega_{18} \omega_9 \omega_6 \omega_{22}\omega_{13} -$
$108\omega_{11} v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22} v_3^2 \omega_{13} + 36\omega_{11}^2 v_1^2 \omega_{18} \omega_6^3 v_3^2 - 18\omega_{11}^2 v_1^2 \omega_{18} \omega_6^3 v_3^2 \omega_{13} - 36\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} v_3^2 + 18\omega_{11} v_1^2 \omega_{18} \omega_9 \omega_6^3 \omega_{22} v_3^2 \omega_{13} -$
$6\omega_{11} v_1^2 \omega_{18} \omega_9 \omega_6^3 \omega_{22}\omega_{13} + 24\omega_{11}^2 cs^2 \omega_9 \omega_6^2 \omega_{22} v_3^2 \omega_{13} - 24\omega_{11}^2 cs^2 v_1^2 \omega_{18} \omega_6^2 \omega_{22}\omega_{13} - 12\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22} - 12\omega_{11}^2 cs^2 \omega_{18}^2 \omega_6^3 -$
$6 cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} - 48\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_{22} v_3^2 \omega_{13} + 6\omega_{11} v_1^2 \omega_{18} \omega_9 \omega_6^3 \omega_{13} - 18\omega_{11} v_1^2 \omega_{18}^2 \omega_6^3 \omega_{22} v_3^2 \omega_{13} + 18\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6^3 v_3^2 \omega_{13} +$
$6\omega_{11}^2 cs^2 v_1^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} - 102\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22} v_3^2 \omega_{13} + 12\omega_{11} cs^4 \omega_{18} \omega_9 \omega_6^2 \omega_{13} - 12\omega_{11} cs^4 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} - 18\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6^3 v_3^2 \omega_{13} -$
$6\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} + 36\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6^3 v_3^2 - 24\omega_{11} v_1^2 \omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6^2 \omega_{13} - \omega_{11}^2 cs^4 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} +$
$6\omega_{11}^2 cs^2 \omega_{18}^2 \omega_6^3 \omega_{13} - 12\omega_{11} cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} - 9\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} + 12\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} - 36\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6^2 v_3^2 \omega_{13} +$
$24\omega_{11} cs^2 v_1^2 \omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13} - 15\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} v_3^2 \omega_{13} - 24\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6^3 \omega_{13} + 18\omega_{11}^2 cs^4 \omega_{18}^2 \omega_9 \omega_6 \omega_{22}\omega_{13} -$
$12\omega_{11}^2 v_1^2 \omega_{18}^2 \omega_6^3 + 12\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} - 36\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} v_3^2 \omega_{13} + 30\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6^3 \omega_{22} v_3^2 \omega_{13} + 12\omega_{11} v_1^2 \omega_{18}^2 \omega_6^3 \omega_{22} +$
$12\omega_{11}^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 + 18\omega_{11} cs^4 \omega_{18}^2 \omega_9 \omega_6^3 + 12\omega_{11}^2 cs^4 \omega_{18}^2 \omega_9 \omega_6^2 + 12\omega_{11}^2 cs^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} v_3^2 - 12\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6 \omega_{22} \omega_{13} -$
$12\omega_{11} cs^2 v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22}\omega_{13} + 36\omega_{11}^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 v_3^2 + 6\omega_{11}^2 cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{13} + 6 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22}\omega_{13} + 12\omega_{11} cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22} -$
$12\omega_{11}^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 - 36\omega_{11} v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22} v_3^2 \omega_{13} - 6\omega_{11}^2 cs^2 v_1^2 \omega_{18}^2 \omega_6^3 \omega_{13} - 18\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22}\omega_{13} - 12\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6 \omega_{22} +$
$6\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6^3 \omega_{13} + 27\omega_{11} v_1^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22} v_3^2 \omega_{13} - 36\omega_{11} cs^2 v_1^2 \omega_{18}^2 \omega_9 \omega_6^2 \omega_{22}\omega_{13} - 72\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6 \omega_{22} v_3^2 \omega_{13} - 48\omega_{11}^2 v_1^2 \omega_{18} \omega_9 \omega_6^2 \omega_{22}\omega_{13} +$
$36\omega_{11}^2 cs^2 \omega_{18} \omega_9 \omega_6^2 v_3^2 \omega_{13} + 12\omega_{11} cs^4 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22} + 72\omega_{11} v_1^2 \omega_{18}^2 \omega_6^3 \omega_{22} v_3^2 \omega_{13} - 36\omega_{11} cs^2 \omega_{18}^2 \omega_9 \omega_6^3 v_3^2 - 36\omega_{11} cs^2 \omega_{18}^2 \omega_6^3 \omega_{22} v_3^2 +$
$12\omega_{11}^2 v_1^2 \omega_9 \omega_6^2 \omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2 \omega_{18} \omega_6^3 \omega_{22}\omega_{13} - 15\omega_{11}^2 cs^2 v_1^2 \omega_{18} \omega_9 \omega_6^3 \omega_{22}\omega_{13} + 12\omega_{11}^2 cs^4 \omega_{18} \omega_9 \omega_6 \omega_{22}\omega_{13} - 12\omega_{11}^2 cs^2 \omega_9 \omega_6^3 \omega_{22} v_3^2 \omega_{13} -$
$12\omega_{11}^2 cs^4 \omega_{18}^2 \omega_9 \omega_6^3 - 12\omega_{11} cs^4 \omega_{18}^2 \omega_6^3 \omega_{22} - 18\omega_{11}^2 cs^2 \omega_{18}^2 \omega_6^3 v_3^2 \omega_{13} - 6\omega_{11}^2 cs^4 \omega_{18} \omega_9 \omega_6^3 \omega_{13}$

$C_{57} = 4\omega_{11}^2 \omega_5 \omega_{18}^3 \omega_6 v_3^2 \omega_{19}\omega_7 + 6\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 3\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 + 12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_{19}\omega_7 + 4\omega_{11}^2 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 -$
$12\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18} \omega_{19}\omega_7 + 4\omega_{20} \omega_{11} \omega_8 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19} - 4\omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6 \omega_{19}\omega_7 + 2\omega_{20} \omega_{11} \omega_8 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 6\omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 -$
$4\omega_{20} \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11}^2 \omega_8 \omega_{18}^2 \omega_6^2 v_3^2 + 4\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6 + 4\omega_{20} \omega_{11}^2 \omega_8 \omega_{18} \omega_6 \omega_{19}\omega_7 + 12\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 -$
$4\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18} v_3^2 \omega_{19}\omega_7 + 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 + 12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_{19} + 12\omega_{11}^2 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 2\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_7 +$
$8\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6 v_3^2 \omega_{19}\omega_7 + 4\omega_{11}^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 - 12\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_{18}^2 \omega_6^2 + 8\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 + 2\omega_{20} \omega_{11}^2 \omega_8 \omega_{18} \omega_6^2 v_3^2 \omega_{19}\omega_7 -$
$6\omega_{20} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_{19} - 2\omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 - 2\omega_{20} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 + 12\omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18} \omega_6 \omega_{19}\omega_7 +$
$12\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_7 - 4\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_6 v_3^2 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_{19}\omega_7 + 2\omega_{11}^2 \omega_8 \omega_5^2 \omega_6^2 \omega_{19}\omega_7 + 3\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_7 +$
$4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18} \omega_6^2 - 4\omega_{20} \omega_{11} \omega_{11} \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 - 6\omega_{20} \omega_8 cs^2 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 12\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 +$
$12\omega_{20} \omega_{11} cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 4\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 + 2\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_7 - 2\omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6^2 v_3^2 \omega_{19}\omega_7 + 12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19} +$
$4\omega_{20} \omega_{11} \omega_8 \omega_{18}^2 \omega_6 v_3^2 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18} \omega_6 v_3^2 - 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 6\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_7 + 2\omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 -$
$4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_{19} - 8\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6 \omega_{19}\omega_7 - 4\omega_{11}^2 \omega_8^2 \omega_6^2 \omega_{19}\omega_7 - 2\omega_{11}^2 \omega_8 \omega_8^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 + 6\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_6^2 \omega_{19}\omega_7 +$
$9\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 - 6\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^2 \omega_{19}\omega_7 + 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 v_3^2 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_{18}^2 \omega_6^2 \omega_{19} + 4\omega_{20} \omega_{11} \omega_8 \omega_{18}^2 \omega_6^2 +$
$4\omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_7 + 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19} - 6\omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^2 \omega_{19}\omega_7 - 8\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_{19}\omega_7 -$
$4\omega_{11}^2 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 + 12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_7 - 2\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_6^2 \omega_{19}\omega_7 - 12\omega_{20} \omega_{11} cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 -$
$3\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_7 + 6\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_{18}^2 \omega_6^2 \omega_7 + 12\omega_{11}^2 cs^2 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 2\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18} \omega_6^2 \omega_{19}\omega_7 - 9\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_7 -$
$4\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6 v_3^2 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_7 - 2\omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_{19}\omega_7 +$
$24\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18} \omega_6 \omega_{19}\omega_7 + 4\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 - 12\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_6 \omega_{19}\omega_7 - 24\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 +$
$4\omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6 v_3^2 \omega_{19}\omega_7 - 2\omega_{20} \omega_{11} \omega_8 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 - 12\omega_{20} \omega_{11} cs^2 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 - 12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_{18} \omega_6 \omega_{19}\omega_7 -$
$12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19} + 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6 \omega_7 + 2\omega_{20} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 2\omega_{20} \omega_{11}^2 \omega_8 \omega_{18}^2 \omega_6^2 v_3^2 \omega_7 + 2\omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_6^2 \omega_{19}\omega_7 +$
$4\omega_{20} \omega_8 \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_{19}\omega_7 - 12\omega_{11}^2 \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 + 4\omega_{20} \omega_{11} \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 2\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_6^2 v_3^2 \omega_{19}\omega_7 +$
$4\omega_{20} \omega_{11}^2 \omega_8 \omega_5 \omega_{18} \omega_{19}\omega_7 - 6\omega_{11}^2 \omega_8 cs^2 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 - 12\omega_{11}^2 cs^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 - 2\omega_{20} \omega_{11}^2 \omega_8 \omega_{18}^2 \omega_6^2 \omega_7 - 2\omega_{20} \omega_{11}^2 \omega_8 \omega_{18} \omega_6^2 \omega_{19}\omega_7 -$
$3\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 - 4\omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_{19}\omega_7 + 12\omega_{20} \omega_8 cs^2 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 4\omega_{20} \omega_{11} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19} - 4\omega_{11}^2 \omega_5 \omega_{18}^2 \omega_6 \omega_{19}\omega_7$

$C_{58} = 2\omega_8 cs^2 \omega_5^2 \omega_{18}^2 \omega_6^2 - 2\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_6^2 + 2\omega_8 \omega_5 \omega_{18}^2 \omega_6^3 v_3^2 + \omega_{20} \omega_8 \omega_5^2 \omega_{18}^2 \omega_6^3 v_3^2 - 6\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6 + \omega_8^2 \omega_5 \omega_{18}^2 \omega_6^3 + 2\omega_{20} \omega_8^2 \omega_5 \omega_{18} \omega_6^2 -$
$2\omega_8^2 \omega_5 \omega_{18} \omega_6^2 + \omega_8^2 cs^2 \omega_5^2 \omega_{18} \omega_6^3 + \omega_{20} \omega_8 cs^2 \omega_5^2 \omega_6^3 - 2\omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^3 + 2\omega_{20} \omega_8 cs^2 \omega_{18}^2 \omega_6^3 - 2\omega_{20} \omega_8 \omega_5 \omega_{18} \omega_6^2 v_3^2 - 2\omega_8^2 cs^2 \omega_5^2 \omega_{18} \omega_6^2 + 2\omega_8^2 \omega_5 \omega_{18} \omega_6^2 v_3^2 -$
$\omega_8^2 \omega_5 \omega_{18}^2 \omega_6^3 v_3^2 - \omega_{20} \omega_8 \omega_5 \omega_{18} \omega_6^3 + \omega_8^2 \omega_5 \omega_{18} \omega_6^3 - 2\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6 + \omega_{20} \omega_8 \omega_5^2 \omega_{18}^2 \omega_6^2 + 2\omega_8 \omega_5 \omega_{18}^2 \omega_6^3 + \omega_{20} \omega_8 \omega_5 \omega_{18} \omega_6^3 + 4\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^2 -$
$\omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6 + 2\omega_{20} cs^2 \omega_5^2 \omega_{18} \omega_6^2 - 2\omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6 v_3^2 + 2\omega_{20} \omega_8 \omega_5^2 \omega_6^2 + 4\omega_{20} \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^2 - \omega_{20} \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 - \omega_{20} \omega_8^2 \omega_5 \omega_6^3 +$
$7\omega_{20} \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^2 - 2\omega_{20} cs^2 \omega_5^2 \omega_{18} \omega_6^3 - \omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^3 - \omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6^2 v_3^2 - 2\omega_8 \omega_5 \omega_{18}^2 \omega_6^3 + \omega_{20} \omega_8 \omega_5 \omega_{18} \omega_6^3 v_3^2 - \omega_8^2 \omega_5 \omega_{18} \omega_6^3 v_3^2 -$
$7\omega_{20} \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^3 + \omega_{20} \omega_8^2 \omega_5 \omega_{18} \omega_6 v_3^2 - 2\omega_{20} \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^2 - 2\omega_{20} \omega_8^2 \omega_5 \omega_6^2 - 2\omega_8 \omega_5 \omega_{18} \omega_6^3 - \omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6^3 - 2\omega_8 \omega_5 \omega_{18} \omega_6^3 v_3^2 -$
$\omega_{20} \omega_8 \omega_5 \omega_{18}^2 \omega_6^3 v_3^2 - 2\omega_{20} \omega_8 cs^2 \omega_{18}^2 \omega_6^2 - 11\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^2 + \omega_8^2 \omega_5 \omega_{18}^2 \omega_6^3 v_3^2 + \omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6^2 + \omega_{20} \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^3 + 4\omega_{20} \omega_8 cs^2 \omega_5 \omega_{18} \omega_6^3 v_3^2 +$
$2\omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6 + 2\omega_{20} cs^2 \omega_5 \omega_{18} \omega_6^2 - 5\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^2 + 5\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^3 + 2\omega_8 \omega_5^2 \omega_{18} \omega_6^3 v_3^2 - \omega_8^2 cs^2 \omega_5 \omega_{18} \omega_6^3 + 2\omega_8^2 \omega_5^2 \omega_{18} \omega_6^2 -$
$4\omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6^2 - \omega_8^2 \omega_5^2 \omega_{18} \omega_6^3 + 13\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6 + \omega_{20} \omega_8 \omega_5^2 \omega_6^3 v_3^2 + 2\omega_8 cs^2 \omega_5 \omega_{18} \omega_6^3 - 8\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} + 6\omega_{20} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6 +$
$2\omega_8^2 \omega_5^2 \omega_{18} \omega_6^2 - \omega_{20} \omega_8^2 \omega_5 \omega_{18} \omega_6^3 v_3^2 - \omega_{20} \omega_8 \omega_5 \omega_{18} \omega_6^3 - \omega_8^2 cs^2 \omega_5^2 \omega_{18} \omega_6^3 - 2\omega_8^2 \omega_5^2 \omega_{18} \omega_6^2 v_3^2 + \omega_{20} \omega_8 \omega_5^2 \omega_{18} \omega_6^2 v_3^2$

$C_{59} = -12\omega_{20} \omega_{11} \omega_8^2 cs^2 \omega_5^2 \omega_{18}^2 \omega_6 \omega_7 + 12\omega_{11}^2 \omega_8 \omega_5^2 \omega_{18}^2 \omega_6^2 \omega_{19}\omega_7 + 12\omega_{20} \omega_{11}^2 \omega_8^2 \omega_5 \omega_{18}^2 \omega_6 \omega_7 + 12\omega_{20} \omega_8 \omega_5^2 \omega_{18}^2 \omega_6 v_3^2 \omega_{19}\omega_7 -$
$6\omega_{11}^2 \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^2 \omega_{19}\omega_7 - 12\omega_{20} \omega_{11} \omega_8^2 \omega_5 \omega_{18}^2 \omega_6 v_3^2 \omega_7 - 12\omega_{20} \omega_{11} \omega_8^2 \omega_5^2 \omega_{18} v_3^2 \omega_{19}\omega_7 - 6\omega_{20} \omega_{11} \omega_8^2 \omega_5 \omega_{18}^2 \omega_6^2 \omega_7 + 12\omega_{20} \omega_{11}^2 cs^2 \omega_5^2 \omega_{18} \omega_6 \omega_{19}\omega_7 -$
$6\omega_{20} \omega_{11}^2 \omega_8 \omega_5^2 \omega_{18} \omega_6 v_3^2 \omega_{19}\omega_7 + 12\omega_{20} \omega_{11} \omega_8^2 \omega_5^2 \omega_{18} \omega_6 \omega_7 + 18\omega_{20} \omega_{11} \omega_8 \omega_5^2 \omega_{18}^2 \omega_6 \omega_{19}\omega_7 - 36\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6^2 \omega_{19}\omega_7 +$
$12\omega_{11}^2 \omega_8 \omega_5 \omega_{18}^2 \omega_6^2 v_3^2 \omega_{19}\omega_7 - 24\omega_{20} \omega_{11}^2 \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6 \omega_{19} + 12\omega_{20} \omega_{11} \omega_8 cs^2 \omega_5^2 \omega_{18} \omega_6 \omega_{19}\omega_7 + 12\omega_{11}^2 \omega_8 \omega_5^2 \omega_{18} \omega_6 v_3^2 \omega_{19}\omega_7 -$

$\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 42\omega_{20}\omega_{11}^2\omega_8^2cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 24\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}^2\omega_{19}\omega_7 - 12\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 -$
$9\omega_{20}\omega_{11}^2\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_6^2\omega_7 - 54\omega_{20}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_6\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 - 12\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 -$
$12\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 36\omega_{20}\omega_{11}^2\omega_8^2cs^2\omega_5^2\omega_6\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_{19}\omega_7^2 - 12\omega_{20}\omega_8\omega_5^2\omega_{18}^2\omega_6\omega_{19}\omega_7^2 - 24\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}^2\omega_{19}\omega_7 +$
$54\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 - 24\omega_{20}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}^2\omega_6\omega_{19}\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 +$
$6\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 18\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 + 24\omega_{20}\omega_{11}^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 - 18\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 -$
$12\omega_{11}^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 + 6\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 12\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 +$
$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}^2v_3^2\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^2 - 24\omega_{20}\omega_{11}^2\omega_8^2cs^2\omega_5\omega_{18}\omega_6^2\omega_{19} -$
$12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6v_3^2\omega_{19}\omega_7^2 - 6\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 12\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 -$
$54\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}^2\omega_6\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}^2\omega_6\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}^2\omega_6^2v_3^2\omega_7 +$
$12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6v_3^2\omega_7^2 + 36\omega_{20}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_6\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_7 - 12\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 -$
$12\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - 36\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_{19}\omega_7^2 + 36\omega_{20}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 -$
$6\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8^2cs^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7 +$
$12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6\omega_{19}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_{19}\omega_7^2 - 42\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 9\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_7^2 + 12\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 +$
$6\omega_{11}^2\omega_8^2cs^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 6\omega_{20}\omega_8\omega_5^2\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 + 30\omega_{20}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 +$
$12\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 6\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7^2 - 18\omega_{20}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 6\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 +$
$6\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6^2\omega_7 + 6\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 - 9\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_7^2 - 12\omega_{20}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_6\omega_7^2 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6v_3^2\omega_7^2 -$
$12\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_7^2 + 12\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6^2\omega_7^2 + 12\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_7 - 12\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7^2 -$
$6\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}^2\omega_6\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 54\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6\omega_{19}\omega_7 +$
$4\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}cs^2\omega_5^2\omega_{18}^2\omega_6\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_6^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_7^2 +$
$6\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6^2\omega_7 + 12\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 + 18\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 -$
$6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8cs^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{11}^2cs^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^2 + 6\omega_{20}\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_7^2 -$
$9\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_7 + 18\omega_{11}^2\omega_8cs^2\omega_5^2\omega_6^2\omega_{19}\omega_7^2 + 24\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5^2\omega_{18}\omega_6\omega_{19} +$
$6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6v_3^2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_{11}^2\omega_8cs^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 6\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^2$

$C_{60} =$
$12\omega_{11}^2\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 9\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2\omega_{19}\omega_7 + 12\omega_{11}^2\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 -$
$4\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19} - 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 2\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 -$
$4\omega_{20}\omega_8\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2v_3^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6 + 4\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6^2 -$
$12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}v_3^2\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_6\omega_{19} + 4\omega_{11}^2cs^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_7 +$
$24\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 + 4\omega_{11}^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8cs^2\omega_{18}^2\omega_6^2 + 8\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 -$
$2\omega_{20}\omega_8cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19} - 2\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 6\omega_{20}\omega_8\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 + 4\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 +$
$4\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2v_3^2\omega_{19}\omega_7 + 2\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_7 +$
$12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2 - 12\omega_{20}\omega_{11}\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_6 +$
$4\omega_{20}\omega_{11}cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_7 - 6\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}^2\omega_6\omega_{19} +$
$12\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2 - 4\omega_{20}\omega_{11}\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_6^2\omega_7 + 6\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 -$
$4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6\omega_{19} - 8\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 - 4\omega_{11}^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 6\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_6^2\omega_{19}\omega_7 +$
$3\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2v_3^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19} + 4\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2 +$
$4\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19} - 2\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - 24\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 -$
$12\omega_{11}^2\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}^2\omega_6\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}cs^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 -$
$9\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_7 + 2\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}^2\omega_6^2\omega_7 + 4\omega_{11}^2cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6^2\omega_7 -$
$12\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 -$
$8\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2v_3^2 - 4\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5\omega_6\omega_{19}\omega_7 - 8\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 +$
$12\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 6\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}cs^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8cs^2\omega_{18}\omega_6\omega_{19}\omega_7 -$
$4\omega_{20}\omega_{11}\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_{19} + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6\omega_7 + 2\omega_{20}\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_7 + 2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 +$
$12\omega_{20}\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 - 4\omega_{11}^2\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6^2v_3^2\omega_{19}\omega_7 +$
$4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_{19}\omega_7 - 2\omega_{11}^2\omega_8cs^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 4\omega_{11}^2cs^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7 -$
$3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - 12\omega_{11}^2\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7 + 4\omega_{20}\omega_8cs^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19} - 4\omega_{11}^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7$

$C_{61} = 72\omega_{11}^2cs^2\omega_6^2v_3^2 - 144cs^2\omega_{18}^2\omega_6^2v_3^2 - 36\omega_{11}\omega_{18}^2\omega_6^2v_3^2 + 12cs^2\omega_{18}^2\omega_6^2 - 12\omega_{11}^2cs^2\omega_6^2 - 48\omega_{11}cs^4\omega_{18}^2\omega_6 - 48\omega_{11}^2\omega_{18}v_3^4 + 24\omega_{11}\omega_{18}\omega_6^2v_3^4 -$
$12\omega_{11}^2cs^4\omega_{18}\omega_6^2 + 24\omega_{11}^2\omega_6v_3^2 + 72\omega_{18}^2\omega_6v_3^4 - 14\omega_{11}cs^2\omega_{18}^2\omega_6^2 + 36\omega_{18}^2\omega_6^2v_3^2 + 12\omega_{11}^2\omega_6^2v_3^4 - 48\omega_{21}^2cs^2\omega_{18}\omega_6 - 24\omega_{11}cs^2\omega_{18}^2 +$
$48\omega_{11}\omega_{18}\omega_6v_3^2 - 24\omega_{11}^2cs^4\omega_{18} - 96\omega_{11}\omega_{18}^2\omega_6v_3^4 + 24cs^4\omega_{18}^2\omega_6 - 216\omega_{11}^2cs^2\omega_{18}v_3^2 + 48\omega_{11}\omega_{18}^2v_3^4 + 432\omega_{11}^2cs^2\omega_{18}\omega_6v_3^2 + 216\omega_{11}cs^2\omega_{18}^2v_3^2 -$
$12cs^4\omega_{18}^2\omega_6^2 - 3\omega_{11}^2\omega_{18}^2\omega_6^2v_3^4 + 30\omega_{11}^2\omega_{18}\omega_6^2v_3^2 + 48\omega_{11}cs^2\omega_{18}^2\omega_6 + 150\omega_{11}cs^2\omega_{18}^2\omega_6^2v_3^2 + 12\omega_{11}^2cs^2\omega_{18}\omega_6^2 + 14\omega_{11}cs^4\omega_{18}^2\omega_6 + 96\omega_{11}^2\omega_{18}\omega_6v_3^4 +$
$48\omega_{11}^2cs^4\omega_{18}\omega_6 - 12\omega_{11}^2cs^2\omega_{18}\omega_6^2v_3^2 - 144\omega_{11}cs^2\omega_{18}\omega_6v_3^2 - 24cs^2\omega_{18}^2\omega_6 + 24\omega_{11}^2cs^2\omega_6 - 30\omega_{11}^2\omega_{18}\omega_6v_3^4 + 24\omega_{11}cs^4\omega_{18} + 24\omega_{11}^2cs^2\omega_{18} +$
$72\omega_{11}cs^2\omega_{18}\omega_6^2v_3^2 + 3\omega_{11}^2\omega_{18}^2\omega_6^2v_3^2 - 126\omega_{11}^2cs^2\omega_{18}\omega_6^2v_3^2 + 12\omega_{11}^2cs^4\omega_6^2 - 96\omega_{11}^2\omega_{18}\omega_6v_3^2 + \omega_{11}^2cs^2\omega_{18}\omega_6^2 - 432\omega_{11}cs^2\omega_{18}\omega_6v_3^2 +$
$48\omega_{11}^2\omega_{18}v_3^2 - 24\omega_{11}\omega_{18}\omega_6^2v_3^2 - 24\omega_{11}^2\omega_6v_3^2 - 72\omega_{18}^2\omega_6v_3^2 + 36\omega_{11}\omega_{18}^2\omega_6^2v_3^2 - 24\omega_{11}^2cs^4\omega_6 + 96\omega_{11}\omega_{18}^2\omega_6v_3^2 - 144\omega_{11}^2cs^2\omega_6v_3^2 +$
$288cs^2\omega_{18}^2\omega_6v_3^2 - 48\omega_{11}\omega_{18}^2v_3^2 - 36\omega_{18}^2\omega_6^2v_3^2 - 12\omega_{11}^2\omega_6^2v_3^2 - \omega_{11}^2cs^4\omega_{18}^2\omega_6 - 48\omega_{11}\omega_{18}\omega_6v_3^2$

$C_{62} = -72cs^2\omega_{18}^2\omega_6^2v_3^2 + 48\omega_{18}\omega_6v_3^2 - 8cs^2\omega_{18}^2\omega_6^2 + 24\omega_{18}^2\omega_6v_3^4 + 24\omega_6^2v_3^2 + cs^2\omega_{18}^2\omega_6^3 + 24\omega_{18}^2\omega_6^2v_3^2 - 24cs^2\omega_{18}\omega_6v_3^2 + 72\omega_{18}\omega_6^2v_3^4 -$
$48cs^4\omega_{18}^2\omega_6 + 24cs^4\omega_{18}^2\omega_6^2 + 6cs^2\omega_{18}^2\omega_6^3v_3^2 - 3cs^4\omega_{18}^2\omega_6^3 - 96cs^2\omega_{18}^2v_3^2 - 18\omega_{18}\omega_6^3v_3^2 - 3\omega_{18}^2\omega_6^3v_3^2 - 12\omega_6^3v_3^2 + 12cs^2\omega_{18}^2\omega_6 + 6cs^4\omega_{18}\omega_6^3 -$
$12cs^2\omega_{18}\omega_6^3v_3^2 - 24cs^2\omega_{18}\omega_6 + 24cs^4\omega_{18} + 3\omega_{18}^2\omega_6^3v_3^4 + 12\omega_6^3v_3^4 - 24cs^4\omega_{18}\omega_6^2 - 24cs^2\omega_6^2v_3^2 + 18\omega_{18}\omega_6^3v_3^2 - 6cs^2\omega_{18}\omega_6^3 + 48cs^2\omega_{18}^2\omega_6^2v_3^2 -$
$24\omega_{18}^2\omega_6v_3^2 - 48\omega_{18}\omega_6v_3^4 + 24cs^4\omega_{18}\omega_6 - 72\omega_{18}\omega_6^2v_3^2 + 156cs^2\omega_{18}^2\omega_6v_3^2 + 24cs^2\omega_{18}\omega_6 + 12cs^2\omega_6^3v_3^2 - 24\omega_6^2v_3^4 - 24\omega_{18}^2\omega_6^2v_3^2$

$C_{63} = 24\omega_{11}^2\omega_6 + 61\omega_{11}\omega_{18}^2\omega_6^2v_3^2 - 36cs^2\omega_{18}^2\omega_6^2 + 24\omega_{11}^2cs^2\omega_6^2 + 24\omega_{11}\omega_{18}\omega_6 - 48\omega_{11}^2\omega_6v_3^2 + 39\omega_{11}cs^2\omega_{18}^2\omega_6^2 - 60\omega_{18}^2\omega_6^2v_3^2 +$
$120\omega_{11}^2cs^2\omega_{18}\omega_6 + 60\omega_{11}cs^2\omega_{18}^2 - 72\omega_{11}\omega_{18}\omega_6v_3^2 + 2\omega_{11}^2\omega_{18}^2\omega_6^2 - 51\omega_{11}^2\omega_{18}\omega_6^2v_3^2 - 120\omega_{11}cs^2\omega_{18}\omega_6 - 33\omega_{11}^2cs^2\omega_{18}\omega_6^2 - 12\omega_{11}\omega_{18}\omega_6^2 -$

$$12\omega_{11}^2\omega_6^2 - 36\omega_{11}\omega_{18}^2 + 72cs^2\omega_{18}^2\omega_6 - 48\omega_{11}^2cs^2\omega_6 - 25\omega_{11}\omega_{18}^2\omega_6^2 - 60\omega_{11}^2cs^2\omega_{18} + 24\omega_{18}^2\omega_6^2 - 5\omega_{11}^2\omega_{18}^2\omega_6^2v_3^2 + 21\omega_{11}^2\omega_{18}\omega_6^2 -$$
$$24\omega_{11}cs^2\omega_{18}\omega_6 + 168\omega_{11}^2\omega_{18}\omega_6v_3^2 - 3\omega_{11}^2cs^2\omega_{18}^2\omega_6^2 + 12\omega_{11}cs^2\omega_{18}\omega_6^2 - 84\omega_{11}^2\omega_{18}v_3^2 + 36\omega_{11}\omega_{18}\omega_6^2v_3^2 + 120\omega_{18}^2\omega_6v_3^2 - 72\omega_{11}^2\omega_{18}\omega_6 -$$
$$168\omega_{11}\omega_{18}^2\omega_6v_3^2 - 48\omega_{18}^2\omega_6 + 84\omega_{11}\omega_{18}^2v_3^2 + 36\omega_{11}^2\omega_{18} + 24\omega_{11}^2\omega_6^2v_3^2 + 72\omega_{11}\omega_{18}^2\omega_6$$

2.3.4 Conservation of momentum: ρv_2

📎 attached text file: `output_d3q27_nse_mrt2_symbolic_pde_02.txt`

$v_2\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_2}{\partial t} + \frac{v_1\delta_l v_2}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{\rho\delta_l v_2}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\rho v_1\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_1} + (v_2^2 + cs^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{2\rho\delta_l v_2}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_3 v_2}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{\rho\delta_l v_3}{\delta_t}\frac{\partial v_2}{\partial x_3} +$

$\frac{\rho\delta_l v_2}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2+\omega_5)\frac{\delta_l^2 cs^2}{2\omega_5\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_1} + (-2+\omega_5)\frac{\delta_l^2 cs^2}{2\omega_5\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_2} +$

$(-2 + 6v_2^2 - 3v_2^2\omega_{10} + 4cs^2 + \omega_{10} - 2cs^2\omega_{10})\frac{\delta_l^2}{\delta_t\omega_{10}}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_2} + (2-\omega_{10})\frac{3\rho\delta_l^2 v_2}{\delta_t\omega_{10}}\left(\frac{\partial v_2}{\partial x_2}\right)^2 + (-2+\omega_7)\frac{\delta_l^2 cs^2}{2\delta_t\omega_7}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_2} +$

$(-2+\omega_7)\frac{\delta_l^2 cs^2}{2\delta_t\omega_7}\frac{\partial\rho}{\partial x_3}\frac{\partial v_2}{\partial x_3} + (-2+\omega_5)\frac{\rho\delta_l^2 cs^2}{2\omega_5\delta_t}\frac{\partial^2 v_2}{\partial x_1^2} + (-2+\omega_5)\frac{\rho\delta_l^2 cs^2}{2\omega_5\delta_t}\frac{\partial^2 v_1}{\partial x_1\partial x_2} +$

$(-2 + 2v_2^2 - v_2^2\omega_{10} + 6cs^2 + \omega_{10} - 3cs^2\omega_{10})\frac{\delta_l^2 v_2}{2\delta_t\omega_{10}}\frac{\partial^2\rho}{\partial x_2^2} + (-2 + 6v_2^2 - 3v_2^2\omega_{10} + 2cs^2 + \omega_{10} - cs^2\omega_{10})\frac{\rho\delta_l^2}{2\delta_t\omega_{10}}\frac{\partial^2 v_2}{\partial x_2^2} +$

$(-2+\omega_7)\frac{\rho\delta_l^2 cs^2}{2\delta_t\omega_7}\frac{\partial^2 v_3}{\partial x_2\partial x_3} + (-2+\omega_7)\frac{\rho\delta_l^2 cs^2}{2\delta_t\omega_7}\frac{\partial^2 v_2}{\partial x_3^2} + C_1\frac{v_1\delta_l^3 v_2}{12\omega_5\omega_9\omega_{12}\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + C_2\frac{\rho\delta_l^3 v_2}{12\omega_5\omega_9\omega_{12}\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_3\frac{\rho v_1\delta_l^3}{6\omega_5^2\omega_{12}\delta_t}\frac{\partial^3 v_2}{\partial x_1^3} +$

$(-12+12\omega_5 - \omega_5^2)\frac{\delta_l^3 cs^4}{6\omega_5^2\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} + (2\omega_5 - 2\omega_{12} + \omega_5\omega_{12} - \omega_5^2)\frac{\rho v_1\delta_l^3 cs^2}{\omega_5^2\omega_{12}\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_2} +$

$(12\omega_5\omega_{15}\omega_{10} + 12\omega_5\omega_{10} - 12\omega_5\omega_{15} + 12\omega_5^2 - \omega_5^2\omega_{15}\omega_{10} - 12\omega_5^2\omega_{10} - 12\omega_{15}\omega_{10})\frac{\rho\delta_l^3 v_2 cs^2}{6\omega_5^2\omega_{15}\delta_t\omega_{10}}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} +$

$C_4\frac{v_1\delta_l^3 v_2}{\omega_5\omega_{15}\delta_t\omega_{10}^2}\frac{\partial^3\rho}{\partial x_1\partial x_2^2} + C_5\frac{\rho\delta_l^3 v_2}{12\omega_5^2\omega_{15}\delta_t\omega_{10}^2}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C_6\frac{\rho v_1\delta_l^3}{\omega_5\omega_{15}\delta_t\omega_{10}^2}\frac{\partial^3 v_2}{\partial x_1\partial x_2^2} + C_7\frac{\delta_l^3}{12\delta_t\omega_{10}^2}\frac{\partial^3\rho}{\partial x_2^3} +$

$(-24 + 11v_2^2\omega_{10}^2 + 60v_2^2 - 60v_2^2\omega_{10} - 4\omega_{10}^2 + 5cs^2\omega_{10}^2 + 36cs^2 + 24\omega_{10} - 36cs^2\omega_{10})\frac{\rho\delta_l^3 v_2}{6\delta_t\omega_{10}^2}\frac{\partial^3 v_2}{\partial x_2^3} +$

$(\omega_8\omega_5\omega_7 + \omega_5\omega_7 - \omega_5^2\omega_7 - \omega_8\omega_7 + \omega_5^2 - \omega_8\omega_5)\frac{\rho\delta_l^3 v_3 cs^2}{\omega_8\omega_5^2\delta_t\omega_7}\frac{\partial^3 v_2}{\partial x_1^2\partial x_3} +$

$(-\omega_8\omega_5\omega_6\omega_7 + 6\omega_8\omega_5\omega_7 + 6\omega_6\omega_7 + 6\omega_5\omega_6 - 6\omega_8\omega_7 - 6\omega_5\omega_6\omega_7 - 6\omega_8\omega_5)\frac{\rho\delta_l^3 v_2 cs^2}{6\omega_8\omega_5\omega_6\delta_t\omega_7}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} +$

$(\omega_8\omega_5\omega_7 + \omega_5\omega_7 - \omega_5^2\omega_7 - \omega_8\omega_7 + \omega_5^2 - \omega_8\omega_5)\frac{\rho\delta_l^3 v_3 cs^2}{\omega_8\omega_5^2\delta_t\omega_7}\frac{\partial^3 v_1}{\partial x_1\partial x_2\partial x_3} +$

$(-\omega_5\omega_7^2 + \omega_8\omega_5\omega_7 + \omega_5\omega_7 - \omega_8\omega_7 - \omega_8\omega_5 + \omega_7^2)\frac{\rho v_1\delta_l^3 cs^2}{\omega_8\omega_5\delta_t\omega_7^2}\frac{\partial^3 v_3}{\partial x_1\partial x_2\partial x_3} + C_8\frac{\delta_l^3 v_3 v_2}{\delta_t\omega_{16}\omega_{10}^2\omega_7}\frac{\partial^3\rho}{\partial x_2^2\partial x_3} + C_9\frac{\rho\delta_l^3 v_3}{\delta_t\omega_{16}\omega_{10}^2\omega_7}\frac{\partial^3 v_2}{\partial x_2^2\partial x_3} +$

$+ C_{10}\frac{\rho\delta_l^3 v_2}{12\delta_t\omega_{16}\omega_{10}^2\omega_7^2}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} +$

$(-\omega_8\omega_5\omega_6\omega_7 + 6\omega_8\omega_5\omega_7 + 6\omega_6\omega_7 + 6\omega_5\omega_6 - 6\omega_8\omega_7 - 6\omega_5\omega_6\omega_7 - 6\omega_8\omega_5)\frac{\rho\delta_l^3 v_2 cs^2}{6\omega_8\omega_5\omega_6\delta_t\omega_7}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} +$

$(-\omega_5\omega_7^2 + \omega_8\omega_5\omega_7 + \omega_5\omega_7 - \omega_8\omega_7 - \omega_8\omega_5 + \omega_7^2)\frac{\rho v_1\delta_l^3 cs^2}{\omega_8\omega_5\delta_t\omega_7^2}\frac{\partial^3 v_2}{\partial x_1\partial x_3^2} + (-12 + 12\omega_7 - \omega_7^2)\frac{\delta_l^3 cs^4}{6\delta_t\omega_7^2}\frac{\partial^3\rho}{\partial x_2\partial x_3^2} +$

$(-12\omega_{10}\omega_7^2 - 12\omega_{16}\omega_{10} + 12\omega_{10}\omega_7 - 12\omega_{16}\omega_7 + 12\omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_{10}\omega_7^2 + 12\omega_7^2)\frac{\rho\delta_l^3 v_2 cs^2}{6\delta_t\omega_{16}\omega_{10}\omega_7^2}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} +$

$(-2\omega_{19} + \omega_{19}\omega_7 + 2\omega_7 - \omega_7^2)\frac{\rho\delta_l^3 v_3 cs^2}{\omega_{19}\delta_t\omega_7^2}\frac{\partial^3 v_3}{\partial x_2\partial x_3^2} + C_{11}\frac{\delta_l^3 v_3 v_2}{12\omega_{11}\omega_{19}\delta_t\omega_7}\frac{\partial^3\rho}{\partial x_3^3} + C_{12}\frac{\rho\delta_l^3 v_2}{6\omega_{19}\delta_t\omega_7^2}\frac{\partial^3 v_2}{\partial x_3^3} + C_{13}\frac{\rho\delta_l^3 v_2}{12\omega_{11}\omega_{19}\delta_t\omega_7}\frac{\partial^3 v_3}{\partial x_3^3} +$

$C_{14}\frac{\delta_l^4 v_2}{24\omega_5^2\omega_9^2\omega_{12}^2\delta_t}\frac{\partial^4\rho}{\partial x_1^4} + C_{15}\frac{\rho v_1\delta_l^4 v_2}{12\omega_5^2\omega_9^2\omega_{12}^2\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_{16}\frac{\rho\delta_l^4}{24\omega_5^3\omega_{12}^2\delta_t}\frac{\partial^4 v_2}{\partial x_1^4} + C_{17}\frac{v_1\delta_l^4}{12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\delta_t\omega_{10}}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} +$

$C_{18}\frac{\rho\delta_l^4}{12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\delta_t\omega_{10}}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} + C_{19}\frac{\rho v_1\delta_l^4 v_2}{12\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2\delta_t\omega_{10}^2}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C_{20}\frac{\delta_l^4 v_2}{12\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}\delta_t\omega_{10}^3}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} +$

$C_{21}\frac{\rho v_1\delta_l^4 v_2}{2\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\delta_t\omega_{10}^3}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} + C_{22}\frac{\rho\delta_l^4}{12\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}\delta_t\omega_{10}^3}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} + C_{23}\frac{v_1\delta_l^4}{4\omega_5^3\omega_{15}^2\delta_t\omega_{10}^3}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} +$

$C_{24}\frac{\rho\delta_l^4}{12\omega_5^3\omega_{15}^2\delta_t\omega_{10}^3}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} + C_{25}\frac{\rho v_1\delta_l^4 v_2}{4\omega_5^2\omega_{15}^2\delta_t\omega_{10}^3}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} + C_{26}\frac{\delta_l^4 v_2}{12\delta_t\omega_{10}^3}\frac{\partial^4\rho}{\partial x_2^4} + C_{27}\frac{\rho\delta_l^4}{12\delta_t\omega_{10}^3}\frac{\partial^4 v_2}{\partial x_2^4} +$

$C_{28}\frac{v_1\delta_l^4 v_3 v_2}{4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6\delta_t\omega_{13}\omega_7}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} + C_{29}\frac{\rho\delta_l^4 v_3 v_2}{4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6\delta_t\omega_{13}\omega_7}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} + C_{30}\frac{\rho v_1\delta_l^4 v_3}{2\omega_{14}\omega_8^2\omega_5^3\omega_{12}^2\delta_t\omega_7}\frac{\partial^4 v_2}{\partial x_1^3\partial x_3} +$

$C_{31}\frac{\rho v_1\delta_l^4 v_2}{12\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6\delta_t\omega_{13}\omega_7^2}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} + C_{32}\frac{2\delta_l^4 v_3 cs^4}{\omega_8^2\omega_5^3\delta_t\omega_7^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} + C_{33}\frac{\rho v_1\delta_l^4 v_3 cs^2}{\omega_{14}\omega_8^2\omega_5^3\omega_{12}^2\delta_t\omega_7^2}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} +$

$C_{34}\frac{\rho\delta_l^4 v_3 v_2 cs^2}{2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\delta_t\omega_{16}\omega_{10}^2\omega_7}\frac{\partial^4 v_2}{\partial x_2^2\partial x_2\partial x_3} + C_{35}\frac{\rho\delta_l^4 cs^2}{12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\delta_t\omega_{16}\omega_{10}\omega_7^3}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} +$

$C_{36}\frac{v_1\delta_l^4 v_3 v_2}{\omega_{17}\omega_8\omega_5^2\omega_{15}^2\delta_t\omega_{16}^2\omega_{10}^3\omega_7^2}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} + C_{37}\frac{\rho\delta_l^4 v_3 v_2}{2\omega_{17}\omega_8^3\omega_5^2\omega_{15}^2\omega_6\delta_t\omega_{16}^2\omega_{10}^3\omega_7^2}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} + C_{38}\frac{\rho v_1\delta_l^4 v_3}{\omega_{17}\omega_8\omega_5^2\omega_{15}^2\delta_t\omega_{16}^2\omega_{10}^3\omega_7}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3}$

$$+ \ C_{39}\frac{\rho v_1 \delta_l^4 v_2}{2\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6\delta_t\omega_{16}^2\omega_{10}^3\omega_7^3}\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} \ + \ C_{40}\frac{\delta_l^4 v_3}{4\delta_t\omega_{16}^2\omega_{10}^3\omega_7^2}\frac{\partial^4 \rho}{\partial x_2^3 \partial x_3} \ + \ C_{41}\frac{\rho\delta_l^4 v_3 v_2}{4\delta_t\omega_{16}^2\omega_{10}^3\omega_7^2}\frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} \ +$$

$$C_{42}\frac{\rho\delta_l^4}{12\delta_t\omega_{16}^2\omega_{10}^3\omega_7^2}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} \ + \ C_{43}\frac{\delta_l^4}{12\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2\omega_{19}\delta_t\omega_7^2}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} \ + \ C_{44}\frac{\rho\delta_l^4}{4\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{19}\delta_t\omega_{13}\omega_7^2}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} \ +$$

$$C_{45}\frac{\rho\delta_l^4}{4\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_{19}\delta_t\omega_7^3}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_3^2} \ + \ C_{46}\frac{\rho\delta_l^4 v_3}{2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12}\omega_6^2\omega_{19}\delta_t\omega_7^2}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} \ +$$

$$C_{47}\frac{\delta_l^4}{2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_{19}\delta_t\omega_{16}\omega_{10}\omega_7^3\omega_{23}}\frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} \ + \ C_{48}\frac{\rho\delta_l^4}{12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\delta_t\omega_{16}\omega_{10}\omega_7^3\omega_{23}}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} \ +$$

$$C_{49}\frac{\rho\delta_l^4 v_2}{2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{19}\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} \ + \ C_{50}\frac{\rho\delta_l^4}{2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_{19}^2\delta_t\omega_{16}\omega_{10}\omega_7^3\omega_{23}}\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} \ +$$

$$C_{51}\frac{\delta_l^4 v_2}{12\omega_{19}\delta_t\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} \ + \ C_{52}\frac{\rho\delta_l^4}{12\omega_{19}\delta_t\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} \ + \ C_{53}\frac{\rho\delta_l^4 v_3 v_2}{2\omega_{11}\omega_{19}^2\delta_t\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} \ +$$

$$C_{54}\frac{v_1\delta_l^4 v_3 v_2}{4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\delta_t\omega_7^2}\frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} \ + \ C_{55}\frac{\rho\delta_l^4 v_3 v_2}{12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2\delta_t\omega_7^2}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} \ + \ C_{56}\frac{\rho v_1\delta_l^4 v_3}{2\omega_{20}\omega_8^2\omega_5^2\omega_{19}^2\delta_t\omega_7^3}\frac{\partial^4 v_2}{\partial x_1 \partial x_3^3} \ +$$

$$C_{57}\frac{\rho v_1\delta_l^4 v_2}{4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\delta_t\omega_7^2}\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} \ + \ C_{58}\frac{\delta_l^4 v_3}{12\omega_{11}^2\omega_{19}^2\delta_t\omega_{16}\omega_{10}\omega_7^3\omega_{23}}\frac{\partial^4 \rho}{\partial x_2 \partial x_3^3} \ + \ C_{59}\frac{\rho\delta_l^4 v_3 v_2}{12\omega_{11}^2\omega_{19}^2\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} \ +$$

$$C_{60}\frac{\rho\delta_l^4}{12\omega_{11}^2\omega_{19}^2\delta_t\omega_{16}\omega_{10}\omega_7^3\omega_{23}}\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} \ + \ C_{61}\frac{\delta_l^4 v_2}{24\omega_{11}^2\omega_{19}^2\delta_t\omega_7^2}\frac{\partial^4 \rho}{\partial x_3^4} \ + \ C_{62}\frac{\rho\delta_l^4}{24\omega_{19}^2\delta_t\omega_7^3}\frac{\partial^4 v_2}{\partial x_3^4} \ + \ C_{63}\frac{\rho\delta_l^4 v_3 v_2}{12\omega_{11}^2\omega_{19}^2\delta_t\omega_7^2}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 6\omega_5 v_1^2\omega_9 + 12v_1^2\omega_{12} + 18\omega_5\omega_9 cs^2 - 6\omega_5\omega_9 + 36\omega_{12}cs^2 + \omega_5 v_1^2\omega_9\omega_{12} + 12\omega_9 + 3\omega_5\omega_9\omega_{12}cs^2 - 12\omega_{12} - 18\omega_5\omega_{12}cs^2 + 6\omega_5\omega_{12} - \omega_5\omega_9\omega_{12} - 36\omega_9 cs^2 - 6\omega_5 v_1^2\omega_{12} - 12v_1^2\omega_9$

$C_2 = 18\omega_5 v_1^2\omega_9 + 36v_1^2\omega_{12} + 6\omega_5\omega_9 cs^2 - 6\omega_5\omega_9 + 12\omega_{12}cs^2 + 3\omega_5 v_1^2\omega_9\omega_{12} + 12\omega_9 + \omega_5\omega_9\omega_{12}cs^2 - 12\omega_{12} - 6\omega_5\omega_{12}cs^2 + 6\omega_5\omega_{12} - \omega_5\omega_9\omega_{12} - 12\omega_9 cs^2 - 18\omega_5 v_1^2\omega_{12} - 36v_1^2\omega_9$

$C_3 = -\omega_5^2 v_1^2\omega_{12} + \omega_5^2\omega_{12} + 6\omega_5 - 6\omega_5 cs^2 - 3\omega_5^2\omega_{12}cs^2 - 12\omega_{12}cs^2 - 6\omega_5 v_1^2 + 3\omega_5^2 v_1^2 + 15\omega_5\omega_{12}cs^2 - 3\omega_5\omega_{12} + 3\omega_5^2 cs^2 - 3\omega_5^2 + 3\omega_5 v_1^2\omega_{12}$

$C_4 = -v_2^2\omega_{10}^2 + \omega_5\omega_{15}\omega_{10} - 3\omega_5 cs^2\omega_{10} + \omega_{15}v_2^2\omega_{10} + \omega_5\omega_{10} + 3\omega_5 cs^2\omega_{10}^2 - \omega_5\omega_{10}^2 - \omega_5\omega_{15} + 3\omega_5\omega_{15}cs^2 - 3\omega_5\omega_{15}cs^2\omega_{10} + 3\omega_{15}cs^2\omega_{10} - \omega_5 v_2^2\omega_{10} + \omega_{10}^2 - 3cs^2\omega_{10}^2 + \omega_5\omega_{15}v_2^2 - \omega_5\omega_{15}v_2^2\omega_{10} + \omega_5 v_2^2\omega_{10}^2 - \omega_{15}\omega_{10}$

$C_5 = 42\omega_5\omega_{15}cs^2\omega_{10}^2 + 12\omega_5^2 v_2^2\omega_{10}^2 - 3\omega_5^2\omega_{15}v_2^2\omega_{10}^2 - 12\omega_5^2 v_2^2\omega_{10} - 6\omega_5^2\omega_{15}v_2^2\omega_{10} - 12\omega_5 cs^2\omega_{10}^2 + 12\omega_5^2\omega_{10} - 6\omega_5\omega_{15}\omega_{10}^2 + 12\omega_5^2\omega_{15}v_2^2 - 24\omega_5\omega_{15}cs^2\omega_{10} - 11\omega_5^2\omega_{15}cs^2\omega_{10}^2 + 12\omega_5^2 cs^2\omega_{10}^2 + 6\omega_5\omega_{15}v_2^2\omega_{10}^2 + 36\omega_5^2\omega_{15}cs^2 + 3\omega_5^2\omega_{15}\omega_{10}^2 - 12\omega_5^2\omega_{15} - 12\omega_5^2\omega_{10}^2 + 6\omega_5^2\omega_{15}\omega_{10} + 12\omega_5^2\omega_{10} - 18\omega_5^2\omega_{15}cs^2\omega_{10} - 12\omega_5^2 cs^2\omega_{10} - 24\omega_{15}cs^2\omega_{10}^2 - 12\omega_5 v_2^2\omega_{10}^2$

$C_6 = -3v_2^2\omega_{10}^2 + \omega_5\omega_{15}\omega_{10} - \omega_5 cs^2\omega_{10} + 3\omega_{15}v_2^2\omega_{10} + \omega_5\omega_{10} + \omega_5 cs^2\omega_{10}^2 - \omega_5\omega_{10}^2 - \omega_5\omega_{15} + \omega_5\omega_{15}cs^2 - \omega_5\omega_{15}cs^2\omega_{10} + \omega_{15}cs^2\omega_{10} - 3\omega_5 v_2^2\omega_{10} + \omega_{10}^2 - cs^2\omega_{10}^2 + 3\omega_5\omega_{15}v_2^2 - 3\omega_5\omega_{15}v_2^2\omega_{10} + 3\omega_5 v_2^2\omega_{10}^2 - \omega_{15}\omega_{10}$

$C_7 = -7v_2^2\omega_{10}^2 + cs^4\omega_{10}^2 + 144v_2^2 cs^2 + 12cs^4 - 36v_2^2 + 36v_2^2\omega_{10} - 12cs^4\omega_{10} - 144v_2^2 cs^2\omega_{10} + 7v_2^4\omega_{10}^2 - cs^2\omega_{10}^2 - 12cs^2 + 36v_2^4 - 36v_2^2\omega_{10} + 12cs^2\omega_{10} + 24v_2^2 cs^2\omega_{10}^2$

$C_8 = -v_2^2\omega_{10}\omega_7 - v_2^2\omega_{10}^2 + 3\omega_{16}cs^2\omega_{10} - v_2^2\omega_{16}\omega_{10}\omega_7 + v_2^2\omega_{16}\omega_7 - \omega_{16}\omega_{10} + \omega_{10}\omega_7 + 3\omega_{16}cs^2\omega_7 - 3cs^2\omega_{10}\omega_7 - \omega_{16}\omega_7 + v_2^2\omega_{16}\omega_{10} + \omega_{16}\omega_{10}\omega_7 - \omega_{10}^2\omega_7 + \omega_{10}^2 - 3cs^2\omega_{10}^2 + 3cs^2\omega_{10}^2\omega_7 + v_2^2\omega_{10}^2\omega_7 - 3\omega_{16}cs^2\omega_{10}\omega_7$

$C_9 = -3v_2^2\omega_{10}\omega_7 - 3v_2^2\omega_{10}^2 + \omega_{16}cs^2\omega_{10} - 3v_2^2\omega_{16}\omega_{10}\omega_7 + 3v_2^2\omega_{16}\omega_7 - \omega_{16}\omega_{10} + \omega_{10}\omega_7 + \omega_{16}cs^2\omega_7 - cs^2\omega_{10}\omega_7 - \omega_{16}\omega_7 + 3v_2^2\omega_{16}\omega_{10} + \omega_{16}\omega_{10}\omega_7 - \omega_{10}^2\omega_7 + \omega_{10}^2 - cs^2\omega_{10}^2 + cs^2\omega_{10}^2\omega_7 + 3v_2^2\omega_{10}^2\omega_7 - \omega_{16}cs^2\omega_{10}\omega_7$

$C_{10} = 3\omega_{16}\omega_{10}^2\omega_7^2 + 42\omega_{16}cs^2\omega_{10}^2\omega_7 - 12\omega_{16}\omega_7^2 + 36\omega_{16}cs^2\omega_7^2 - 12cs^2\omega_{10}^2\omega_7^2 + 12\omega_{10}\omega_7^2 + 12v_2^2\omega_{16}\omega_7^2 - 11\omega_{16}cs^2\omega_{10}^2\omega_7^2 - 6v_2^2\omega_{16}\omega_{10}\omega_7^2 - 12v_2^2\omega_{10}\omega_7^2 - 6\omega_{16}\omega_{10}^2\omega_7 - 24\omega_{16}cs^2\omega_{10} - 18\omega_{16}cs^2\omega_{10}\omega_7 - 3v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 12v_2^2\omega_{10}^2\omega_7^2 + 12\omega_{10}^2\omega_7 - 12cs^2\omega_{10}^2\omega_7 + 12cs^2\omega_{10}\omega_7^2 - 12\omega_{10}^2\omega_7^2 + 6\omega_{16}\omega_{10}\omega_7^2 - 12v_2^2\omega_{10}^2\omega_7 - 24\omega_{16}cs^2\omega_{10}\omega_7^2 + 6v_2^2\omega_{16}\omega_{10}^2\omega_7$

$C_{11} = -6\omega_{11}\omega_7 + 6\omega_{11}v_3^2\omega_7 + 12\omega_{11} - 36\omega_{11}cs^2 - 6v_3^2\omega_{19}\omega_7 + 36\omega_{19}cs^2 + 18\omega_{11}cs^2\omega_7 - \omega_{11}\omega_{19}\omega_7 + \omega_{11}v_3^2\omega_{19}\omega_7 - 12\omega_{19} + 6\omega_{19}\omega_7 + 12v_3^2\omega_{19} + 3\omega_{11}\omega_{19}cs^2\omega_7 - 12\omega_{11}v_3^2 - 18\omega_{19}cs^2\omega_7$

$C_{12} = -6v_3^2\omega_7 + 3v_3^2\omega_7^2 + 3v_3^2\omega_{19}\omega_7 - 6cs^2\omega_7 - 12\omega_{19}cs^2 - 3\omega_{19}cs^2\omega_7^2 - 3\omega_{19}\omega_7 + \omega_{19}\omega_7^2 + 6\omega_7 - v_3^2\omega_{19}\omega_7^2 + 3cs^2\omega_7^2 + 15\omega_{19}cs^2\omega_7 - 3\omega_7^2$

$C_{13} = -6\omega_{11}\omega_7 + 18\omega_{11}v_3^2\omega_7 + 12\omega_{11} - 12\omega_{11}cs^2 - 18v_3^2\omega_{19}\omega_7 + 12\omega_{19}cs^2 + 6\omega_{11}cs^2\omega_7 - \omega_{11}\omega_{19}\omega_7 + 3\omega_{11}v_3^2\omega_{19}\omega_7 - 12\omega_{19} + 6\omega_{19}\omega_7 + 36v_3^2\omega_{19} + \omega_{11}\omega_{19}cs^2\omega_7 - 36\omega_{11}v_3^2 - 6\omega_{19}cs^2\omega_7$

$C_{14} = -12\omega_5^2 v_1^2\omega_9^2\omega_{12}^2 cs^2 - 12\omega_5^2\omega_9^2\omega_{12}cs^4 + 216v_1^4\omega_9\omega_{12}^2 cs^2 + 72\omega_5 v_1^4\omega_{12}^2 + 96\omega_5 v_1^2\omega_9\omega_{12}^2 + 30\omega_5^2 v_1^2\omega_9^2\omega_{12} - 144\omega_5 v_1^2\omega_9\omega_{12}cs^2 - 48\omega_5 v_1^4\omega_9\omega_{12} - 216v_1^2\omega_9^2\omega_{12}cs^2 - 144\omega_5^2 v_1^2\omega_{12}^2 cs^2 + 14\omega_5^2\omega_9\omega_{12}cs^4 + 72\omega_5^2 v_1^2\omega_9\omega_{12}cs^2 - 3\omega_5^2 v_1^4\omega_9^2\omega_{12} + \omega_5^2\omega_9\omega_{12}^2 cs^2 + 12\omega_5^2 v_1^4\omega_9 - 48v_1^4\omega_9\omega_{12} + 24\omega_9\omega_{12}^2 cs^4 - 48\omega_5\omega_9^2\omega_{12}cs^2 - 96\omega_5 v_1^4\omega_9\omega_{12}^2 - 30\omega_5^2 v_1^4\omega_9\omega_{12} + 24\omega_5 v_1^4\omega_9 - 24\omega_9\omega_{12}cs^4 + 48\omega_5\omega_9\omega_{12}^2 cs^2 - 12\omega_5^2\omega_{12}cs^4 + 48\omega_5 v_1^2\omega_9\omega_{12} + 3\omega_5^2 v_1^2\omega_9\omega_{12} - 144\omega_5 v_1^2\omega_9^2 cs^2 - 12\omega_5^2\omega_9\omega_{12}cs^2 - 24\omega_5\omega_9^2 cs^4 + 48v_1^4\omega_9\omega_{12} - 24\omega_5\omega_{12}^2 cs^2 + 36\omega_5^2 v_1^2\omega_{12} - 96\omega_5 v_1^2\omega_9\omega_{12} - 36\omega_5^2 v_1^2\omega_9\omega_{12} - 12\omega_5^2 v_1^2\omega_9^2 + 48\omega_5\omega_9^2\omega_{12}cs^4 - 24\omega_9\omega_{12}^2 cs^2 + 24\omega_5\omega_9^2 cs^2 + 48v_1^4\omega_9\omega_{12} + 24\omega_5\omega_{12}^2 cs^4 - 72\omega_5 v_1^2\omega_{12}^2 - 48\omega_5\omega_9\omega_{12}^2 cs^4 + 24\omega_9^2\omega_{12}cs^2 + 288\omega_5 v_1^2\omega_{12}^2 cs^2 +$

$$12\omega_5^2\omega_{12}^2cs^2 + 24\omega_5^2v_1^4\omega_9\omega_{12} + 12\omega_5^2\omega_9^2cs^4 + 96\omega_5v_1^4\omega_9^2\omega_{12} + 36\omega_5^2v_1^4\omega_9\omega_{12}^2 + 150\omega_5^2v_1^2\omega_9\omega_{12}^2cs^2 + 432\omega_5v_1^2\omega_9^2\omega_{12}cs^2 + 12\omega_5^2\omega_9^2\omega_{12}cs^2 -$$
$$36\omega_5v_1^4\omega_{12}^2 - 126\omega_5^2v_1^2\omega_9^2\omega_{12}cs^2 - \omega_5^2\omega_9^2\omega_{12}^2cs^4 - 48v_1^2\omega_9\omega_{12}^2 + 72\omega_5^2v_1^2\omega_9^2cs^2 - 432\omega_5v_1^2\omega_9\omega_{12}^2cs^2 - 14\omega_5^2\omega_9\omega_{12}^2cs^2 - 24\omega_5v_1^4\omega_9^3 - 24\omega_5^2v_1^2\omega_9\omega_{12}$$

$C_{15} =$
$$-168\omega_5v_1^2\omega_9\omega_{12}^2 - 25\omega_5^2\omega_9\omega_{12}^2 - 51\omega_5^2v_1^2\omega_9\omega_{12} + 12\omega_5^2\omega_9\omega_{12}cs^2 - 36\omega_9\omega_{12}^2 - 3\omega_5^2\omega_9^2\omega_{12}^2cs^2 + 24\omega_5^2\omega_{12}^2 + 24\omega_5\omega_9^3 - 72\omega_5\omega_9^2\omega_{12} + 120\omega_5\omega_9\omega_{12}cs^2 -$$
$$48\omega_5v_1^2\omega_9^3 - 12\omega_5^2\omega_9\omega_{12} - 120\omega_5\omega_9\omega_{12}^2cs^2 - 72\omega_5v_1^2\omega_9\omega_{12} - 5\omega_5^2v_1^2\omega_9^2\omega_{12} + 24\omega_5^2\omega_9^3cs^2 - 84v_1^2\omega_9^3\omega_{12} + 72\omega_5\omega_{12}^2cs^2 - 60\omega_5^2v_1^2\omega_{12}^2 +$$
$$168\omega_5v_1^2\omega_9^2\omega_{12} + 21\omega_5^2\omega_9^2\omega_{12} - 24\omega_5\omega_9\omega_{12}cs^2 + 61\omega_5^2v_1^2\omega_9\omega_{12} + 24\omega_5^2v_1^2\omega_9^3 + 60\omega_9\omega_{12}^2cs^2 - 48\omega_5\omega_9^3cs^2 + 24\omega_5\omega_9\omega_{12} + 120\omega_5v_1^2\omega_{12}^2 + 36\omega_9^2\omega_{12} -$$
$$60\omega_9\omega_{12}^2cs^2 - 36\omega_5^2\omega_{12}^2cs^2 - 48\omega_5\omega_{12}^2 - 33\omega_5^2\omega_9\omega_{12}cs^2 + 72\omega_5\omega_9\omega_{12} - 12\omega_5^2\omega_9^3 + 84v_1^2\omega_9^3\omega_{12} + 2\omega_5^2\omega_9^2\omega_{12} + 39\omega_5^2\omega_9\omega_{12}cs^2 + 36\omega_5^2v_1^2\omega_9\omega_{12}$$

$C_{16} = \omega_5^3\omega_{12}^2cs^2 - 72\omega_5^2v_1^2\omega_{12} + 24\omega_5v_1^4\omega_{12} + 12\omega_5^3v_1^4 - 18\omega_5^3v_1^4\omega_{12} - 72\omega_5^2v_1^2\omega_{12}^2cs^2 + 6\omega_5^3\omega_{12}cs^4 + 6\omega_5^3v_1^2\omega_{12}^2cs^2 - 24\omega_5^2v_1^4 + 24\omega_5\omega_{12}cs^4 -$
$96v_1^2\omega_{12}^2cs^2 + 24\omega_5^2\omega_{12}cs^2 - 24\omega_5v_1^2\omega_{12}cs^2 + 12\omega_5^3v_1^2cs^2 + 24\omega_{12}^2cs^4 - 48\omega_5v_1^4\omega_{12} + 24\omega_5^2\omega_{12}^2cs^4 + 3\omega_5^3v_1^4\omega_{12}^2 + 12\omega_5\omega_{12}^2cs^2 + 24\omega_5^2v_1^2\omega_{12} -$
$24\omega_5^2\omega_{12}cs^4 + 24\omega_5^2v_1^2 - 24\omega_5\omega_{12}cs^2 - 12\omega_5^3v_1^2\omega_{12}cs^2 - 48\omega_5\omega_{12}^2cs^4 + 72\omega_5^2v_1^4\omega_{12} - 24\omega_5v_1^2\omega_{12}^2 + 156\omega_5v_1^2\omega_{12}^2cs^2 - 8\omega_5^3\omega_{12}^2cs^2 +$
$18\omega_5^3v_1^2\omega_{12} + 48\omega_5v_1^2\omega_{12} - 12\omega_5^3v_1^2 - 3\omega_5^3v_1^2\omega_{12}^2 + 48\omega_5^3v_1^2\omega_{12}cs^2 - 3\omega_5^3\omega_{12}^2cs^4 - 24\omega_5^2v_1^4\omega_{12} - 24\omega_5^2v_1^2cs^2 - 6\omega_5^3\omega_{12}cs^2$

$C_{17} = -18\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2v_2^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10} + 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 18\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_{10} + 12\omega_5^2\omega_9^2\omega_{12}^2cs^2\omega_{10} +$
$12\omega_5^3v_1^2\omega_9^2\omega_{12}^2v_2^2 - 12\omega_5^3v_1^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 36\omega_5^2\omega_{21}\omega_{15}\omega_9^2v_2^2cs^2\omega_{10} - 36\omega_5^2\omega_{21}\omega_9\omega_{12}^2cs^4\omega_{10} + 12\omega_5^2v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10} +$
$54\omega_{21}^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4\omega_{10} - 18\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2 + 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9v_2^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^2\omega_{10} + 36\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} -$
$15\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 36\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 18\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_{10} + 15\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 18\omega_5^3\omega_{15}\omega_9\omega_{12}^2cs^4 +$
$6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2 - 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2cs^2\omega_{10} - 6\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2 + 12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10} +$
$6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2 - 12\omega_5^3\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 72\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2 + 15\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^4\omega_{10} -$
$45\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}^2v_2\omega_{10} + 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2cs^4\omega_{10} + 12\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} -$
$18\omega_5^3\omega_{15}\omega_9^2\omega_{12}cs^4\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2v_2^2\omega_{10} + 18\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 36\omega_5^3\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2v_2^2\omega_{10} -$
$12\omega_5^2v_1^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 36\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2 - \omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 42\omega_5^2\omega_{21}\omega_9\omega_{12}cs^4\omega_{10} - 36\omega_5^2\omega_{21}\omega_9^2\omega_{12}cs^4\omega_{10} +$
$156\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10} - 108\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2 + 9\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} +$
$12\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{12}\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}^2v_2^2 - 48\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} + 6\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^2 -$
$24\omega_5\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 12\omega_5^3\omega_9^2\omega_{12}^2cs^2 + 12\omega_5^2v_1^2\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} +$
$18\omega_5^3\omega_{21}\omega_{15}\omega_9^2v_2^2cs^2\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2 + 18\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4 + 36\omega_5^2\omega_{21}\omega_{15}\omega_{12}^2v_2^2cs^2\omega_{10} + 18\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} -$
$36\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} + 36\omega_5^2\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_{10} + 36\omega_5^2\omega_9^2\omega_{12}^2cs^4\omega_{10} - 9\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2v_2^2\omega_{10} -$
$72\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 15\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4\omega_{10} + 72\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2 + 12\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + \omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} -$
$12\omega_5^3\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 12\omega_5\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 12\omega_5\omega_{21}\omega_9\omega_{12}^2v_2^2 + 24\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}^2cs^2\omega_{10} - 36\omega_5^2\omega_{21}\omega_9\omega_{12}^2cs^4 +$
$18\omega_5^3\omega_9^2\omega_{12}^2v_2^2cs^2\omega_{10} - 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2cs^4\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_9v_2^2\omega_{10} - 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2v_2^2\omega_{10} + 12\omega_5\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} -$
$12\omega_5^3\omega_9^2\omega_{12}^2v_2^2 + 36\omega_5^2\omega_9^2\omega_{12}^2v_2^2cs^2\omega_{10} + 36\omega_5^3\omega_9^2\omega_{12}^2cs^4 + 3\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} - 60\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^4\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9v_2^2\omega_{10} +$
$36\omega_5^2\omega_{15}\omega_9^2\omega_{12}cs^4\omega_{10} + 24\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2 + 12\omega_5\omega_{21}\omega_{15}\omega_9^2cs^2\omega_{10} - 12\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 36\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} -$
$96\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} - 18\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2 + 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}^2cs^2 + 27\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} -$
$6\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 12\omega_5^3\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}^2v_2^2\omega_{10} - 12\omega_5^3v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10} -$
$36\omega_5^3\omega_9^2\omega_{12}^2cs^4\omega_{10} - 12\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_9\omega_{12}^2cs^2\omega_{10} - 3\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2 -$
$12\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10} - 18\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 24\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2 - 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 36\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^4\omega_{10} +$
$6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2cs^2\omega_{10} + 12\omega_5^2v_1^2\omega_9^2\omega_{12}^2cs^2\omega_{10} + 48\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9v_2^2\omega_{10} + 36\omega_5^2\omega_9^2\omega_{12}^2v_2^2cs^2 + 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2v_2^2\omega_{10} -$
$24\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 72\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 12\omega_5^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 24\omega_5^2\omega_9^2\omega_{12}^2v_2^2 - 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2cs^2\omega_{10} +$
$12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}v_2^2 - 36\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2cs^2 + 12\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 5\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 12\omega_5^3v_1^2\omega_9^2\omega_{12}^2cs^2 -$
$36\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_{10} - 36\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4\omega_{10} + 12\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 18\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} + 3\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4\omega_{10} -$
$12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 5\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 36\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_9\omega_{12}^2cs^2\omega_{10} +$
$144\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 6\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2cs^2 + 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2 + 12\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 18\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} -$
$12\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2 + 6\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} + 24\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2$

$C_{18} = -6\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2v_2^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10} + 72\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_{10} + 12\omega_5^3\omega_9^2\omega_{12}^2cs^2\omega_{10} +$
$36\omega_5^3v_1^2\omega_9^2\omega_{12}^2v_2^2 - 36\omega_5^3v_1^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2v_2^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_9\omega_{12}^2cs^4\omega_{10} + 36\omega_5^2v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10} + 18\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4\omega_{10} -$
$6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2 + 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9v_2^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^2\omega_{10} + 36\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} - 45\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} +$
$12\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_{10} + 15\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^4 + 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2 - 18\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2 -$
$12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} + 36\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10} + 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2 - 12\omega_5^3\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + \omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} -$
$24\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2 + 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^4\omega_{10} - 15\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_{10} - 18\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}^2v_2\omega_{10} + 60\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} +$
$6\omega_5^3\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_9\omega_{12}cs^4\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_{12}^2v_2^2\omega_{10} + 54\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} +$
$12\omega_5^2\omega_{21}\omega_{15}\omega_9^2v_2^2\omega_{10} - 36\omega_5^2v_1^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2 - 18\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_9\omega_{12}cs^4\omega_{10} +$
$18\omega_5^2\omega_{15}\omega_9^2\omega_{12}cs^4\omega_{10} - 36\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 36\omega_5^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2 + 27\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} +$
$12\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 36\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}^2v_2^2 - 48\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} + 18\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^2 -$
$72\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9v_2^2\omega_{10} - 12\omega_5^3\omega_9^2\omega_{12}^2cs^2 + 36\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} +$
$6\omega_5^3\omega_{21}\omega_{15}\omega_9^2v_2^2cs^2\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2 + 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4 + 12\omega_5^2\omega_{21}\omega_{15}\omega_{12}^2v_2^2cs^2\omega_{10} - 102\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} -$
$12\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} + 12\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_{10} + 12\omega_5^2\omega_9^2\omega_{12}^2cs^4\omega_{10} - 9\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} - 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2v_2^2\omega_{10} -$
$24\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_{10} - 5\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4\omega_{10} + 24\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2 + 12\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_9^2\omega_{12}^2v_2^2\omega_{10} -$
$12\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2 + 24\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 36\omega_5^3\omega_{21}v_1^2\omega_9\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_9\omega_{12}^2cs^4 + 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_{10} +$
$18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} - 6\omega_5^3\omega_{21}\omega_{15}\omega_9^2v_2^2\omega_{10} + 12\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^4\omega_{10} - 12\omega_5^3\omega_9^2\omega_{12}^2v_2^2 + 12\omega_5^2\omega_9^2\omega_{12}^2v_2^2cs^2\omega_{10} + 12\omega_5^3\omega_9^2\omega_{12}^2cs^4 -$
$6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_{12}^2v_2^2\omega_{10} + 12\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} + 72\omega_5^2v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2 -$
$36\omega_5^2v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 48\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 108\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} - 12\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} - 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2 +$
$6\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 36\omega_5^2\omega_{21}v_1^2\omega_9\omega_{12}^2cs^2 + 9\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 18\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 15\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} +$

$$12\omega_5^3\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}^2v_2^2\omega_{10} - 36\omega_5^3v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 12\omega_5^3\omega_9^2\omega_{12}^2cs^4\omega_{10} - 36\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_9\omega_{12}^2cs^2\omega_{10} +$$
$$30\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2 - 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10} - 18\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 72\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2 -$$
$$6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^4\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2cs^2\omega_{10} + 36\omega_5^2v_1^2\omega_9^2\omega_{12}^2cs^2\omega_{10} + 144\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10} +$$
$$12\omega_5^3\omega_9^2\omega_{12}^2v_2^2cs^2 + 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}^2v_2^2\omega_{10} - 24\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 24\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_{10} - 12\omega_5^2\omega_9^2\omega_{12}^2cs^2\omega_{10} -$$
$$24\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2 + 24\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_9^2cs^2\omega_{10} + 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}v_2^2 - 12\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2cs^2 + 12\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} +$$
$$5\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 36\omega_5^3v_1^2\omega_9^2\omega_{12}^2cs^2 - 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_{10} - 12\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^4\omega_{10} + 12\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} +$$
$$18\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} - \omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} - 15\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_{10} - 36\omega_5^2\omega_{21}v_1^2\omega_9\omega_{12}^2cs^2\omega_{10} +$$
$$48\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_{10} - 18\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2cs^2 + 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2 + 36\omega_5^3v_1^2\omega_{15}\omega_9\omega_{12}cs^2\omega_{10} + 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_{10} +$$
$$60\omega_5\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} - 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2v_2^2 + 18\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10} + 24\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}v_2^2$$

$$C_{19} = 3\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 - 6\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}^2\omega_{10}^2 + 12\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2 - 12\omega_5^3v_1^2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} +$$
$$12\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{10} + 18\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} + 12\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}^2\omega_{12}^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} +$$
$$84\omega_5^2\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 24\omega_5^2v_1^2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_{10} -$$
$$36\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} + 48\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 60\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}\omega_{10} - 24\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} -$$
$$12\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^2 + 12\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 4\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} - 84\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} -$$
$$24\omega_5^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 6\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 24\omega_5^2\omega_{21}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 24\omega_5^2v_1^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} +$$
$$24\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 24\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}^2cs^2 - 132\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} -$$
$$36\omega_5\omega_{21}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10} - 24\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} - \omega_5^3v_1^2\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10} + 24\omega_5^2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} +$$
$$12\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}\omega_{10} - 66\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} - 96\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{15}\omega_9^2\omega_{12}\omega_{10} +$$
$$24\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2 - 48\omega_5^2\omega_{21}\omega_{15}\omega_9^2cs^2\omega_{10} + 12\omega_5^3v_1^2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - 18\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}cs^2\omega_{10} + 24\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2cs^2\omega_{10} -$$
$$12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 18\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} - 18\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}\omega_{10} + 24\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} +$$
$$24\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10}^2 + 72\omega_5\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10} - 24\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}^2\omega_{10} -$$
$$12\omega_5^3v_1^2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} + 12\omega_5^3\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} - 24\omega_5^2\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10} + 4\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} + 90\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10} -$$
$$66\omega_5^3\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} + 24\omega_5^3\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} + 156\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^2\omega_{10} +$$
$$36\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} + 36\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}^2cs^2\omega_{10} + 12\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^2\omega_{10} + 6\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}^2\omega_{10} -$$
$$24\omega_5^2v_1^2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} - 18\omega_5^2v_1^2\omega_{15}^2\omega_9\omega_9\omega_{12}^2\omega_{10} + 24\omega_5^2\omega_{15}^2\omega_9^2cs^2\omega_{10} + 24\omega_5^2\omega_{15}\omega_9^2\omega_{12}\omega_{10} - 24\omega_5^2\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10} +$$
$$24\omega_5^2\omega_{15}\omega_9^2\omega_{12}\omega_{10} - 72\omega_5\omega_{21}\omega_{15}^2\omega_9^2\omega_{12}cs^2\omega_{10} - 6\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12} - 12\omega_5^3\omega_{21}\omega_9^2\omega_{12}cs^2\omega_{10} +$$
$$12\omega_5^2\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 24\omega_5^3\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 24\omega_5^3v_1^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 66\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10} - 12\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} -$$
$$24\omega_5^3\omega_{21}\omega_9^2\omega_{12}^2cs^2\omega_{10}^2 - \omega_5^3\omega_{21}\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} - 42\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_9\omega_{12}\omega_{10}$$

$$C_{20} =$$
$$36\omega_5^3\omega_{15}\omega_{12}cs^4\omega_{10}^2 - 18\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^2 - 36\omega_5^3\omega_{21}v_1^2\omega_{12}cs^2\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^3\omega_{10}^3 + 12\omega_5^3\omega_{21}\omega_{12}v_2^2cs^2\omega_{10}^3 - 96\omega_{21}\omega_{15}^2\omega_{15}\omega_{12}cs^4\omega_{10}^3 +$$
$$6\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3 + 12\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2 - 12\omega_5^2v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3 - 12\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 - 6\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10} - 42\omega_5^2\omega_{21}\omega_{15}\omega_{15}\omega_{12}cs^4\omega_{10}^3 -$$
$$6\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10}^3 + 18\omega_5^3v_1^2\omega_{15}\omega_{12}cs^3\omega_{10}^3 + 6\omega_5^3\omega_{15}cs^2\omega_{10}^3 + 24\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2 + 12\omega_5^2\omega_{15}^2v_2^2cs^2\omega_{10}^3 -$$
$$12\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10} - 12\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3 - 12\omega_5^2\omega_{21}v_1^2\omega_{15}^2v_2^2\omega_{10}^2 + 24\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 - 12\omega_5^3\omega_{21}\omega_{12}v_2^2cs^2\omega_{10}^2 + 36\omega_5^3\omega_{21}v_1^2\omega_{12}cs^2\omega_{10}^3 -$$
$$24\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^2 + 12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3 - 18\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^2 + 12\omega_5^2\omega_{21}\omega_{15}cs^2\omega_{10}^2 + 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^2 -$$
$$36\omega_5^3\omega_{15}\omega_{12}cs^4\omega_{10}^2 + 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} - 12\omega_5^2\omega_{21}v_1^2\omega_{12}v_2^2\omega_{10}^3 - 6\omega_5^3v_1^2\omega_{15}^2v_2^2\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} - 24\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10} +$$
$$36\omega_5^2v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3 + 6\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2 - 18\omega_5^3v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} + 5\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10} - 72\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} +$$
$$12\omega_5^2\omega_{21}\omega_{12}\omega_{10} + 18\omega_5^3v_1^2\omega_{15}cs^2\omega_{10}^2 - 72\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^2 + 36\omega_5^2v_1^2\omega_{15}cs^2\omega_{10} - 6\omega_5^3v_1^2\omega_{15}^2\omega_{12}\omega_{10}^3 - 12\omega_5^3\omega_{21}\omega_{12}cs^4\omega_{10} -$$
$$12\omega_5^2\omega_{21}\omega_{15}^2\omega_{12}cs^2\omega_{10}^3 + 12\omega_5\omega_{21}\omega_{15}^2\omega_{12}v_2^2cs^2\omega_{10}^3 + 24\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}^2\omega_{10} + 18\omega_5^3\omega_{21}\omega_{15}^2cs^4\omega_{10} - 12\omega_5^2v_1^2\omega_{15}\omega_{12}\omega_{10}^3 - 12\omega_5^2\omega_{15}\omega_{12}cs^2\omega_{10}^3 -$$
$$12\omega_5^2\omega_{15}\omega_{12}cs^2\omega_{10} + 12\omega_5^3\omega_{15}\omega_{15}\omega_{12}cs^2\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} + 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3 - 12\omega_5^3\omega_{21}v_1^2\omega_{12}\omega_{10}^3 + 6\omega_5^3\omega_{21}\omega_{15}^2v_2^2cs^2\omega_{10}^2 -$$
$$54\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}cs^2\omega_{10} + 12\omega_5\omega_{21}\omega_{15}^2\omega_{12}cs^2\omega_{10}^2 - 36\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}cs^4\omega_{10} - 12\omega_5\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3 + 12\omega_5^2\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3 +$$
$$12\omega_5^3\omega_{21}\omega_{12}cs^4\omega_{10}^2 - 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} - 36\omega_5^2\omega_{15}^2\omega_{12}cs^4\omega_{10}^3 - 6\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{10} + 6\omega_5^3v_1^2\omega_{15}^2\omega_{12}\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_{12}\omega_{10} -$$
$$12\omega_5^2\omega_{15}^2cs^2\omega_{10}^3 - 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3 - 12\omega_5\omega_{21}\omega_{15}^2\omega_{12}v_2^2cs^2\omega_{10}^2 + 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} + 6\omega_5^3v_1^2\omega_{15}^2\omega_{10}^3 +$$
$$12\omega_5^3\omega_{21}v_1^2\omega_{12}v_2^2\omega_{10}^3 + 12\omega_5^2\omega_{21}v_1^2\omega_{12}\omega_{10}^3 - 36\omega_5^2\omega_{21}\omega_{15}^2cs^4\omega_{10}^3 - 42\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3 - 36\omega_5^3\omega_{21}v_1^2\omega_{15}cs^2\omega_{10}^2 + 72\omega_5\omega_{21}v_1^2\omega_{15}^2\omega_{12}cs^2\omega_{10}^2 -$$
$$88\omega_5^2\omega_{21}\omega_{15}^2\omega_{12}cs^4\omega_{10}^3 + 12\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10}^3 + 12\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_{10} - 36\omega_5^3v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} - 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3 + 6\omega_5^3\omega_{21}v_1^2\omega_{15}v_2^2\omega_{10} -$$
$$12\omega_5^3v_1^2\omega_{15}\omega_{12} + 12\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3 + 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} - 6\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2 + 12\omega_5^3v_1^2\omega_{12}\omega_{10}^3 - 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} -$$
$$18\omega_5^3v_1^2\omega_{15}^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}v_1^2\omega_{12}cs^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}v_2^2cs^2\omega_{10} + 12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} -$$
$$36\omega_5^2\omega_{21}v_1^2\omega_{12}cs^2\omega_{10}^3 + 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} - \omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3 + 12\omega_5^3\omega_{21}\omega_{12}cs^4\omega_{10}^3 - 12\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10} - 36\omega_5^2v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} +$$
$$36\omega_5^3v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} - 12\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_{10} + 30\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3 + 150\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3 - 12\omega_5^3\omega_{21}v_1^2\omega_{12}v_2^2\omega_{10} +$$
$$18\omega_5^2\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3 - 12\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10} - 18\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3 - 12\omega_5^2\omega_{21}\omega_{12}v_2^2cs^2\omega_{10}^2 + 2\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10} -$$
$$36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} + 72\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} + 18\omega_5^2\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10} + 12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{10} + 18\omega_5^3\omega_{15}\omega_{12}cs^4\omega_{10} + 6\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} -$$
$$18\omega_5^2\omega_{15}cs^4\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10} - 84\omega_5\omega_{21}\omega_{15}^2\omega_{12}cs^4\omega_{10} - 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} - 6\omega_5\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3 +$$
$$12\omega_5^3\omega_{21}\omega_{12}cs^2\omega_{10} + 12\omega_5^2\omega_{15}\omega_{12}cs^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10} - 12\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10} + 12\omega_5\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3 - 48\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10} +$$
$$36\omega_5^2\omega_{15}cs^4\omega_{10} + 24\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} - 2\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^2 - 36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10} + 6\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10} - 6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10} -$$
$$12\omega_5^3\omega_{21}\omega_{12}cs^2\omega_{10} + 36\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4 - 12\omega_5^3v_1^2\omega_{15}\omega_{10} + 18\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10} - 12\omega_5^3\omega_{21}\omega_{15}v_2^2cs^2\omega_{10} - 24\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} +$$
$$180\omega_5\omega_{21}\omega_{15}^2\omega_{12}cs^4\omega_{10}^3 + 12\omega_5^2v_1^2\omega_{15}^2\omega_{12}v_2^2\omega_{10} - 6\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10} - 18\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10} + 36\omega_5\omega_{15}\omega_{12}cs^4\omega_{10} + \omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10} +$$
$$108\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3 + 36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2 - 6\omega_5^3\omega_{15}v_2^2cs^2\omega_{10} + 12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10} + 12\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}$$

$$C_{21} = 4\omega_5^3\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3 + 7\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^2 + 2\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^2 + 4\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} + 2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2 +$$
$$26\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}^3 - 4\omega_5^2\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^3 - 24\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^3 - 2\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3 - 6\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^3 +$$
$$4\omega_5^3\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} + 2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10} + 4\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3 - 3\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3 + 12\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2 - 4\omega_5^3\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2 -$$
$$2\omega_5^3\omega_{21}\omega_{15}\omega_9cs^2\omega_{10} + \omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^2 + 8\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^2 - 9\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3 - 6\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10} -$$
$$4\omega_5^3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10} - \omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10} + 4\omega_5^3\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3 + 2\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10} + 8\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^2\omega_{10} + 9\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3 -$$

$$5\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}+4\omega_5^3\omega_{21}\omega_9\omega_{12}^2\omega_{10}^2+5\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}-4\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^2+6\omega_5\omega_{21}^2\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3-3\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^2-$$
$$4\omega_5^2\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10}^3-8\omega_5^3\omega_{21}\omega_9\omega_{12}^2cs^2\omega_{10}^2-2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}-4\omega_5^3\omega_{21}\omega_9\omega_{12}^2\omega_{10}^3-2\omega_5^3\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}+4\omega_5^2\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3-$$
$$4\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10}-\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^2+8\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^3-4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}+2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}+$$
$$2\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}-5\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^3+3\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}+4\omega_5^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3+3\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3-$$
$$2\omega_5^3\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^2-6\omega_5\omega_{21}\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3+2\omega_5\omega_{21}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^2-4\omega_5^3\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^3+4\omega_5^2\omega_{21}^2\omega_9\omega_{12}cs^2\omega_{10}^3-2\omega_5^2\omega_{15}\omega_9\omega_{12}^2\omega_{10}+$$
$$3\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^2-2\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3+2\omega_5^2\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^2-4\omega_5^2\omega_{21}^2\omega_9\omega_{12}\omega_{10}^3+\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10}-7\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}^2-$$
$$13\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^2+4\omega_5^2\omega_{21}\omega_9\omega_{12}^2\omega_{10}^3+2\omega_5^2\omega_{15}\omega_9\omega_{12}^2\omega_{10}-4\omega_5^2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3-2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^3+4\omega_5^3\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^2+$$
$$2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^3-16\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}-2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10}-2\omega_5^2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^3-4\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10}^3+2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^3+$$
$$\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3+4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10}+4\omega_5^2\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^3-8\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}-8\omega_5^2\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}-4\omega_5^2\omega_{15}\omega_9\omega_{12}^2\omega_{10}-$$
$$12\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^3+2\omega_5^2\omega_{21}\omega_{15}^2\omega_{12}cs^2\omega_{10}^3+4\omega_5^3\omega_{21}\omega_9\omega_{12}^2v_2^2\omega_{10}^3+11\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^3-15\omega_5^3\omega_{21}\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}-$$
$$2\omega_5\omega_{21}\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}-8\omega_5^2\omega_{21}\omega_9\omega_{12}^2cs^2\omega_{10}^2-\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}\omega_{10}-\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}+4\omega_5^3\omega_{21}\omega_{15}\omega_9\omega_{12}v_2^2-2\omega_5^2\omega_{21}\omega_{15}\omega_9\omega_{12}^2\omega_{10}$$

$C_{22}=12\omega_5^3\omega_{15}\omega_{12}cs^4\omega_{10}^2-24\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^2-12\omega_5^3\omega_{21}v_1^2\omega_{12}cs^2\omega_{10}^2+12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^3-24\omega_5^3\omega_{21}\omega_{12}v_2^2cs^2\omega_{10}^3-$
$12\omega_{21}\omega_{15}^2\omega_{12}cs^4\omega_{10}^3-12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3-36\omega_5^3v_1^2\omega_{15}^2\omega_{12}v_2^3\omega_{10}^3+36\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3-6\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^2-$
$24\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3-6\omega_5^3\omega_{15}^2\omega_{12}cs^2\omega_{10}^3+6\omega_5^3v_1^2\omega_{15}^2\omega_{12}cs^2\omega_{10}^3+6\omega_5^3\omega_{15}^2cs^2\omega_{10}^3+72\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^2+36\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}v_2^2+$
$36\omega_5^2\omega_{15}^2v_2^2cs^2\omega_{10}^3-12\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10}-36\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3-36\omega_5^3\omega_{21}v_1^2\omega_{15}^2v_2^2\omega_{10}^2+72\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3+24\omega_5^3\omega_{21}\omega_{12}v_2^2cs^2\omega_{10}^3+$
$12\omega_5^3\omega_{21}v_1^2\omega_{12}cs^2\omega_{10}^3-24\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^2+12\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2\omega_{10}^3+12\omega_5^2\omega_{21}\omega_{15}^2cs^2\omega_{10}^2+6\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^2-$
$12\omega_5^3\omega_{15}\omega_{12}cs^4\omega_{10}^3+12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}-36\omega_5^3\omega_{21}v_1^2\omega_{15}^2v_2^2\omega_{10}^3-18\omega_5^3v_1^2\omega_{15}^2v_2^2\omega_{10}^3-36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3-24\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^2+$
$12\omega_5^2v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3+6\omega_5^3\omega_{12}cs^2\omega_{10}^2-6\omega_5^3v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^2-\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}cs^4\omega_{10}^3-24\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3+6\omega_5^3\omega_{21}v_1^2\omega_{15}^2cs^2\omega_{10}^2+$
$12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^2-24\omega_5^2\omega_{21}v_1^2\omega_{15}^2\omega_{12}cs^2\omega_{10}^2+12\omega_5^2v_1^2\omega_{15}^2cs^2\omega_{10}^3-6\omega_5^3v_1^2\omega_{15}^2\omega_{12}\omega_{10}^3+84\omega_5\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3+24\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^3+$
$6\omega_5^3\omega_{21}\omega_{15}^2cs^4\omega_{10}^2-12\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_{10}^3-36\omega_5^2\omega_{15}^2\omega_{12}v_2^2cs^2\omega_{10}^3-12\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10}^3+12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^3+108\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3-$
$12\omega_5^3\omega_{21}v_1^2\omega_{12}\omega_{10}^3+18\omega_5^3\omega_{21}\omega_{15}^2v_2^2cs^2\omega_{10}^3-18\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}cs^2\omega_{10}+12\omega_5\omega_{21}\omega_{15}^2\omega_{12}cs^2\omega_{10}^3+6\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}cs^4\omega_{10}+$
$60\omega_5\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3+36\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3-36\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3-12\omega_5^2\omega_{15}^2\omega_{12}cs^4\omega_{10}^3-6\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{10}^3+6\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_{10}^3+$
$12\omega_5^3\omega_{21}v_1^2\omega_{12}\omega_{10}^3-12\omega_5^3\omega_{15}^2cs^2\omega_{10}^3-36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3+12\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3+12\omega_5\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3-84\omega_5\omega_{21}\omega_{15}^2\omega_{12}v_2^2cs^2\omega_{10}^3+$
$18\omega_5^3\omega_{21}v_1^2\omega_{15}^2v_2^2\omega_{10}^3-48\omega_{21}\omega_{15}^2\omega_{12}v_2^2cs^2\omega_{10}^3+60\omega_5\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3+6\omega_5^3v_1^2\omega_{15}^2\omega_{10}^3+36\omega_5^3\omega_{21}v_1^2\omega_{12}v_2^2\omega_{10}^3+12\omega_5^3\omega_{21}v_1^2\omega_{12}\omega_{10}^3-$
$12\omega_5^2\omega_{21}\omega_{15}^2cs^4\omega_{10}^3-12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^2-12\omega_5^3\omega_{21}v_1^2\omega_{12}cs^2\omega_{10}^3+24\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2\omega_{10}^2-4\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3+$
$12\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10}^3+12\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_{10}^3-12\omega_5^3v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3-72\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3+18\omega_5^3\omega_{21}v_1^2\omega_{15}^2v_2^2\omega_{10}^3-12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}+$
$36\omega_5^2v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3+18\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10}-18\omega_5^2v_1^2\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3+12\omega_5^2v_1^2\omega_{15}^2\omega_{12}\omega_{10}^3-12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3-6\omega_5^3v_1^2\omega_{15}^2cs^2\omega_{10}^3+$
$72\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}-6\omega_5^3\omega_{15}^2\omega_{12}cs^4\omega_{10}^3-42\omega_5^2\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3-12\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3+36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3-$
$12\omega_5^3\omega_{21}v_1^2\omega_{12}cs^2\omega_{10}^3+12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^3-12\omega_5^3\omega_{15}\omega_{12}cs^2\omega_{10}^3-12\omega_5^3v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3+12\omega_5^3v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3-12\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_{10}^3+$
$12\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3+24\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3-36\omega_5^3\omega_{21}v_1^2\omega_{12}v_2^2\omega_{10}^3-132\omega_5^2\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3+18\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}+$
$24\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3+24\omega_5^2\omega_{21}\omega_{12}v_2^2cs^2\omega_{10}^3+6\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3-36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^3+24\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^2+$
$180\omega_5^2\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3+12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}+6\omega_5^3\omega_{15}\omega_{12}cs^4\omega_{10}^3+18\omega_5^3v_1^2\omega_{15}\omega_{12}v_2^2\omega_{10}^3-6\omega_5^3\omega_{15}^2cs^4\omega_{10}^3-6\omega_5^3\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}-$
$12\omega_5\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3-108\omega_{21}\omega_{15}^2\omega_{12}v_2^2cs^2\omega_{10}^3-12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}+78\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3+12\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3-$
$18\omega_5^3\omega_{12}v_2^2cs^2\omega_{10}^3-36\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3-12\omega_5\omega_{21}\omega_{15}\omega_{12}cs^2\omega_{10}^3-12\omega_5^2\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}+12\omega_5^2\omega_{15}^2cs^4\omega_{10}^3+24\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}\omega_{10}^3-$
$18\omega_5^3\omega_{21}\omega_{15}^2\omega_{12}v_2^2cs^2\omega_{10}-12\omega_5\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3+18\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3-6\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}\omega_{10}^3-12\omega_5^2v_1^2\omega_{15}^2\omega_{10}^3-$
$144\omega_5^3\omega_{21}\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3-36\omega_5^3\omega_{21}\omega_{15}^2v_2^2cs^2\omega_{10}^3-72\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3+18\omega_5\omega_{21}\omega_{15}\omega_{12}cs^4\omega_{10}^3+36\omega_5^2v_1^2\omega_{15}^2v_2^2\omega_{10}^3-6\omega_5^3\omega_{21}\omega_{15}^2cs^2\omega_{10}^3-$
$54\omega_5^3\omega_{21}v_1^2\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3+12\omega_5^2\omega_{15}\omega_{12}cs^4\omega_{10}^3+36\omega_5^2\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2\omega_{10}^3+12\omega_5^3\omega_{21}v_1^2\omega_{15}\omega_{12}cs^2-18\omega_5^3\omega_{15}^2v_2^2cs^2\omega_{10}^3+36\omega_5^3\omega_{15}\omega_{12}v_2^2cs^2\omega_{10}^3$

$C_{23}=-16\omega_5\omega_{15}v_2^4\omega_{10}^2+51\omega_5^2\omega_{15}^2v_2^2cs^2\omega_{10}^2+4\omega_5\omega_{15}^2cs^4\omega_{10}+13\omega_5^2\omega_{15}v_2^2\omega_{10}^3+4\omega_5^2cs^4\omega_{10}^3-4\omega_5^2v_2^2\omega_{10}^3-4\omega_5^2\omega_{15}cs^4\omega_{10}^3-20\omega_5\omega_{15}^2v_2^2\omega_{10}-$
$8\omega_5\omega_{15}cs^2\omega_{10}^3-36\omega_5^2\omega_{15}^2v_2^4\omega_{10}+12\omega_5^2\omega_{15}^2cs^2\omega_{10}+20\omega_5\omega_{15}v_2^4\omega_{10}^3+8\omega_5^2\omega_{15}^2v_2^4\omega_{10}+4\omega_5^2v_2^4\omega_{10}+8\omega_5^2\omega_{15}cs^4\omega_{10}^3-24\omega_5v_2^2cs^2\omega_{10}^3-$
$32\omega_5^2\omega_{15}v_2^2\omega_{10}-4\omega_5^2\omega_{15}cs^2\omega_{10}^3-4\omega_5^2cs^4\omega_{10}^3-84\omega_5\omega_{15}^2v_2^2cs^2\omega_{10}^3-4\omega_5^2\omega_{15}cs^4\omega_{10}+20\omega_5\omega_{15}v_2^2\omega_{10}^3+24\omega_5^2\omega_{15}^2v_2^4-8\omega_5^2\omega_{15}cs^2+$
$72\omega_5\omega_{15}^2v_2^2cs^2\omega_{10}+13\omega_5^2\omega_{15}^2v_2^4\omega_{10}^2-4\omega_5^2\omega_{15}cs^2\omega_{10}^3-8\omega_5\omega_{15}cs^4\omega_{10}^3+20\omega_5\omega_{15}^2v_2^2\omega_{10}^3-4\omega_5v_2^4\omega_{10}^3+8\omega_5\omega_{15}^2v_2^2\omega_{10}^3+4\omega_5cs^2\omega_{10}^3-4\omega_5\omega_{15}cs^4\omega_{10}^3-$
$36\omega_5\omega_{15}v_2^2cs^2\omega_{10}^3-144\omega_5^2\omega_{15}^2v_2^2cs^2\omega_{10}+8\omega_5\omega_{15}cs^4\omega_{10}^3+36\omega_5^2\omega_{15}^2v_2^2\omega_{10}-12\omega_5^2cs^4\omega_{10}+84\omega_5\omega_{15}^2v_2^2cs^2\omega_{10}^3-24\omega_5^2v_2^2cs^2\omega_{10}^2-$
$20\omega_5\omega_{15}v_2^2\omega_{10}^3+120\omega_5^2\omega_{15}v_2^2cs^2\omega_{10}^2-8\omega_5\omega_{15}cs^2\omega_{10}^2-8\omega_5^2\omega_{15}^2cs^2\omega_{10}^2-4\omega_5^2v_2^4\omega_{10}^2+4\omega_5^2\omega_{15}cs^4\omega_{10}^2+4\omega_5^2cs^2\omega_{10}^2-24\omega_5^2\omega_{15}^2v_2^2+32\omega_5^2\omega_{15}v_2^4\omega_{10}^2+$
$8\omega_5^2\omega_{15}^2cs^4+16\omega_5\omega_{15}v_2^2\omega_{10}^2+24\omega_5^2v_2^2cs^2\omega_{10}^3-48\omega_5\omega_{15}^2v_2^2cs^2\omega_{10}-4\omega_5\omega_{15}^2cs^2\omega_{10}-4\omega_5^2cs^2\omega_{10}^3-13\omega_5^2\omega_{15}v_2^4\omega_{10}^3-51\omega_5^2\omega_{15}v_2^2cs^2\omega_{10}^3+$
$4\omega_5^2\omega_{15}cs^2\omega_{10}^3+4\omega_5^2v_2^4\omega_{10}^3+20\omega_5\omega_{15}v_2^4\omega_{10}+8\omega_5^2\omega_{15}cs^2\omega_{10}^2+36\omega_{15}^2v_2^2cs^2\omega_{10}^3-20\omega_5\omega_{15}v_2^4\omega_{10}^3+4\omega_5v_2^2\omega_{10}^3-8\omega_{15}v_2^4\omega_{10}^3-4\omega_5cs^4\omega_{10}^3+$
$4\omega_{15}cs^2\omega_{10}^3-72\omega_5^2\omega_{15}v_2^2cs^2\omega_{10}+4\omega_5^2\omega_{15}cs^2\omega_{10}+96\omega_5^2\omega_{15}^2v_2^2cs^2-20\omega_5^2\omega_{15}v_2^4\omega_{10}-13\omega_5^2\omega_{15}v_2^2\omega_{10}^3+4\omega_5^2\omega_{15}cs^4\omega_{10}^2$

$C_{24}=12\omega_5^3v_2^4\omega_{10}^2+162\omega_5^2\omega_{15}^2v_2^2cs^2\omega_{10}^2+102\omega_5\omega_{15}^2v_2^2cs^2\omega_{10}^3-48\omega_5\omega_{15}v_2^2\omega_{10}^3+4\omega_5^3\omega_{15}^2v_2^4\omega_{10}^3+12\omega_5^2v_2^2\omega_{10}^3-18\omega_5^2\omega_{15}cs^4\omega_{10}^3-$
$12\omega_5\omega_{15}cs^2\omega_{10}^3-81\omega_5^2\omega_{15}^2v_2^2cs^2\omega_{10}^3-12\omega_5^3v_2^4\omega_{10}^3+36\omega_5^3\omega_{15}v_2^2\omega_{10}^3+12\omega_5^2\omega_{15}cs^2\omega_{10}+12\omega_5^3\omega_{15}^2cs^4-72\omega_5^3\omega_{15}v_2^2-24\omega_5\omega_{15}v_2^2\omega_{10}^3-$
$\omega_5^3\omega_{15}^2cs^2\omega_{10}^2+12\omega_5\omega_{15}cs^4\omega_{10}^3+24\omega_5^2\omega_{15}v_2^2\omega_{10}^3+19\omega_5^3\omega_{15}^2v_2^4\omega_{10}^2-36\omega_5^3\omega_{15}v_2^2cs^2\omega_{10}-48\omega_5\omega_{15}^2v_2^2cs^2\omega_{10}^3-12\omega_5\omega_{15}^2v_2^2\omega_{10}^3+$
$12\omega_5^3\omega_{15}^2cs^2\omega_{10}-90\omega_5^3\omega_{15}^2v_2^4\omega_{10}+54\omega_5^3\omega_{15}v_2^2cs^2\omega_{10}^2-24\omega_5^2\omega_{15}cs^4\omega_{10}^3-60\omega_5^3\omega_{15}v_2^2\omega_{10}+12\omega_5^2\omega_{15}^2v_2^4\omega_{10}-6\omega_5^2\omega_{15}cs^2\omega_{10}^2-6\omega_5^3\omega_{15}cs^4\omega_{10}^3-$
$21\omega_5^3\omega_{15}v_2^2cs^2\omega_{10}^3-5\omega_5^2\omega_{15}cs^2\omega_{10}^3+6\omega_5^3\omega_{15}cs^4\omega_{10}^3+27\omega_5^3\omega_{15}v_2^2\omega_{10}^3-18\omega_5^3\omega_{15}^2v_2^4\omega_{10}^3-108\omega_5^2\omega_{15}^2v_2^2cs^2\omega_{10}+12\omega_5^3v_2^4\omega_{10}^3+12\omega_5\omega_{15}cs^4\omega_{10}^3-$
$36\omega_5^3\omega_{15}v_2^4\omega_{10}^3-12\omega_5^2\omega_{15}cs^4\omega_{10}^3-12\omega_5\omega_{15}v_2^2cs^2\omega_{10}^3+252\omega_5^3\omega_{15}^2v_2^2cs^2+24\omega_5\omega_{15}v_2^2\omega_{10}^3-12\omega_5\omega_{15}v_2^2cs^2\omega_{10}^3-12\omega_5^2\omega_{15}cs^2\omega_{10}^2+$
$\omega_5^3\omega_{15}cs^4\omega_{10}^2-19\omega_5^3\omega_{15}^2v_2^2\omega_{10}^2-24\omega_5\omega_{15}v_2^4\omega_{10}^2-12\omega_5^2v_2^2cs^2\omega_{10}^3-306\omega_5^3\omega_{15}^2v_2^2cs^2\omega_{10}-12\omega_5^3v_2^4\omega_{10}^3+12\omega_{15}^2cs^4\omega_{10}^3-4\omega_5^2\omega_{15}^2v_2^4\omega_{10}^3+$
$48\omega_5^3\omega_{15}v_2^4\omega_{10}^3+30\omega_5^3\omega_{15}^2v_2^4\omega_{10}^3+18\omega_5^2\omega_{15}v_2^2cs^2\omega_{10}^3-12\omega_5^3v_2^4\omega_{10}^3-12\omega_5^2v_2^4\omega_{10}^3+12\omega_5^3v_2^2cs^2\omega_{10}^3-6\omega_5^3\omega_{15}cs^4\omega_{10}^3+13\omega_5^3\omega_{15}^2cs^4\omega_{10}^3+$
$60\omega_5^3\omega_{15}^2v_2^2cs^2\omega_{10}^2+18\omega_5^3\omega_{15}^2v_2^2\omega_{10}^3-27\omega_5^3\omega_{15}v_2^4\omega_{10}^3-12\omega_5^3v_2^2cs^2\omega_{10}^2+12\omega_5\omega_{15}^2v_2^4\omega_{10}^3-12\omega_5^2\omega_{15}cs^4\omega_{10}^3-48\omega_{15}v_2^2cs^2\omega_{10}^3+90\omega_5^3\omega_{15}^2v_2^4\omega_{10}^3+$
$6\omega_5\omega_{15}^2cs^2\omega_{10}^3-12\omega_5^2\omega_{15}^2v_2^4\omega_{10}^2+60\omega_5^3\omega_{15}v_2^4\omega_{10}^2+6\omega_5^3\omega_{15}cs^2\omega_{10}^2-12\omega_5^3\omega_{15}cs^2+12\omega_5^3\omega_{15}^2v_2^2cs^2\omega_{10}^2+6\omega_5^3\omega_{15}cs^4\omega_{10}^2+72\omega_5^3\omega_{15}v_2^4$

$C_{25}=-16\omega_5\omega_{15}cs^2\omega_{10}^2-43\omega_5^2\omega_{15}v_2^2\omega_{10}^3+16\omega_5^2v_2^2\omega_{10}^3+64\omega_5\omega_{15}^2v_2^2\omega_{10}+44\omega_5\omega_{15}cs^2\omega_{10}^3-72\omega_5^2\omega_{15}cs^2\omega_{10}+48\omega_5^2\omega_{15}\omega_{10}-16\omega_5^2v_2^2\omega_{10}^3+$
$104\omega_5^2\omega_{15}v_2^2\omega_2\omega_{10}+20\omega_{15}^2cs^2\omega_{10}-64\omega_5\omega_{15}v_2^2\omega_{10}+48\omega_5^2\omega_{15}^2cs^2-28\omega_5\omega_{15}\omega_{10}^3+25\omega_5^2\omega_{15}^2cs^2\omega_{10}-17\omega_5^2\omega_{15}^2\omega_{10}-68\omega_5\omega_{15}^2v_2^2\omega_{10}-$
$12\omega_{15}^2\omega_{10}+8\omega_5\omega_{10}^3+16\omega_5\omega_{15}\omega_{10}-28\omega_{15}v_2^2\omega_{10}^3-16\omega_5cs^2\omega_{10}-120\omega_5^2\omega_{15}^2v_2^2\omega_{10}+68\omega_5\omega_{15}^2v_2^2\omega_{10}^3-8\omega_5^2\omega_{10}^3+28\omega_5\omega_{15}^2\omega_{10}+17\omega_5^2\omega_{15}\omega_{10}+$
$56\omega_5^2\omega_{15}cs^2\omega_{10}^2+28\omega_{15}^2v_2^2\omega_{10}-16\omega_5^2cs^2\omega_{10}+80\omega_5^2\omega_{15}^2v_2^2-48\omega_5\omega_{15}v_2^2\omega_{10}^2+12\omega_{15}^2\omega_{10}+32\omega_5^2\omega_{15}^2cs^2\omega_{10}+16\omega_5^2cs^2\omega_{10}^3-25\omega_5^2\omega_{15}\omega_{10}cs^2\omega_{10}^3-$

$$40\omega_5^2\omega_{15}\omega_{10}^2 + 8\omega_5^2\omega_{10}^2 - 44\omega_5\omega_{15}^2cs^2\omega_{10}^2 + 24\omega_5^2\omega_{15}\omega_{10} - 32\omega_5^2\omega_{15}^2 - 16\omega_5v_2^2\omega_{10}^3 - 20\omega_{15}cs^2\omega_{10}^3 - 24\omega_5^2\omega_{15}\omega_{10} - 32\omega_5^2\omega_{15}cs^2\omega_{10} + 43\omega_5^2\omega_{15}^2v_2^2\omega_{10}^2$$

$C_{26} = 12 - 98v_2^2\omega_{10}^2 + 82cs^4\omega_{10}^2 + 672v_2^2cs^2 - 5cs^4\omega_{10}^3 + 10v_2^2\omega_{10}^3 + 144cs^4 - 156v_2^2 + 234v_2^2\omega_{10} - 216cs^4\omega_{10} + 6cs^2\omega_{10}^3 - 9v_2^4\omega_{10}^3 - \omega_{10}^3 - 1008v_2^2cs^2\omega_{10} + 8\omega_{10}^2 + 90v_2^4\omega_{10}^2 - 78cs^2\omega_{10}^2 - 132cs^2 + 144v_2^4 - 34v_2^2cs^2\omega_{10}^3 - 18\omega_{10} - 216v_2^4\omega_{10} + 198cs^2\omega_{10} + 404v_2^2cs^2\omega_{10}^2$

$C_{27} = 12 - 154v_2^2\omega_{10}^2 + 14cs^4\omega_{10}^2 + 432v_2^2cs^2 - cs^4\omega_{10}^3 + 14v_2^2\omega_{10}^3 + 24cs^4 - 252v_2^2 + 378v_2^2\omega_{10} - 36cs^4\omega_{10} + 2cs^2\omega_{10}^3 - 29v_2^4\omega_{10}^3 - \omega_{10}^3 - 648v_2^2cs^2\omega_{10} + 8\omega_{10}^2 + 310v_2^4\omega_{10}^2 - 22cs^2\omega_{10}^2 - 36cs^2 + 504v_2^4 - 18v_2^2cs^2\omega_{10}^3 - 18\omega_{10} - 756v_2^4\omega_{10} + 54cs^2\omega_{10} + 252v_2^2cs^2\omega_{10}^2$

$C_{28} = 8\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6\omega_7 - 8\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 12\omega_5\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2cs^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_{13} + 6\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_6cs^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13} + 4\omega_5\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7 + 4\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 12\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2cs^2\omega_7 + 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_{13}\omega_7 - 4\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 - 12\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12} - 2\omega_{14}\omega_8\omega_5^2v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13} + 4\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} + 6\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6cs^2\omega_{13} - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2cs^2\omega_7 - 2\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 12\omega_8\omega_5\omega_9\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 2\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_7 - 12\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13} - 24\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6cs^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_7^2 + 2\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6 - 4\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 12\omega_{14}\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 + 2\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 4\omega_{14}\omega_8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2 - 3\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_5\omega_9\omega_{12}^2cs^2\omega_{13}\omega_7 + 4\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 24\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 2\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_9\omega_9\omega_{12}^2\omega_6\omega_{13} - 12\omega_{14}\omega_8\omega_5\omega_9^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_8\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2cs^2 + 4\omega_5^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 3\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7 - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_7 + 12\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 6\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13} + 6\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2 - 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 12\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13} + 12\omega_{14}\omega_8\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_7 - 6\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13} - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6 + 8\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 6\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 4\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} + 4\omega_{14}\omega_8v_1^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 8\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 3\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_7 + 4\omega_{14}\omega_8\omega_5^2v_1^2\omega_2^2\omega_{12}\omega_7 + 12\omega_{14}\omega_8\omega_5\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 + 2\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_5\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 12\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6\omega_{13}\omega_7 + 3\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7 - 9\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_7 + 6\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 6\omega_{14}\omega_8\omega_5^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_7 + 4\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_7 - 6\omega_8\omega_5^2\omega_9\omega_{12}\omega_6cs^2\omega_{13}\omega_7 + 2\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_{13} + 12\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2cs^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 9\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_{13} + 4\omega_{14}\omega_8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 6\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_7$

$C_{29} = 8\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6\omega_7 - 24\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_5\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 12\omega_{14}\omega_8v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2cs^2\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_6cs^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} + 4\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7 + 4\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2cs^2\omega_7 + 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_{13}\omega_7 - 4\omega_5\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 4\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12} - 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13} + 12\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6cs^2\omega_{13} - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2cs^2\omega_7 - 6\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 4\omega_8\omega_5\omega_9\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 6\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_7 - 4\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13} - 8\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6cs^2\omega_{13} + 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_7^2 - 4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_7^2 + 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6 - 4\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 4\omega_{14}\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 + 2\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 4\omega_{14}\omega_8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2 - 3\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_7^2 + 12\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 8\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 2\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6\omega_{13} - 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_6cs^2\omega_{13}\omega_7 - 12\omega_8\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2cs^2 + 4\omega_5^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 9\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_7 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_7 + 4\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2 - 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_6\omega_{13}\omega_7 - 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 4\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13} + 4\omega_{14}\omega_8\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_7 - 2\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13} - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6 + 24\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 12\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} + 12\omega_{14}\omega_8v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_9^2\omega_{12}\omega_6cs^2\omega_7 - 8\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 3\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 + 6\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_5\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_9\omega_{12}\omega_6cs^2\omega_{13}\omega_7 - 4\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 9\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7 - 3\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_7 + 2\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5^2\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_7 + 12\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}^2\omega_6\omega_7 - 2\omega_8\omega_5^2\omega_9\omega_{12}\omega_6cs^2\omega_{13}\omega_7 + 2\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_{13} + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2cs^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_{12}^2\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13} + 3\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_6cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}^2\omega_{13} + 4\omega_{14}\omega_8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6cs^2\omega_7$

$C_{30} = -\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_7^2 + 13\omega_{14}\omega_8^2\omega_5\omega_{12}cs^2\omega_7^2 - \omega_8^3\omega_{12}^2\omega_7^2 - \omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}^2\omega_7^2 - 2\omega_8\omega_5^3\omega_{12}cs^2\omega_7^2 + 6\omega_{14}\omega_8\omega_5\omega_{12}cs^2\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_7^2 + \omega_{14}\omega_8^3v_1^2\omega_7^2 - \omega_{14}\omega_8^2v_1^2\omega_{12}^2\omega_7^2 - \omega_{14}\omega_8^3\omega_{12}cs^2\omega_7^2 + \omega_8^3\omega_{12}cs^2\omega_7^2 + 2\omega_8^2\omega_5v_1^2\omega_{12}\omega_7^2 - 2\omega_{14}\omega_8^2\omega_5\omega_{12}cs^2\omega_7 - \omega_{14}\omega_8\omega_5v_1^2\omega_{12}^2\omega_7 - 2\omega_8\omega_5^2\omega_{12}\omega_7^2 - 2\omega_8^2\omega_5\omega_{12}cs^2\omega_7^2 + \omega_{14}\omega_8\omega_5^3v_1^2\omega_{12}\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5\omega_{12}cs^2\omega_7 - 2\omega_8^2\omega_5^2\omega_{12}\omega_7^2 + \omega_{14}\omega_8\omega_5^3cs^2\omega_7^2 + 2\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_7 + \omega_{14}\omega_8^2\omega_5^2\omega_{12}cs^2\omega_7 - \omega_8^2\omega_5^3v_1^2\omega_{12}\omega_7^2 + \omega_{14}\omega_8\omega_5^2\omega_{12}^2\omega_7^2 - \omega_8^2\omega_5^3\omega_{12}cs^2\omega_7^2 - 6\omega_{14}\omega_8\omega_5\omega_{12}cs^2\omega_7^2 + \omega_8^3\omega_{12}^2\omega_7^2 - 2\omega_{14}\omega_8^3\omega_5v_1^2\omega_{12}\omega_7^2 + \omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_7^2 + 2\omega_8\omega_5^3\omega_{12}^2cs^2\omega_7^2 + 2\omega_8\omega_5^2\omega_{12}cs^2\omega_7^2 + \omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_7^2 + 2\omega_{14}\omega_5^3\omega_{12}cs^2\omega_7^2 - 5\omega_{14}\omega_8^2\omega_5^2\omega_{12}cs^2\omega_7^2 - 2\omega_{14}\omega_8^2\omega_5^2\omega_{12}cs^2 - 2\omega_8\omega_5^3v_1^2\omega_{12}\omega_7^2 + 2\omega_8^2\omega_5\omega_{12}cs^2\omega_7^2 + 2\omega_8\omega_5^3\omega_{12}\omega_7^2 - 2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_7 - \omega_{14}\omega_8^3v_1^2\omega_{12}\omega_7^2 - 2\omega_{14}\omega_8^2\omega_5v_1^2\omega_7^2 + \omega_{14}\omega_8^3\omega_{12}\omega_7^2 + 2\omega_{14}\omega_8^2\omega_5^2\omega_{12}cs^2\omega_7^2 + \omega_{14}\omega_8\omega_5^3\omega_{12}\omega_7^2 + 2\omega_8^3\omega_5^2\omega_{12}\omega_7^2 + 2\omega_{14}\omega_8\omega_5^3\omega_{12}cs^2 - 7\omega_{14}\omega_8\omega_5^3\omega_{12}^2cs^2\omega_7 - \omega_{14}\omega_8^3\omega_5^2\omega_7^2 - 8\omega_{14}\omega_8^2\omega_{12}cs^2\omega_7^2 - \omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_7 - 11\omega_{14}\omega_8\omega_5^3\omega_{12}cs^2\omega_7^2 + \omega_8^3\omega_5^3v_1^2\omega_{12}\omega_7^2 + \omega_{14}\omega_8^3\omega_5^2\omega_{12}^2\omega_7^2 + 4\omega_{14}\omega_8\omega_5\omega_{12}cs^2\omega_7 - \omega_8^3\omega_5^3v_1^2\omega_{12}\omega_7^2 - 2\omega_8^2\omega_5^3v_1^2\omega_{12}\omega_7^2 + 5\omega_{14}\omega_8^3\omega_5^2\omega_{12}cs^2\omega_7^2 - 2\omega_{14}\omega_8^3\omega_5\omega_{12}cs^2\omega_7 + 2\omega_8\omega_5^3v_1^2\omega_{12}\omega_7^2 + \omega_{14}\omega_8^3\omega_5^3v_1^2\omega_{12}\omega_7 - \omega_8^3\omega_5^3\omega_{12}cs^2\omega_7 - \omega_{14}\omega_8\omega_5^3\omega_{12}\omega_7 - \omega_{14}\omega_8\omega_5^3\omega_{12}^2\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_{12}\omega_7 + \omega_8^3\omega_5^3\omega_{12}\omega_7^2 - 2\omega_{14}\omega_8^2\omega_5cs^2\omega_7^2 + 7\omega_{14}\omega_8^2\omega_5^3\omega_{12}cs^2\omega_7^2 - 2\omega_{14}\omega_8^3\omega_{12}cs^2\omega_7^2 + 2\omega_{14}\omega_8^3\omega_5^2\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_7^2 - 2\omega_8\omega_5^3\omega_{12}\omega_7 + 2\omega_8\omega_5^3v_1^2\omega_{12}^2\omega_7$

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$C_{31} = 42\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7 - 6\omega_8^2\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 - 6\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 12\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6 cs^2\omega_7 -$
$12\omega_{14}\omega_5^2\omega_9\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 - 12\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 42\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7 + 54\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13}\omega_7 -$
$12\omega_{14}\omega_8^2\omega_9\omega_{12}^2\omega_6 cs^2\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2 + 12\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 -$
$12\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 + 24\omega_{14}\omega_8\omega_9^3\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 - 18\omega_{14}\omega_8^2\omega_5 v_1^2\omega\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 9\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_7^2 -$
$\omega_{14}\omega_8^2\omega_9^2\omega_9^2\omega_{12}^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_7 + 12\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 + 18\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_6^2 cs^2\omega_{13}\omega_7^2 +$
$12\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_6^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 12\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 - 3\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 -$
$12\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 - 54\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 -$
$24\omega_{14}\omega_8^2\omega_9\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 + 12\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_7 - 12\omega_8\omega_5 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 +$
$12\omega_8^2\omega_5\omega_9^2\omega_{12}\omega_6^2 cs^2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_6^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 36\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 9\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2 +$
$12\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 12\omega_8\omega_5\omega_9\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8\omega_5^2 v_1^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 - 12\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12}\omega_6^2\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6 cs^2\omega_{13} +$
$18\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 36\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_9^2\omega_{12}^2\omega_6 cs^2\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13} +$
$6\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7 - 12\omega_{14}\omega_8^2 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_6^2\omega_{13}\omega_7^2 + 30\omega_{14}\omega_8\omega_5^2\omega_9^2\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 +$
$12\omega_8\omega_5^2 v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8\omega_5 v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 + 24\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}^2 cs^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2 cs^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6\omega_7^2 +$
$18\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 24\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 -$
$6\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_9\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 36\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^2\omega_9\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 +$
$6\omega_8^2\omega_5^2 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2 - 6\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 + 6\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8\omega_5^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 -$
$12\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6\omega_7^2 + 6\omega_8^2\omega_5^2\omega_9\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 - 12\omega_8\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6\omega_7^2 + 36\omega_{14}\omega_8\omega_9\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 -$
$54\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 54\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_7^2 - 9\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}\omega_6^2 cs^2\omega_7^2 -$
$12\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_7^2 + 3\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8\omega_5\omega_9\omega_9^2\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7 -$
$6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6\omega_7^2 + 12\omega_8\omega_5 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}\omega_6\omega_7^2 + 12\omega_8\omega_5 v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 +$
$6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6 cs^2\omega_7 - 12\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 + 12\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 + \omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 -$
$9\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}\omega_6^2 cs^2\omega_{13}\omega_7^2 - 18\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2 - 6\omega_8^2\omega_5^2\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12}^2\omega_6 cs^2\omega_{13}\omega_7^2 -$
$12\omega_{14}\omega_8^2\omega_5 v_1^2\omega\omega_{12}^2\omega_6^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5\omega_9\omega_{12}^2\omega_6^2 cs^2\omega_7^2 + 6\omega_{14}\omega_8\omega_5 v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12} cs^2\omega_{13}\omega_7^2 -$
$36\omega_{14}\omega_8^2\omega_9\omega_{12}\omega_6^2 cs^2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8\omega_5\omega_9^2\omega_9^2\omega_{12}\omega_6 cs^2\omega_{13}\omega_7^2 - 6\omega_8^2\omega_5 v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 + 6\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2 +$
$3\omega_{14}\omega_8^2\omega_5\omega_9\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_9\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8\omega_5\omega_9\omega_9\omega_{12}^2\omega_6^2 cs^2\omega_7^2 - 6\omega_{14}\omega_8\omega_5^2\omega_9\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2 -$
$18\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 + 12\omega_8\omega_5\omega_9\omega_9^2\omega_{12}^2\omega_6^2 cs^2\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8^2\omega_5\omega_9^2\omega_{12}^2 cs^2\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}^2\omega_6^2\omega_7^2 - 12\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7$

$C_{32} = -2\omega_8^2\omega_7^2 + 2\omega_8^2\omega_5\omega_7 - \omega_8^2\omega_5^2\omega_7^2 + \omega_8\omega_5\omega_7^2 - \omega_8^2\omega_5^2 - 2\omega_8\omega_5^2\omega_7^2 + \omega_8\omega_5^3 + 3\omega_8^2\omega_5\omega_7^2 - 2\omega_8\omega_5^2\omega_7 - \omega_5^3\omega_7^2 + \omega_5^3\omega_7 + \omega_8\omega_5^3\omega_7^2 - \omega_8^2\omega_5\omega_7 + \omega_5^2\omega_7^2$

$C_{33} = 5\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_7^2 - \omega_8^2\omega_5^3\omega_{12}^2\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5\omega_{12}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^2\omega_{12} + 2\omega_{14}\omega_8\omega_5^2\omega_{12}^2\omega_7 - 2\omega_8\omega_5^2\omega_{12}^2\omega_7^2 - 2\omega_8^2\omega_5\omega_{12}^2\omega_7 + \omega_{14}\omega_5^2\omega_{12}^2\omega_7^2 +$
$2\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_{12}^2\omega_7^2 + \omega_8^2\omega_5^3\omega_{12}^2\omega_7 - 3\omega_{14}\omega_8\omega_5\omega_{12}^2\omega_7^2 + 2\omega_8\omega_5^3\omega_{12}^2\omega_7^2 + \omega_{14}\omega_5^3\omega_{12}^2\omega_7 + 3\omega_{14}\omega_8\omega_5\omega_{12}^2\omega_7 + \omega_{14}\omega_8\omega_5^3\omega_{12}^2\omega_7 -$
$2\omega_{14}\omega_8\omega_5^3\omega_{12}^2\omega_7 + 2\omega_8^2\omega_5^2\omega_{12}^2\omega_7 - \omega_{14}\omega_8^2\omega_5^2\omega_7^2 + 2\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_7 + \omega_{14}\omega_8\omega_5^3\omega_{12} - \omega_{14}\omega_8^2\omega_5^2\omega_{12}^2\omega_7 - 4\omega_{14}\omega_8^2\omega_{12}^2\omega_7^2 - \omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_7 +$
$\omega_{14}\omega_8\omega_5^3\omega_{12}^2\omega_7^2 + 2\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_7 + \omega_8^2\omega_5^3\omega_{12}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^2\omega_7 - 2\omega_8\omega_5^3\omega_{12}^2\omega_7 - \omega_{14}\omega_5^3\omega_{12}^2\omega_7^2$

$C_{34} =$
$-8\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 5\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 - 8\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 - 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 + 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 2\omega_{17}\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 +$
$2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 4\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 -$
$8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 2\omega_{17}\omega_8\omega_5^2\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7^2 - 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{17}\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 +$
$4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 - 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_7^2 -$
$5\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10} - 8\omega_{17}\omega_8\omega_5\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_{16}\omega_{10}^2\omega_7 -$
$4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{10}\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 +$
$4\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{10}^2\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{16}\omega_{10}\omega_7^2 + 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 -$
$10\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10} + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 - 4\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 +$
$4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 - 8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{10}\omega_7^2 - 4\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 +$
$2\omega_{17}\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_{16}\omega_{10}^2\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 4\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2$

$C_{35} = -24\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6 v_2^2\omega_{16}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10} -$
$12\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_6^2\omega_{16} cs^2\omega_7^3 + 24\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_7^2 + 10\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6\omega_{16} cs^2\omega_{10}\omega_7^3 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6 v_2^2\omega_{10}\omega_7^3 -$
$12\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^3 - 12\omega_{17}\omega_{14}\omega_8^3\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^3 + 6\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12}\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6 v_2^2\omega_{10}\omega_7^3 -$
$18\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6\omega_{16} cs^2\omega_{10}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^3 - 24\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_7^2 -$
$48\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_7^3 - 12\omega_{17}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6^2\omega_2^2\omega_7^3 - 12\omega_{17}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 +$
$36\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^3 +$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}\omega_6\omega_{16} cs^2\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_6 v_2^2\omega_{16}\omega_{10}\omega_7^3 - 24\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12}\omega_6 v_2^2\omega_{16}\omega_7^3 +$
$24\omega_{17}\omega_{14}\omega_8\omega_5^2\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_7^3 - 6\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^2 -$
$6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^3 - 36\omega_{17}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 24\omega_{17}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}\omega_6\omega_{16} cs^2\omega_{10}\omega_7 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6 cs^2\omega_{10}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_5^2 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^3\omega_5\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 -$
$12\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16} cs^2\omega_7^3 + 6\omega_{17}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^3 - 6\omega_{17}\omega_{14}\omega_8^3\omega_5^3\omega_{15}\omega_6\omega_{16} cs^2\omega_{10}\omega_7 +$
$12\omega_{17}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_{10} - 24\omega_{17}\omega_{14}\omega_8^2\omega_{15}\omega_{12}\omega_6\omega_{16} cs^2\omega_{10}\omega_7^3 + 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^3 - 6\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16} cs^2\omega_{10}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12}\omega_6^2\omega_{16} cs^2\omega_{10}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6\omega_{16} cs^2\omega_7^3 +$

$$24\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 - 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^2 +$$
$$12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6cs^2\omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 - 12\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_7^3 - 12\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^3 -$$
$$12\omega_{17}\omega_{14}\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 - 6\omega_{17}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 +$$
$$12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_7^3 - 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2cs^2\omega_7^3 + 12\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^3 +$$
$$12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2cs^2\omega_{10}\omega_7^3 - 12\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 +$$
$$24\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7 + 12\omega_{17}\omega_{14}\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^2\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^3 -$$
$$24\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6\omega_{16}cs^2\omega_{10}\omega_7^3 - 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2cs^2\omega_{10}\omega_7^2 +$$
$$24\omega_{17}\omega_{14}\omega_8\omega_5\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 -$$
$$24\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_6\omega_{16}cs^2\omega_7^3 - 12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 -$$
$$24\omega_{17}\omega_{14}\omega_8\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 - 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^3 -$$
$$12\omega_{17}\omega_8\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 36\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^3 -$$
$$6\omega_{17}\omega_8^2\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^2 +$$
$$12\omega_{17}\omega_{14}\omega_8\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_6v_2^2\omega_{16}\omega_7^3 -$$
$$18\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^2 - 18\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6\omega_{16}cs^2\omega_{10}\omega_7^3 - 48\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^2 -$$
$$12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^2 + 24\omega_{17}\omega_{14}\omega_8\omega_5v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3 - 24\omega_{17}\omega_{14}\omega_8\omega_5v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 +$$
$$12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6v_2^2\omega_7^3 + 12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_7^3 - 12\omega_{17}\omega_{14}\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7^3 +$$
$$18\omega_{17}\omega_{14}\omega_8^2\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2\omega_{16}cs^2\omega_{10}\omega_7^3 + 6\omega_{17}\omega_8^2\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3 +$$
$$12\omega_{17}\omega_{14}\omega_8^2\omega_5\omega_{15}\omega_{12}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^2 - 18\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{17}\omega_8\omega_5^3v_1^2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2 -$$
$$12\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{10}\omega_7^2 + 12\omega_{17}\omega_{14}\omega_8^2\omega_5^3\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^3 + 30\omega_{17}\omega_{14}\omega_8\omega_5^3\omega_{15}\omega_{12}\omega_6^2v_2^2\omega_{16}\omega_{10}\omega_7$$

$C_{36} = -2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7^3 + 3\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7^2 + 3\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7^2 - \omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 + 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^2 +$
$3\omega_8\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}\omega_7^2 + \omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + \omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7^3 + 2\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 - 3\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7^3 -$
$\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2v_2^2\omega_{16}\omega_{10} + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^3 + 2\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^3 +$
$\omega_{17}\omega_8\omega_5^2v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 3\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7^3 - 3\omega_{17}\omega_8\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^3 - \omega_{17}\omega_8\omega_5\omega_{16}^2\omega_{10}\omega_7 +$
$\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7 - \omega_8\omega_5^2\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7 - 3\omega_8\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + 3\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7 -$
$\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7 + \omega_8\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 -$
$\omega_{17}\omega_5\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2 - \omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}\omega_{10}\omega_7^2 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^3\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2v_2^2\omega_{16}\omega_{10}\omega_7^2 + 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}\omega_7 -$
$3\omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7^2 - \omega_{17}\omega_5^2\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^2 + 3\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7^2 + \omega_{17}\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 -$
$\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}\omega_{10}\omega_7^2 - \omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 - 9\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}^2cs^2\omega_{10}\omega_7 + \omega_8\omega_5\omega_{15}\omega_{16}^3\omega_{10}^3\omega_7 + \omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + \omega_{17}\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 +$
$\omega_{17}\omega_8\omega_5^2\omega_{16}^2\omega_{10}\omega_7 - \omega_{17}\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2v_2^2\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 -$
$3\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7 -$
$3\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + 3\omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7 + \omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + \omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 +$
$\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 - \omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10} - 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 -$
$3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^2 - 2\omega_{17}\omega_8\omega_5\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7 + \omega_{17}\omega_5\omega_{15}^2\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10} + 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3 +$
$3\omega_{17}\omega_8\omega_{15}^2\omega_{16}^2cs^2\omega_{10}\omega_7 - 3\omega_{17}\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}\omega_7 + 3\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7 + \omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^2 - \omega_{17}\omega_5\omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7 +$
$\omega_{17}\omega_8\omega_5^2v_2^2\omega_{16}\omega_{10}\omega_7 - \omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^2 + \omega_{17}\omega_8\omega_5\omega_{16}^3\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{10}\omega_7 + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^2 -$
$3\omega_{17}\omega_5\omega_{15}^2\omega_{16}^2cs^2\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{16}^2cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_7^2 +$
$\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{10}\omega_7 + 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10} - \omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 +$
$3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^2 - 2\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}\omega_{10}\omega_7 + \omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + 3\omega_{17}\omega_8\omega_5^2\omega_{16}^2cs^2\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_{15}v_2^2\omega_{16}\omega_{10}^3\omega_7 +$
$3\omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2cs^2\omega_{10}\omega_7 - \omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^2 - \omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^2 -$
$\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7^2 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2v_2^2\omega_{10}\omega_7^2 + \omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7^3 + \omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^2 + 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 +$
$3\omega_{17}\omega_8\omega_5^2\omega_{15}^2cs^2\omega_{10}\omega_7^2 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10} + \omega_5\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2 + \omega_{17}\omega_8\omega_5^2\omega_{15}^2v_2^2\omega_{16}\omega_{10} + \omega_{17}\omega_8\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_7^2 +$
$\omega_{17}\omega_8\omega_5\omega_{15}^2cs^2\omega_{10}\omega_7^2 - 6\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7^3 - \omega_8\omega_5^2\omega_{16}\omega_{10}\omega_7 -$
$3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 - 6\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7 + \omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}^3\omega_7^2 +$
$2\omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}\omega_{10}\omega_7 - \omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 -$
$\omega_8\omega_5\omega_{15}\omega_{16}^2\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15}cs^2\omega_{10}\omega_7 - \omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}\omega_7 -$
$\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 + \omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{10}\omega_7 -$
$3\omega_{17}\omega_8\omega_5^2\omega_{16}^2cs^2\omega_{10}\omega_7 - 3\omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7 + 3\omega_{17}\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7$

$C_{37} = 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 6\omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 2\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7^2 + \omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7^2 +$
$3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^2 + 2\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7 - \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - 9\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6\omega_{16}cs^2\omega_{10}\omega_7 +$
$2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6cs^2\omega_{10}^2\omega_7 + 2\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 - 2\omega_{17}\omega_8^2\omega_5^2\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8\omega_5^3\omega_5\omega_6v_2^2\omega_{10}^3\omega_7 +$
$6\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7 - 4\omega_{17}\omega_8^3\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_7 +$
$2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_5^3\omega_{15}^2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_8\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 -$
$3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 5\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7 -$
$6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6cs^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10} + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{16}^3\omega_{10}\omega_7 +$
$12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_6\omega_{16}cs^2\omega_7^2 + 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2 + 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$
$4\omega_{17}\omega_8^3\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5^3\omega_{15}^2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 11\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7 -$
$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 +$
$2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10} - 8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 2\omega_8\omega_5^2\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}^3\omega_7 +$
$2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 + 2\omega_8\omega_5^3\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 -$
$2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6v_2^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$
$2\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$
$8\omega_{17}\omega_8^2\omega_5^2\omega_{15}^2\omega_6\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8^2\omega_5^3\omega_{15}^2\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}^2\omega_6\omega_{10}^3\omega_7 + 2\omega_{17}\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$

$$2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_7 +$$
$$6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10} - 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 +$$
$$3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{10}^3\omega_7 - 2\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 + 15\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 +$$
$$2\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$$
$$6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10} + 4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10} + 4\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 -$$
$$\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 +$$
$$2\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - 15\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 8\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$$
$$2\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_{16}\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 + 8\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_8^3\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 -$$
$$3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^3\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 +$$
$$2\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$$
$$2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - 11\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 9\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 -$$
$$2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 -$$
$$2\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 13\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 +$$
$$9\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 +$$
$$\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10} - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10} +$$
$$\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7 - 3\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 -$$
$$4\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 5\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 -$$
$$\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 +$$
$$2\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7$$

$$C_{38} = -2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^3\omega_7 + 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}\omega_7 + \omega_5\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 - \omega_5^2\omega_{15}\omega_{16}\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 +$$
$$\omega_8\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + \omega_8\omega_5^2\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7 + 6\omega_{17}\omega_8\omega_5\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}^2\omega_7 - \omega_8\omega_5\omega_{15}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$$
$$\omega_{17}\omega_8\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10} + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 + 6\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$3\omega_{17}\omega_8\omega_5^2 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + \omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7 -$$
$$3\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - \omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}^3\omega_7 + 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}^2cs^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$\omega_{17}\omega_8\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_8\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7 - 3\omega_{17}\omega_5\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}^2\omega_7 -$$
$$\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 - \omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 -$$
$$3\omega_{17}\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 + \omega_8\omega_5\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7 -$$
$$\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 + \omega_8\omega_5\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7 + 3\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + 3\omega_{17}\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{16}^2\omega_{10}^2\omega_7 -$$
$$\omega_{17}\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2 v_2^2\omega_{16}^2\omega_{10}^2\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 - \omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 -$$
$$\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}^2\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7 - \omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}^3\omega_7 -$$
$$6\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 3\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7 +$$
$$\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^3\omega_{10}^2\omega_7 - \omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 -$$
$$\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 - 6\omega_{17}\omega_8\omega_5\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_{17}\omega_5\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{10}^2\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10} +$$
$$\omega_{17}\omega_8\omega_{15}^2\omega_{16}cs^2\omega_{10}^2\omega_7 - \omega_{17}\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}^2\omega_7 + \omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 + 3\omega_8\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10}^3\omega_7 +$$
$$3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10}^3\omega_7 - 3\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + \omega_{17}\omega_8\omega_5\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 -$$
$$\omega_{17}\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2\omega_{10}\omega_7 - \omega_{17}\omega_8\omega_5\omega_{16}^2cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2\omega_{10}\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_7 +$$
$$3\omega_{17}\omega_8\omega_5\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10} - 3\omega_8\omega_5^2\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$\omega_{17}\omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}^2\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7 + 3\omega_5^2\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{16}^2cs^2\omega_{10}^2\omega_7 - 3\omega_{17}\omega_8\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$\omega_8\omega_5^2\omega_{15}^2\omega_{16}cs^2\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}^2\omega_7 - 3\omega_8\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}^2\omega_7 -$$
$$\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 3\omega_8\omega_5^2 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + \omega_8\omega_5\omega_{15}^2\omega_{16}cs^2\omega_{10}^2\omega_7 +$$
$$\omega_{17}\omega_8\omega_5^2\omega_{16}^2cs^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10} + 3\omega_5\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10} + 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2cs^2\omega_{10}^2\omega_7 + \omega_{17}\omega_8\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}^2cs^2\omega_{10}^3\omega_7 - \omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^3\omega_7 -$$
$$\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 + 3\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$6\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7 - 3\omega_5^2\omega_{15}^2 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$$
$$\omega_8\omega_5\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}cs^2\omega_{10}^3\omega_7 - \omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 - \omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}cs^2\omega_{10}^2\omega_7 - 3\omega_8\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$3\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{10}^2\omega_7 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + \omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}^2\omega_7 + 3\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{10}^3\omega_7 -$$
$$\omega_{17}\omega_8\omega_5^2\omega_{16}^2cs^2\omega_{10}^2\omega_7 - \omega_8\omega_5^2\omega_{15}\omega_{16}cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^2\omega_7 - 9\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10}^3\omega_7 + 6\omega_{17}\omega_8\omega_5^2\omega_{15} v_2^2\omega_{16}\omega_{10}^3\omega_7$$

$$C_{39} = -\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5\omega_6\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 -$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 -$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 + 2\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 +$$
$$8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 -$$
$$4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_{10}^3\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 +$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_6\omega_{16}^2\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 +$$
$$2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 -$$
$$11\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 + 15\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7 -$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 +$$
$$2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 + \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 +$$
$$2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 + 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 2\omega_8\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 -$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 2\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 -$$
$$2\omega_{17}\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 2\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 9\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7 +$$

$$2\omega_{17}\omega_8^2\omega_{15}^2\omega_6v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3 - 5\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^2\omega_7^3 - 2\omega_8\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 -$$
$$2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^2 - \omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + \omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 +$$
$$4\omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6\omega_{16}cs^2\omega_{10}^2\omega_7^3 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^2\omega_7^3 + 2\omega_{17}\omega_8^2\omega_5^2\omega_6\omega_{16}\omega_{10}^2\omega_7^3 + 2\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2 + 2\omega_{17}\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 +$$
$$2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 + 3\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + 5\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^3 +$$
$$2\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 2\omega_{17}\omega_8^2\omega_5^2\omega_6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 - \omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2 - \omega_{17}\omega_8\omega_5\omega_{15}^2\omega_6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 + \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^2 +$$
$$11\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 2\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^2\omega_7^2 - 2\omega_8^2\omega_5\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 -$$
$$\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{10}^3\omega_7^2 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6cs^2\omega_{10}^2\omega_7^2 + 2\omega_{17}\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 +$$
$$2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^3 + 6\omega_{17}\omega_8^2\omega_5^2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{10}^3\omega_7^2 - 3\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 - 3\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 +$$
$$4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^2\omega_7^2 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^2\omega_7 + 2\omega_8\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + 6\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7 -$$
$$4\omega_{17}\omega_8^2\omega_{15}^2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_{10}\omega_7^2 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 -$$
$$2\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{10}^3\omega_7^2 + 12\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_7^3 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 -$$
$$6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7^3 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{10}^3\omega_7^2 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 +$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{10}^3\omega_7^2 - 6\omega_{17}\omega_8^2\omega_5^2\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^3 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 + 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6cs^2\omega_{10}^3\omega_7^3 +$$
$$9\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{10}^3\omega_7^2 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^2 -$$
$$2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 13\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7^2 -$$
$$8\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 15\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7^3 + 6\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 -$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 2\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^3 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_7^3 - 6\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 +$$
$$3\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_7^2 + \omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 - 8\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3 +$$
$$4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}\omega_7^3 - \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}\omega_7^2 - 9\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 +$$
$$2\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 2\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_{16}^3\omega_7^2 - 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}^3\omega_7^2 +$$
$$3\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^3 + 8\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6v_2^2\omega_{16}\omega_{10}\omega_7^3 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 -$$
$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + \omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}^2cs^2\omega_{10}^3\omega_7^2$$

$C_{40} = -144v_2^2\omega_{16}^2cs^2\omega_{10}\omega_7^2 + 32v_2^4\omega_{16}^2\omega_{10}\omega_7^2 - 48v_2^2\omega_{16}cs^2\omega_{10}^2\omega_7 + 8\omega_{16}cs^4\omega_{10}^3\omega_7 + 4\omega_{16}^2cs^4\omega_{10} + 24v_2^2cs^2\omega_{10}^3\omega_7^2 + 12\omega_{16}^2cs^2\omega_{10}\omega_7^2 - 51v_2^2\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 8\omega_{16}cs^4\omega_{10}\omega_7^2 + 8v_2^2\omega_{16}cs^2\omega_{10} + 20v_2^2\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{16}^2cs^4\omega_{10}\omega_7 - 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 20v_2^2\omega_{16}^2\omega_{10}\omega_7 + 4\omega_{16}cs^2\omega_{10}^3\omega_7^2 +$
$36v_2^2\omega_{16}^2cs^2\omega_{10} - 24v_2^2cs^2\omega_{10}^2\omega_7^2 - 13v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 8\omega_{16}cs^2\omega_{10}^3\omega_7 + 8\omega_{16}^2cs^4\omega_7^2 + 4\omega_{16}cs^2\omega_{10}^3 + 84v_2^2\omega_{16}cs^2\omega_{10}^2\omega_7 + 20v_2^4\omega_{16}^2\omega_{10}\omega_7 - 12\omega_{16}^2cs^4\omega_{10}\omega_7^2 - 13v_2^4\omega_{16}^2\omega_{10}^3\omega_7^2 + 96v_2^2\omega_{16}^2cs^2\omega_7^2 - 8\omega_{16}cs^2\omega_{10}^3\omega_7^2 - 8v_2^4\omega_{16}^2\omega_{10} - 24v_2^2cs^2\omega_{10}^3\omega_7 + 20v_2^2\omega_{16}\omega_{10}\omega_7^2 - 4\omega_{16}^2cs^2\omega_{10}\omega_7 -$
$16v_2^4\omega_{16}^2\omega_{10}\omega_7^2 + 72v_2^2\omega_{16}^2cs^2\omega_{10}\omega_7 - 4\omega_{16}cs^4\omega_{10}^3\omega_7^2 + 120v_2^2\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 4\omega_{16}cs^2\omega_{10}\omega_7^2 - 4cs^4\omega_{10}^3\omega_7^2 + 8\omega_{16}^2cs^2\omega_{10}\omega_7^2 + 4v_4^4\omega_{10}^3\omega_7^2 - 32v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 4v_2^2\omega_{10}^3\omega_7^2 - 84v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 4cs^2\omega_{10}^3\omega_7^2 - 72v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2 - 4cs^4\omega_{10}^3\omega_7 + 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 20v_2^2\omega_{16}\omega_{10}^3\omega_7 +$
$8v_2^4\omega_{16}^2\omega_{10} - 24v_2^2\omega_{16}^2\omega_7^2 - 4\omega_{16}^2cs^2\omega_{10} + 4v_2^2\omega_{10}^3\omega_7 - 20v_2^4\omega_{16}^2\omega_{10}\omega_7 + 4\omega_{16}^2cs^4\omega_{10}\omega_7^2 - 4\omega_{16}cs^4\omega_{10}\omega_7^2 - 8\omega_{16}^2cs^4\omega_{10}\omega_7^2 + 13v_2^4\omega_{16}^2\omega_{10}\omega_7^2 +$
$4cs^2\omega_{10}^3\omega_7^2 - 4v_2^2\omega_{10}^3\omega_7^2 - 4v_2^2\omega_{10}^3\omega_7^2 + 13v_2^2\omega_{16}\omega_{10}\omega_7^2 - 20v_2^2\omega_{16}\omega_{10}\omega_7^2 + 4cs^4\omega_{10}^3\omega_7^2 - 36v_2^2\omega_{16}cs^2\omega_{10} + 4cs^3\omega_{10}^3\omega_7 + 51v_2^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 - 20v_2^4\omega_{16}\omega_{10}\omega_7^2 - 8v_2^2\omega_{16}^2\omega_{10} - 8\omega_{16}cs^2\omega_7^2 - 4\omega_{16}cs^4\omega_{10} + 24v_2^4\omega_{16}^2\omega_7^2 - 4v_2^2\omega_{10}^3\omega_7^2 + 16v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 4\omega_{16}^2cs^2\omega_{10}\omega_7^2$

$C_{41} = -40\omega_{16}\omega_{10}^2\omega_7^2 - 16\omega_{16}cs^2\omega_{10}^2\omega_7^2 - 72\omega_{16}^2cs^2\omega_{10}\omega_7^2 - 28v_2^2\omega_{16}\omega_{10}^3 - 28\omega_{16}\omega_{10}^3\omega_7 + 48\omega_{16}^2\omega_{10}\omega_7^2 - 68v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 25\omega_{16}cs^2\omega_{10}^3\omega_7^2 +$
$43v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 + 44\omega_{16}cs^2\omega_{10}^3\omega_7 - 20\omega_{16}cs^2\omega_{10}^3 - 24\omega_{16}^2\omega_{10}\omega_7^2 + 17\omega_{16}\omega_{10}^3\omega_7^2 + 12\omega_{16}\omega_{10}^3 + 56\omega_{16}cs^2\omega_{10}^2\omega_7 - 64v_2^2\omega_{16}\omega_{10}\omega_7^2 + 32\omega_{16}^2cs^2\omega_{10}\omega_7 +$
$16\omega_{16}^2\omega_{10}\omega_7 - 32\omega_{16}cs^2\omega_{10}\omega_7^2 - 8\omega_{10}^3\omega_7^2 - 44\omega_{16}^2\omega_{10}\omega_7^2 + 104v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 16v_2^2\omega_{10}^2\omega_7^2 + 16cs^2\omega_{10}^3\omega_7^2 - 120v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 68v_2^2\omega_{16}\omega_{10}^3\omega_7 -$
$12\omega_{16}^2\omega_{10} + 80v_2^2\omega_{16}^2\omega_7^2 + 20\omega_{16}cs^2\omega_{10} + 28\omega_{16}^2\omega_{10}\omega_7 - 16v_2^2\omega_{10}^3\omega_7 - 17\omega_{16}^2\omega_{10}^2\omega_7^2 - 16cs^2\omega_{10}^2\omega_7^2 + 16v_2^2\omega_{10}^3\omega_7^2 - 43v_2^2\omega_{16}\omega_{10}^3\omega_7^2 +$
$64v_2^2\omega_{16}^2\omega_{10}\omega_7 + 8\omega_{10}^3\omega_7^2 + 24\omega_{16}\omega_{10}\omega_7^2 - 16cs^2\omega_{10}^3\omega_7 + 28v_2^2\omega_{16}^2\omega_{10} + 48\omega_{16}^2cs^2\omega_7^2 - 32\omega_{16}^2\omega_7^2 - 48v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 25\omega_{16}cs^2\omega_{10}^2\omega_7^2 + 8\omega_{10}^3\omega_7$

$C_{42} = -108v_2^2\omega_{16}^2cs^2\omega_{10}\omega_7^2 - 24v_2^4\omega_{16}^2\omega_{10}\omega_7^2 - 90v_2^4\omega_{16}^2\omega_{10}\omega_7^3 - 21v_2^2\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 6\omega_{16}cs^4\omega_{10}^3\omega_7 + 12\omega_{16}cs^4\omega_{10}^3\omega_7\omega_7 - 48v_2^2\omega_{16}^2cs^2\omega_{10}^3 -$
$6\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 12v_2^2cs^2\omega_{10}^3\omega_7^2 + 12\omega_{16}^2cs^2\omega_{10}\omega_7^2 + 18v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 30v_2^2\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 12\omega_{16}cs^4\omega_{10}^2\omega_7^2 - 24v_2^4\omega_{16}\omega_{10}^3\omega_7 +$
$60v_2^4\omega_{16}^2\omega_{10}^2\omega_7^3 - 306v_2^2\omega_{16}^2cs^2\omega_{10}\omega_7^3 - 4v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12\omega_{16}^2cs^2\omega_{10}^3 + 12v_2^2cs^2\omega_{10}^3\omega_7^3 + 18\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 12\omega_{16}^2cs^4\omega_{10} + 36v_2^2\omega_{16}\omega_{10}\omega_7^3 -$
$12v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 12\omega_{16}cs^2\omega_{10}^3\omega_7 + 252v_2^2\omega_{16}^2cs^2\omega_7^3 + 6\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 6\omega_{16}cs^4\omega_{10}^3\omega_7^2 + 54v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 12v_2^2\omega_{16}cs^2\omega_{10}^3\omega_7 -$
$12\omega_{16}^2cs^4\omega_{10}\omega_7^2 + 48v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 12\omega_{16}^2cs^4\omega_7^2 - 12\omega_{16}cs^2\omega_{10}^3\omega_7^2 - 19v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 12v_2^2\omega_{16}\omega_{10}^3\omega_7 - 12v_2^2cs^2\omega_{10}^3\omega_7^2 - 12\omega_{16}^2cs^4\omega_{10}\omega_7^2 -$
$27v_2^4\omega_{16}\omega_{10}^3\omega_7^2 - 18\omega_{16}cs^4\omega_{10}^3\omega_7^2 - 12v_2^2\omega_{16}cs^2\omega_{10}^3\omega_7^2 - 12v_2^4\omega_{10}^3\omega_7^2 + 24v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 90v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 12v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + \omega_{16}cs^4\omega_{10}^3\omega_7^2 -$
$48v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7 - 18v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 24v_2^2cs^4\omega_{10}^3\omega_7 - 72v_2^2\omega_{16}^2\omega_7^2 - 5\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 24v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 60v_2^2\omega_{16}\omega_{10}^3\omega_7^3 + 12v_2^4\omega_{10}^3\omega_7^3 -$
$36v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3 + 12v_2^2\omega_{10}^3\omega_7^2 + 4v_2^2\omega_{16}^2\omega_{10}\omega_7^3 - 81v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 6\omega_{16}cs^4\omega_{10}^2\omega_7^2 - 12\omega_{16}cs^2\omega_{10}^3 - \omega_{16}cs^4\omega_{10}^3\omega_7^2 - 36v_2^4\omega_{16}\omega_{10}^3\omega_7 +$
$60v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 12v_2^2\omega_{16}^3\omega_{10}^3\omega_7^2 + 102v_2^2\omega_{16}cs^2\omega_{10}^3\omega_7^3 + 12v_2^2\omega_{10}^3\omega_7^2 - 48v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 6\omega_{16}cs^2\omega_{10}^3\omega_7 - \omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 72v_2^4\omega_{16}^2\omega_7^3 +$
$19v_2^4\omega_{16}^2\omega_{10}^3\omega_7^2 - 12v_2^2\omega_{10}^3\omega_7^2 + 13\omega_{16}^2cs^4\omega_{10}^3\omega_7^2 + 12v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 162v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 6\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 27v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 12v_2^4\omega_{10}^3\omega_7^2$

$C_{43} = -12\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}^2v_2\omega_{19}cs^4\omega_7^2 +$
$12\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2cs^2\omega_7^2 - 12\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 +$
$6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2cs^2\omega_7^2 - 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2cs^2\omega_7^2 - 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^2v_3^2v_2^2\omega_{19}\omega_7^2 - 12\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 -$
$12\omega_{14}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6v_2\omega_{19}cs^4 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 -$
$6\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2cs^2\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2cs^2\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_6v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 -$
$6\omega_{20}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_8^2\omega_5\omega_6v_3^2v_2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5v_1^2\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7^2 +$
$6\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 +$
$6\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 +$
$12\omega_{20}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_2cs^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5v_1^2\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7 -$
$12\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7 + 12\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2^2\omega_{19}\omega_7 -$
$12\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7 - 6\omega_{20}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 +$
$12\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_2cs^2\omega_7 - 12\omega_{20}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2^2\omega_7^2 - 6\omega_{20}\omega_8^2\omega_5v_1^2\omega_6^2v_2\omega_{19}cs^2\omega_7^2 -$
$12\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 -$

$$24\omega_{20}\omega_{14}\omega_5^2\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7^2 + 48\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6v_2\omega_{19}cs^4\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7 +$$
$$12\omega_{20}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5v_1\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 6\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 +$$
$$12\omega_{20}\omega_8\omega_5v_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 - 48\omega_{20}\omega_{14}\omega_8\omega_5^2v_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7 + 12\omega_{14}\omega_8\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7 + 24\omega_{20}\omega_{14}\omega_8\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7^2 -$$
$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2\omega_2\omega_7 + 24\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2v_2\omega_{19}cs^4 - 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5^2v_1\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 -$$
$$12\omega_{20}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7 - 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 -$$
$$24\omega_{20}\omega_{14}\omega_8\omega_5\omega_{12}v_2\omega_{19}cs^4\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 -$$
$$6\omega_{20}\omega_{14}\omega_8^2\omega_5v_1^2\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}v_2\omega_{19}cs^4\omega_7 -$$
$$6\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2cs^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5v_1\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2cs^2\omega_7 -$$
$$3\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_2^2cs^2\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5v_1\omega_6\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 -$$
$$28\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8\omega_5\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^4\omega_7^2 -$$
$$12\omega_{20}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7 - 12\omega_{20}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 +$$
$$12\omega_{20}\omega_8^2\omega_5v_1^2\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7 - 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 +$$
$$12\omega_{14}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_8\omega_5v_1\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 - 12\omega_{14}\omega_8\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2^2cs^2\omega_7^2 -$$
$$12\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2cs^2\omega_7 - 12\omega_{20}\omega_8\omega_5v_1\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 12\omega_{14}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2cs^2\omega_7^2 -$$
$$6\omega_{20}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 24\omega_{20}\omega_{14}\omega_8^2\omega_{12}\omega_6v_2\omega_{19}cs^4\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 -$$
$$6\omega_{20}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2^2\omega_{19}\omega_7^2 - 12\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 -$$
$$3\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}\omega_7 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_2cs^2\omega_7 -$$
$$6\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7^2 + 12\omega_{20}\omega_8^2\omega_5\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_7 +$$
$$6\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5v_1\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 6\omega_{14}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 -$$
$$12\omega_{20}\omega_8\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 -$$
$$6\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8\omega_5\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7 + 6\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 +$$
$$12\omega_{14}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 +$$
$$12\omega_{20}\omega_{14}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7 - 6\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 6\omega_{20}\omega_8^2\omega_5^2\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 -$$
$$6\omega_{20}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_7 - 6\omega_{20}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7 +$$
$$12\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2cs^2\omega_7^2 - 3\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 -$$
$$12\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7 - 3\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8\omega_5\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 + 12\omega_{14}\omega_8\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7 +$$
$$6\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2cs^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_2^2cs^2\omega_7 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 -$$
$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2v_3^2v_2cs^2\omega_7 - 12\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 48\omega_{20}\omega_{14}\omega_8\omega_5\omega_{12}\omega_6^2v_2\omega_{19}cs^4\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 +$$
$$48\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6v_2\omega_{19}cs^4\omega_7 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 +$$
$$12\omega_{20}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_7 - 12\omega_{20}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 6\omega_{20}\omega_8^2\omega_5v_1^4\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 +$$
$$12\omega_{20}\omega_8\omega_5^2v_1\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_8\omega_5^2v_1^2\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_7$$

$C_{44} = 4\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7 +$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 + 8\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}\omega_7 + \omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 -$
$\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2^2\omega_{13}\omega_7^2 + 8\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}v_2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{14}\omega_8\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$
$12\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7^2 + 2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 - 4\omega_{20}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 +$
$4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2v_2^2\omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 - 8\omega_{20}\omega_8\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 +$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2cs^2\omega_{13}\omega_7 + 4\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7 +$
$2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2cs^2\omega_{13}\omega_7^2 + 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 +$
$2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 + 8\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7 +$
$4\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 8\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}v_2\omega_{19}cs^2\omega_{13}\omega_7 -$
$8\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_9\omega_{12}v_2\omega_{19}cs^2\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 + 4\omega_{20}\omega_8^2\omega_5\omega\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 -$
$8\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 - \omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7 +$
$8\omega_{20}\omega_8\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 - 8\omega_{20}\omega_{14}\omega_8v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_2cs^2\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2v_3^2v_2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7 -$
$\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2cs^2\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 +$
$2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 8\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}v_2\omega_{19}cs^2\omega_{13}\omega_7 - 2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2cs^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 -$
$4\omega_{20}\omega_8^2\omega_5\omega_9\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 8\omega_{20}\omega_{14}\omega_8v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{20}\omega_8\omega_5\omega_9\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 + 8\omega_{20}\omega_8\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 + 8\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7^2 +$
$4\omega_{20}\omega_{14}\omega_8\omega_5^2v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7 - 4\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 8\omega_{14}\omega_8\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13} + 8\omega_{14}\omega_8\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7 - 4\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_9\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 -$
$4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_2^2cs^2\omega_{13}\omega_7 + 4\omega_{20}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2cs^2\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 8\omega_{20}\omega_8\omega_5v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{14}\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7 - 4\omega_{20}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 -$
$8\omega_{20}\omega_{14}\omega_8^2v_1\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7 + 8\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_7 - \omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2v_2^2\omega_{19}cs^2\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5v_1\omega_9\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7^2 + 8\omega_{14}\omega_8\omega_5v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_{13}\omega_7 -$
$2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{14}\omega_8\omega_5v_1\omega_9\omega_{12}\omega_6v_2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_9\omega_{12}\omega_6^2v_2\omega_{19}cs^2\omega_7 -$

$$8\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_2^2 cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 -$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 v_2 cs^2\omega_{13}\omega_7 - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_9\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_8^2\omega_5\omega_9\omega_6^2 v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 -$$
$$2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_{13}\omega_7 -$$
$$2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_2^2 cs^2\omega_{13}\omega_7 +$$
$$8\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_9\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_6 v_2\omega_{19}cs^2\omega_{13}\omega_7 +$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{13}\omega_7 - 4\omega_{20}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 -$$
$$8\omega_{20}\omega_8^2\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{13}\omega_7^2 - 20\omega_{20}\omega_{14}\omega_8\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7 +$$
$$2\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 v_2^2\omega_{13}\omega_7 - 4\omega_{20}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_{13}\omega_7^2 +$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{13}\omega_7^2 + 8\omega_{14}\omega_8\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 +$$
$$2\omega_{20}\omega_8\omega_5\omega_9\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_6 v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{20}\omega_8^2\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7 +$$
$$8\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2 v_2 cs^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_{13}\omega_7^2 -$$
$$16\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_{13}\omega_7 + 4\omega_{20}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 +$$
$$8\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2 + 8\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_9\omega_6 v_2\omega_{19}cs^2\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 +$$
$$4\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 8\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_9\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_{13} -$$
$$8\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_9\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 -$$
$$4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_9\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 + 8\omega_{14}\omega_8\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_8^2\omega_5^2\omega_9\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 - 8\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_{13}\omega_7^2 - 8\omega_{14}\omega_8\omega_5^2 v_1\omega_9\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_{13}\omega_7^2 +$$
$$4\omega_{20}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{13}\omega_7^2 - 4\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2 v_3^2 cs^2\omega_{13}\omega_7$$

$C_{45} =$
$$-2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2 v_3^2\omega_{19}\omega_7^3 - 4\omega_{14}\omega_8\omega_5^2\omega_{12}\omega_{19}cs^4\omega_7^3 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_{19}cs^4\omega_7^2 - 8\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2 -$$
$$4\omega_{20}\omega_{14}\omega_8^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1 v_2 v_3^2 cs^2\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{19}cs^4\omega_7^2 + 2\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_{14}\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 -$$
$$2\omega_{20}\omega_8^2\omega_5^3 v_1^2 v_3^2\omega_{19}\omega_7^2 + 4\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_3^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_8\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 - 2\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}cs^2\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 -$$
$$2\omega_{20}\omega_8^2\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^3 + 8\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{12}\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^3 v_1\omega_{12}v_2 cs^2\omega_7^2 +$$
$$4\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 - 8\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 + 8\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 +$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_{19}cs^4\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 + 8\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_8\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 + 2\omega_{20}\omega_8^2\omega_5^3\omega_{19}cs^4\omega_7^3 -$$
$$4\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}cs^2\omega_7^2 + 4\omega_{20}\omega_8^2\omega_5^3 v_1 v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^3 v_1^2\omega_{12}\omega_{19}cs^2 + 8\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^2 -$$
$$8\omega_{20}\omega_8^2\omega_5^2 v_1 v_3^2 v_2\omega_{19}\omega_7^3 + \omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{12}v_3^2 cs^2\omega_7^3 + 2\omega_{20}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_{14}\omega_5 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_{19}cs^4\omega_7^3 +$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 + 8\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_{19}cs^4\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1 v_3^2 v_2\omega_{19}\omega_7^3 -$$
$$4\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 - 8\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1 v_2\omega_{19}cs^2\omega_7^2 -$$
$$2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1\omega_{12}v_2 cs^2\omega_7^2 + 4\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_3^2 v_2^2 - 12\omega_{20}\omega_{14}\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 - 8\omega_{20}\omega_8\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_8\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^3 +$$
$$4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_{19}cs^4\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 - 8\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 -$$
$$4\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_8^2\omega_5^2\omega_{19}cs^4\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_8^2\omega_5 v_3^2\omega_{19}cs^2\omega_7^2 +$$
$$8\omega_{20}\omega_8^2\omega_5 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 - 4\omega_{20}\omega_8\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1^2\omega_{12}cs^2\omega_7^2 - 4\omega_{20}\omega_8^2\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 -$$
$$4\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 + 4\omega_{14}\omega_8^2\omega_5 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_{14}\omega_8\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_3^2\omega_{19}cs^2\omega_7^3 +$$
$$8\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 - 4\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2 + 8\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_3^2\omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{19}cs^4\omega_7^2 + 2\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_{19}cs^4\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7 +$$
$$4\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 + 2\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_8^3\omega_5^2\omega_{12}\omega_{19}cs^4\omega_7^2 - 8\omega_{14}\omega_8\omega_5^2 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 +$$
$$4\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}cs^4\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{19}cs^2\omega_7^3 - 8\omega_{20}\omega_{14}\omega_5 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 -$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5 v_3^2\omega_{19}cs^2\omega_7^3 - 16\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1 v_3^2 v_2\omega_{19}\omega_7^3 - \omega_{20}\omega_{14}\omega_8^3\omega_5 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 -$$
$$4\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 - 8\omega_{14}\omega_8\omega_5 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^2 - 4\omega_{14}\omega_8\omega_5^3\omega_{12}cs^4\omega_7^2 - 2\omega_{20}\omega_8^2\omega_5^3 v_3^2\omega_{19}cs^2\omega_7^3 - 2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1^2\omega_{19}cs^2\omega_7^2 -$$
$$4\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 + 8\omega_{20}\omega_{14}\omega_8\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 - 2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1 v_2\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_{14}\omega_8\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^2 +$$
$$4\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 - 8\omega_{20}\omega_8^2\omega_5 v_1 v_2\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_{14}\omega_5\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_8\omega_5^2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 +$$
$$4\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2 + 8\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^3\omega_5\omega_{12}\omega_{19}cs^4\omega_7 - 2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_7^3 - 4\omega_{20}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 +$$
$$4\omega_{20}\omega_8^2\omega_5^3 v_1 v_3^2 v_2\omega_{19}\omega_7^3 - 16\omega_{20}\omega_{14}\omega_8\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 + 8\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^3 +$$
$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7 + 2\omega_{14}\omega_8^2\omega_5^3\omega_{12}cs^4\omega_7^3 + 8\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 + \omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 +$$
$$2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_{14}\omega_8\omega_5 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 + 8\omega_{20}\omega_8\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 - 8\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}v_3^2\omega_{19}cs^2\omega_7 -$$
$$4\omega_{20}\omega_{14}\omega_5^2\omega_{12}\omega_{19}cs^4\omega_7^3 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_{14}\omega_5 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^3 + 4\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_7^3 - 4\omega_{20}\omega_8\omega_5^2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 -$$
$$4\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 - 2\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}\omega_{19}cs^2\omega_7^3 - 4\omega_{20}\omega_{14}\omega_5^2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 - 2\omega_{14}\omega_8^2\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^3 - 8\omega_{20}\omega_8^2\omega_5 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 -$$
$$2\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 - 2\omega_{20}\omega_8^2\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 - 4\omega_{14}\omega_8^3\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_8^2\omega_5^2\omega_{12}\omega_{19}cs^4\omega_7^3 - 8\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}v_3^2\omega_7^3 + 4\omega_{20}\omega_8\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{14}\omega_8^3\omega_5 v_1\omega_{12}v_3^2 v_2\omega_7^3 + 4\omega_{14}\omega_8^3\omega_5^3 v_1\omega_{12}v_2 cs^2\omega_7^2 + 8\omega_{20}\omega_{14}\omega_8\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 +$$
$$4\omega_{20}\omega_8^2\omega_5^3 v_1^2 v_3^2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}cs^4\omega_7^2 + 4\omega_{14}\omega_8\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^3 + 8\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2 v_3^2\omega_{19}\omega_7^3 +$$
$$4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}v_3^2 cs^2\omega_7^2 + 8\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 - 4\omega_{20}\omega_8\omega_5^3 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3 +$$
$$4\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{12}v_3^2 v_2\omega_7^3 + \omega_{20}\omega_{14}\omega_8^3\omega_5 v_1^2\omega_{12}v_3^2\omega_7^3 - 4\omega_{20}\omega_{14}\omega_8^2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 - 8\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_2 cs^2\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 +$$
$$8\omega_{20}\omega_{14}\omega_8\omega_5 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 + 8\omega_{20}\omega_8\omega_5^2 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^3 + 4\omega_{14}\omega_8\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{12}cs^4\omega_7^2 +$$
$$2\omega_{20}\omega_8^3\omega_5^3\omega_{12}v_3^2\omega_{19}cs^2\omega_7^3 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^3\omega_{12}v_3^2 cs^2\omega_7^3 - 4\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_3^2 v_2\omega_{19}\omega_7^2 - 4\omega_{14}\omega_8\omega_5^3\omega_{12}\omega_{19}cs^4\omega_7^2 -$$
$$2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{12}cs^4\omega_7^3 - 8\omega_{20}\omega_{14}\omega_8\omega_5^3 v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^3 - \omega_{20}\omega_{14}\omega_8^2\omega_5^3 v_1^2\omega_{12}\omega_{19}cs^2\omega_7^3 - 4\omega_{20}\omega_{14}\omega_8\omega_5^2 v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3$$

$C_{46} = -\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12}v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 -$
$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12}\omega_6 v_2 cs^2\omega_7^2 - 4\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}cs^2\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 +$
$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 - 4\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 4\omega_{11}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 -$
$10\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 -$
$4\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_7^2 +$

$$\begin{aligned}
&2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7 - \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + \\
&2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 - \\
&4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_7 + 3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2 - \\
&\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 cs^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 + \\
&4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 + \\
&2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 cs^2\omega_7 + \\
&4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 - \\
&\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 + \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 + \\
&\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_7 - \\
&4\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2 + \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6 v_2 cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12} v_2\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 + \\
&2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2\omega_{19}\omega_7^2 + \\
&4\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2 - 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7 + 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - \\
&2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 - \\
&2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_6^2 v_2\omega_{19}cs^2\omega_7 + 4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 + \\
&2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + \\
&\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2 cs^2\omega_7^2 - 4\omega_{11}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2\omega_7^2 + \\
&4\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 - 4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 cs^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 + \\
&2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + \\
&2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7 + 4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_7 - 2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2\omega_{19}\omega_7^2 + \\
&2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 + \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_2\omega_{19}\omega_7^2 + \\
&2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 + \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_7 + 4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7 - \\
&2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12} v_2\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 + \\
&4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_2\omega_{19}\omega_7^2 + \\
&2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7 - \\
&\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7 - 4\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7 + \\
&2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6 v_2 cs^2\omega_7 + 4\omega_{11}\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}\omega_7 + \\
&2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_7 - 8\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 cs^2\omega_7^2 - \\
&4\omega_{11}\omega_{14}\omega_8\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2\omega_{19}cs^2\omega_7^2 + \\
&4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}\omega_{12}\omega_6 v_2\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6^2 v_2\omega_{19}cs^2\omega_7^2 - \\
&4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_{12}\omega_6^2 v_2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_{12}\omega_6^2 v_2^2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2
\end{aligned}$$

$$\begin{aligned}
C_{47} = {}&2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{10}\omega_7^2 + \\
&2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \\
&\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \\
&\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5 v_1 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + \\
&2\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2 + \omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \\
&2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_7^3\omega_{23} - \\
&2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - \\
&\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + \\
&4\omega_{20}\omega_{17}\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_7^3\omega_{23} + \\
&\omega_{20}\omega_{17}\omega_8^2\omega_5 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + \omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \\
&\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + \\
&2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2 + 2\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 + \\
&2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_{10}\omega_7^2 + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + \\
&2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_{10}\omega_7^2 + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + \\
&2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \\
&2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + \\
&2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - \omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_7^3 - \\
&2\omega_{20}\omega_8\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3 - 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + \\
&2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 2\omega_{20}\omega_8^2\omega_5 v_1 v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5 v_1 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + \\
&2\omega_{20}\omega_8^2\omega_5 v_1 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + \\
&\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{10}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_{10}\omega_7^3 - \\
&2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 2\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \\
&2\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3 - \\
&2\omega_{20}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_7^2\omega_{23} - \omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \\
&2\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} + \\
&2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_7^3 - \\
&\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^2 - \\
&4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} - 4\omega_{20}\omega_{17}\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +
\end{aligned}$$

$$2\omega_{20}\omega_8^2\omega_5^2 v_1 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} -$$

$$\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3\omega_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} -$$

$$8\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2 - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 2\omega_{20}\omega_8\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5 v_1^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$

$$\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + \omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{20}\omega_8\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_{17}\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} -$$

$$2\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 -$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_7^3 + 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$$

$$4\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 +$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + \omega_{17}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{16}\omega_{10}\omega_7^3 - \omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2 v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} -$$

$$2\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{20}\omega_8\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}cs^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 +$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2 - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} +$$

$$4\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^3 - 2\omega_{20}\omega_8^2\omega_5 v_1^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} +$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_8\omega_5 v_1^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{17}\omega_8\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{20}\omega_8\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} -$$

$$8\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 -$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5 v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_7^3\omega_{23} +$$

$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 2\omega_{20}\omega_8\omega_5 v_1 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_7^3 + 2\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - \omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$$

$$2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} -$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7 + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_7^3 -$$

$$2\omega_{17}\omega_8\omega_5^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8\omega_5 v_1 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$2\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$

$$8\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2 +$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3 - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_7^3\omega_{23} -$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1 v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 +$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$

$$2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7 + \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$

$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_7^3\omega_{23} -$$

$$2\omega_{20}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$

$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3 - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3 - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$2\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{17}\omega_8\omega_5\omega_5 v_1\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}$$

$C_{48} = -12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$12\omega_{20}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3\omega_{16}cs^2\omega_{10}\omega_7^2 -$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^3\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^3\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 60\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$
$24\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3\omega_{16}cs^2\omega_{10}\omega_7^3 -$
$48\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$
$24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}cs^2\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{19}cs^2\omega_7^3 - 12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_8^2\omega_5^3\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$24\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{16}cs^2\omega_{10}\omega_7^2 -$
$60\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_8^2\omega_5^3\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6^2 v_3^3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$
$36\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 + 24\omega_{20}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$
$6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{16}cs^2\omega_{10}\omega_7^3 -$
$24\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} +$
$24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 36\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$24\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^3\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_6\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} +$
$24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3 +$
$24\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$
$24\omega_{20}\omega_8^2\omega_5^2 v_1\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^3\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} +$
$6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 24\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_8^2\omega_5^2\omega_6^2 v_3^3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_6^2 v_3^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} -$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7 - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} -$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{10}\omega_7^3 - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$
$12\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} +$
$24\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$
$24\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3\omega_{19}cs^2\omega_{10}\omega_7^3 + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} +$
$6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_{10}\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_7^3 -$
$18\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_7^2 +$
$24\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 +$
$12\omega_{20}\omega_8^2\omega_5^2\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 - 12\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_7^2\omega_{23} - 18\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} -$
$24\omega_{20}\omega_8^2\omega_5^3\omega_{15}v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{20}\omega_{17}\omega_8^3\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3 + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7 +$
$24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_{10}\omega_7 - 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{20}\omega_{17}\omega_8^3\omega_5^2 v_1\omega_{15}\omega_6\omega_6\omega_{19}\omega_{16}cs^2\omega_7^3 +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 + 42\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^3\omega_{19}cs^2\omega_{10}\omega_7^2 + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$
$12\omega_{20}\omega_{17}\omega_8^2\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{20}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} +$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_6^2 v_3^3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$18\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 12\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}cs^4\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^2\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$24\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_{10}\omega_7 + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6 v_2^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$
$6\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} -$
$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} - 24\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{20}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3 -$
$24\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$

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$$24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3 + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 +$$
$$12\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} -$$
$$12\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$24\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_5^2\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 -$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2\omega_{19}cs^2\omega_{10}\omega_7 +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$24\omega_{20}\omega_8^3\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^3\omega_6^2\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}cs^2\omega_7^3\omega_{23} + 12\omega_{20}\omega_8\omega_5^2\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{16}\omega_{10}\omega_7^3 + 24\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$24\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 12\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3 +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_8\omega_5^2 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^2\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$18\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_8^3\omega_5\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{19}cs^4\omega_{10}\omega_7^3\omega_{23} +$$
$$10\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} -$$
$$6\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_8\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}cs^2\omega_7^3\omega_{23} - 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} +$$
$$24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23} + 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7 - 12\omega_{20}\omega_8^3\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{16}cs^2\omega_{10}\omega_7 - 24\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} -$$
$$6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{16}\omega_{10}\omega_7^2 +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_{17}\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 12\omega_{17}\omega_8\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_8^2\omega_5^2 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6\omega_{19}cs^4\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}cs^4\omega_7^3\omega_{23} - 12\omega_{20}\omega_8^2\omega_5^3\omega_6^2 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2\omega_{19}cs^2\omega_7^3\omega_{23} + 24\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} +$$
$$24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_7^3 -$$
$$24\omega_{20}\omega_8^2\omega_5^3 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^3 v_1\omega_{15}\omega_6^2 v_3\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{17}\omega_8^2\omega_5^3\omega_{15}\omega_6^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23}$$

$C_{49} = 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} +$
$4\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$
$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{16}^2 cs^2\omega_{10}\omega_7 + 4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$
$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$
$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} +$
$4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 14\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$
$4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 4\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$
$4\omega_{20}\omega_8\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7\omega_{23} -$
$4\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{16}^2 cs^2\omega_{10}\omega_7 -$
$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$
$8\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2 +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 -$
$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3 -$
$2\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} +$
$4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8\omega_5\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$
$4\omega_{20}\omega_8\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 9\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$
$4\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7 -$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7 +$
$4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{16}^2 cs^2\omega_{10}^2\omega_7\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^3 - 4\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7 +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$
$4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$4\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7 +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3 - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23} -$

$$4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$$
$$8\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$4\omega_{20}\omega_8^2\omega_5 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_8\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_8\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{16}^2\omega_{10}\omega_7^2 - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_7^2\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$4\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3 -$$
$$4\omega_{20}\omega_8^2\omega_5 v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3 + 4\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7\omega_{23} + 4\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16} cs^2\omega_7^2\omega_{23} - 4\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} - 8\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7\omega_{23} +$$
$$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{17}\omega_8\omega_5\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_8\omega_5\omega_6\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 8\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{16}^2 cs^2\omega_{10}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7 - 4\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6 v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3 +$$
$$4\omega_{20}\omega_8^2\omega_5\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7 +$$
$$4\omega_{20}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{16}^2 cs^2\omega_{10}\omega_7^3 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3 +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3 -$$
$$2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 8\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}\omega_6\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23}$$

$C_{50} = -\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}^2 cs^2\omega_{10}\omega_7^3 -$
$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}^2\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_7^3 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2 - \omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{19}\omega_{16} cs^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{19}^2\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$
$4\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_8\omega_5 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1 v_3\omega_{19}\omega_{16} cs^2\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16} cs^2\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} -$
$4\omega_{20}\omega_8^2\omega_5^2 v_1 v_3 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_2^2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2 v_3\omega_{16} cs^2\omega_7^3\omega_{23} +$
$\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3 + 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_{19}^2 cs^2\omega_{10}\omega_7^2 - 2\omega_{20}\omega_8\omega_5 v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3\omega_{19}^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_8^2\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{19}^3\omega_{23} + \omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$
$\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_8^2\omega_5 v_1 v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$4\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2 v_{19}^2\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} -$
$8\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3\omega_{19}^2\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_8^2\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}^2 cs^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5\omega_5 v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{17}\omega_8^2\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1 v_3\omega_{19}\omega_{16} cs^2\omega_{10}\omega_7^3\omega_{23} +$

$$4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7^3 - 2\omega_{20}\omega_8^2\omega_5 v_1^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_2^2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 -$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_2^2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 - 4\omega_{20}\omega_8\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_1\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 6\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1 v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 10\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$2\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_1\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 -$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_1\omega_{19}cs^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1 v_3\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23} -$$
$$4\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 -$$
$$\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1 v_3\omega_7^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_8\omega_5 v_1^2\omega_{15}v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 +$$
$$2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_7^3 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_7^3\omega_{23} - 4\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_7^3 -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_{10}\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2 cs^2\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7 - 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_8\omega_5 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3\omega_7^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + \omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 +$$
$$4\omega_{20}\omega_8^2\omega_5 v_1 v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2 cs^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_1\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 +$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1 v_3 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_7^3 + 2\omega_{20}\omega_{17}\omega_5 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_{10}\omega_7^2 +$$
$$\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2 cs^2\omega_7^3 - \omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_5 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_7^2\omega_{19}^2 cs^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5^2 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2 + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + 4\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8\omega_5 v_1^2\omega_7^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^3 -$$
$$8\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_{23} + 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{20}\omega_8^2\omega_5 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 -$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}^2\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1 v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1 v_3 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}cs^2\omega_7^3 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}^2 cs^2\omega_{10}\omega_7^3 +$$
$$2\omega_{20}\omega_{17}\omega_8\omega_5\omega_{15}v_1\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}^2 cs^2\omega_7^3\omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_5 v_1^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_8\omega_5 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_5^2 v_1\omega_{15}v_3\omega_7^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$$
$$2\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{17}\omega_8\omega_5 v_1^2\omega_{15}v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_1\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$2\omega_{20}\omega_{17}\omega_8\omega_5^2 v_1^2\omega_{15}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{15}v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_8\omega_5 v_1 v_3\omega_7^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_8^2\omega_5^2 v_1\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{15}v_3 v_2^2\omega_{19}\omega_{10}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_7^3 -$$
$$2\omega_{20}\omega_8\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{20}\omega_8^2\omega_5^2 v_1^2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{15}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23}$$

$$C_{51} = -6\omega_{19}\omega_{16}^2 cs^4\omega_{10}^2\omega_7^3\omega_{23} + 12 v_3^3 v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 12 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6 v_2^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3 + 12\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$36 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 24 v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 36 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3 + 108 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} - 12 v_3\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 +$$
$$180\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7\omega_{23} - 12 v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2\omega_{23} + 6\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 36\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7 - 12 v_2^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23} -$$
$$54 v_3^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} + 12 v_3^3 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 + 12 v_3^3 v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 18\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_7 + 18 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} -$$
$$24 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 24 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 36 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 24 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} +$$
$$12 v_3^3\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 36 v_3^2\omega_{19}\omega_{16}^2 cs^2\omega_7^3\omega_{23} - 42\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^3\omega_{23} - 12 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7\omega_{23} + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} -$$
$$12 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} + 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3 - \omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 12 v_2^2\omega_{16}^2 cs^2\omega_{10}^2\omega_7^2\omega_{23} +$$
$$36 v_3^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2\omega_{23} - 12 v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12 v_3^3 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^2 +$$
$$v_2^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}\omega_7^3\omega_{23} + 12 v_3^3\omega_{19}\omega_{16}\omega_{10}\omega_7 - 36 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7 - 36 v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} + 12 v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$$
$$12\omega_{19}cs^4\omega_{10}^3\omega_7\omega_{23} - 18\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 12 v_2^2\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 18 v_3^2\omega_{16}cs^2\omega_{10}^2\omega_7^3 + 150\omega_{19}\omega_{16}^2 cs^4\omega_{10}^2\omega_7\omega_{23} - 6\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} +$$
$$6 v_2^2\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7 - 96\omega_{19}\omega_{16}^2 cs^4\omega_{10}^3\omega_{23} - 12 v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 6 v_2^2\omega_{16}^2 cs^2\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^2\omega_{23} - 6\omega_{19}\omega_{16}^2 cs^2\omega_{10}^3\omega_7^3 +$$

$72v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{23} - 12\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 - 12v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7 + 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 36v_3^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 -$
$36v_3^2\omega_{19}cs^2\omega_{10}^3\omega_7^2\omega_{23} - 12v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 18v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 18\omega_{19}\omega_{16}^2cs^4\omega_{10}^2\omega_7 + 36v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2 -$
$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 6v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 12\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} + 30\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} +$
$2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} + 6v_3^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 36\omega_{16}^2cs^4\omega_{10}^2\omega_7^2\omega_{23} + 6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 72v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} - 6v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 -$
$18v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3 + 36\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2 - 48\omega_{19}\omega_{16}^2cs^4\omega_{10}\omega_7^2\omega_{23} - 36v_3^2\omega_{19}cs^2\omega_{10}^2\omega_7^2\omega_{23} - 12v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} -$
$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3 - 12\omega_{19}\omega_{16}^2cs^2\omega_7^3\omega_{23} + 18v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 6v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 -$
$12v_3^2v_2^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 12v_2^2\omega_{19}\omega_{16}^2cs^2\omega_7^3\omega_{23} - 36v_3^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} + 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 +$
$12\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 6v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 5\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^3\omega_{23} - 18\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7\omega_{23} - 36\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7 -$
$36v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 12v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 84\omega_{19}\omega_{16}^2cs^4\omega_{10}^2\omega_7\omega_{23} + 12\omega_{19}cs^4\omega_{10}^3\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} +$
$36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 12v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{23} - 12v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 +$
$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2 + 18v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 18v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3 - 18\omega_{16}^2cs^4\omega_{10}^3\omega_7^3 + 12v_3^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 36\omega_{19}\omega_{16}^2cs^4\omega_{10}\omega_7^3\omega_{23} -$
$12v_3^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 18\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{23} - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7 + 6v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 18v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 +$
$18\omega_{16}^2cs^4\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23} + 36\omega_{19}\omega_{16}^2cs^4\omega_7^3\omega_{23} - 42\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2\omega_{23} - 12v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12v_2^2\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23} +$
$36\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^2 + 36\omega_{16}^2cs^4\omega_{10}^3\omega_7^2 - 12\omega_{19}cs^4\omega_{10}^3\omega_7^3\omega_{23} - 36v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 6v_3^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 +$
$72v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7 - 72v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} - 88\omega_{19}\omega_{16}^2cs^4\omega_{10}\omega_7^2\omega_{23} +$
$24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 24v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 6v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 12v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{23} + 18v_3^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} +$
$6v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 - 12v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 2v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 + 12v_3^2v_2^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}$

$C_{52} = -6\omega_{19}\omega_{16}^2cs^4\omega_{10}^2\omega_7^3\omega_{23} + 36v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 72v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 18v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3 + 12\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} -$
$36\omega_{19}\omega_{16}^3\omega_{10}\omega_7^2\omega_{23} + 72v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} + 12v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^4 + 36v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 +$
$18\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7\omega_{23} + 24v_2^2\omega_{19}cs^2\omega_{10}^3\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^2 - 42v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} -$
$18v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23} + 36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 12\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{23} - 48v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{23} + 36v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$
$6\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^3 - 132v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 72v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$12v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 72v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^3\omega_{23} -$
$36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 12\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{23} + 18v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7\omega_{23} + 6\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3 -$
$36v_2^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 84\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} - 6\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{23} - 36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} +$
$12\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3 - 12v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$
$24\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23} - 24v_2^2\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 6v_3^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 24\omega_{19}\omega_{16}^2cs^4\omega_{10}^2\omega_7^2\omega_{23} - 6\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} + 18v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 -$
$12\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 18v_2^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} - 6\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 + 24v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^2\omega_{23} -$
$108v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{23} + 36v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 - 36v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 + 12v_3^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 12v_3^2\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23} -$
$36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 54v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 6\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7 + 12v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 +$
$78v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2\omega_{23} + 6\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} + 18v_3^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{16}^2cs^4\omega_{10}^2\omega_7^2\omega_{23} + 6\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 -$
$24v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} - 18v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 6v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3 + 60v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2 -$
$12\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^2\omega_{23} - 12v_3^2\omega_{19}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 36v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7 +$
$180v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 36v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 12v_3^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} +$
$18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 18v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - \omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3\omega_{23} +$
$12\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^3 - 12v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 36v_2^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 12\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7\omega_{23} +$
$12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 108v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} +$
$60v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} - 36v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7 + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 6v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 - 144v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 6\omega_{16}^2cs^4\omega_{10}^3\omega_7^3 +$
$36v_3^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 6\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7\omega_{23} - 36v_3^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 24\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 6v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 +$
$6v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} - 36v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 6\omega_{16}^2cs^4\omega_{10}^2\omega_7^3\omega_{23} - 24\omega_{19}\omega_{16}cs^4\omega_{10}^3\omega_7^2\omega_{23} - 36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} +$
$24v_3^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 12\omega_{19}\omega_{16}cs^4\omega_{10}^2\omega_7^3 - 12\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{16}^2cs^4\omega_{10}^3\omega_7^2 - 12v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} -$
$18v_3^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 24v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 36v_3^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} -$
$4\omega_{19}\omega_{16}^2cs^4\omega_{10}^3\omega_7^2\omega_{23} + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 72v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 6v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 84v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{23} +$
$6v_3^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} + 18v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 - 12v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 18v_2^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2 + 36v_3^2v_2^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}$

$C_{53} = 4\omega_{11}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} + 2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} - 24\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} + 4\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 2\omega_{11}v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} -$
$5\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} + 3\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 2\omega_{11}\omega_{19}\omega_{16}^3\omega_{10}\omega_7^3 + 2\omega_{11}v_2^2\omega_{16}^2cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_7^3\omega_{23} -$
$4\omega_{11}\omega_{19}^3\omega_{16}\omega_{10}^2\omega_7^2 + 7\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} - 4\omega_{11}v_2^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 2\omega_{11}v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7 - 9\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$
$4\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7 - 6\omega_{11}v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 2\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}v_2^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} + 4\omega_{11}\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23} -$
$2\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} - 4\omega_{11}\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + \omega_{11}v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} - 15\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 -$
$\omega_{11}v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 4\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^2 - 4\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 + 11\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23} - \omega_{11}v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$
$8\omega_{11}\omega_{19}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} - 2\omega_{11}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3\omega_{23} - 2\omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} + 8\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23} - 8\omega_{11}\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} -$
$2\omega_{11}v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} + 4\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} - 4\omega_{11}\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 8\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7^2\omega_{23} - 4\omega_{11}\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23} -$
$5\omega_{11}v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}v_2^2\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23} - 2\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 4\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7 + 2\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2 +$
$3\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 26\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23} + 4\omega_{11}v_2^2\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7 + 3\omega_{11}\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23} -$
$4\omega_{11}\omega_{19}^3\omega_{10}^3\omega_7^2\omega_{23} + 2\omega_{11}\omega_{19}\omega_{16}^3\omega_{10}^3\omega_7^2\omega_{23} + 2\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 3\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 5\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$4\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 - 16\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 8\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} -$
$4\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 6\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}^3\omega_7\omega_{23} - 8\omega_{11}\omega_{19}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} + \omega_{11}v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} + \omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} +$
$13\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}^3\omega_7^3\omega_{23} - 2\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_7^3 + 6\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 2\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 7\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} -$
$4\omega_{11}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 + 4\omega_{11}v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 - 4\omega_{11}v_2^2\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23} + 9\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 2\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 - \omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} -$
$2\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^3 + 4\omega_{11}\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23} - \omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} - 3\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23} +$
$2\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 4\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^3\omega_7\omega_{23} + 2\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2\omega_{23} - 2\omega_{11}v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 4\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7 -$
$4\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2 - 2\omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} + 8\omega_{11}\omega_{19}^2cs^2\omega_{10}^3\omega_7^3\omega_{23} - 4\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^3\omega_7^2$

$$C_{54} = 6\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{19}^2\omega_7 -$$
$$24\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 + 2\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_{19}^2cs^2\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_8\omega_5\omega_6v_3^2\omega_{19}^2\omega_7 - 6\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_{18}\omega_6\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{19}^2cs^2\omega_7^2 -$$
$$4\omega_{20}\omega_{11}^2\omega_8v_3^2\omega_{19}^2\omega_7^2 - 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 - 6\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6cs^2\omega_7^2 -$$
$$3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 4\omega_{11}^2\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 - 12\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 + 8\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 +$$
$$4\omega_{20}\omega_{11}^2\omega_8\omega_{19}^2\omega_7^2 - 6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7 - 12\omega_{20}\omega_{11}\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 12\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 +$$
$$8\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 8\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 + 24\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7 -$$
$$2\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 + 6\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7^2 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2 + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{19}^2cs^2\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}\omega_7^2 +$$
$$2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 + 12\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6cs^2\omega_7 + 9\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{19}^2\omega_7 -$$
$$4\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 + 12\omega_{11}^2\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_8\omega_6\omega_{19}\omega_7^2 + 2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 -$$
$$4\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 - 8\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 -$$
$$12\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{19}^2cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2 -$$
$$2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 12\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 9\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5v_3^2\omega_{19}^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 -$$
$$4\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 + 2\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_{18}v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8\omega_6v_3^2\omega_{19}^2\omega_7^2 -$$
$$4\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6v_3^2\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{19}^2cs^2\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2\omega_7^2 - 4\omega_{11}^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}cs^2\omega_7 - 6\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 -$$
$$4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2\omega_7 - 4\omega_{11}^2\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_7^2 + 12\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19} +$$
$$3\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2\omega_7^2 + 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_{19}^2cs^2\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_6\omega_{19}^2cs^2\omega_7^2 -$$
$$6\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_6v_3^2\omega_{19}^2\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6v_3^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2\omega_7 +$$
$$4\omega_{11}^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19} - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19} + 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 -$$
$$12\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}cs^2\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{19}^2\omega_7 - 12\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 +$$
$$4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5v_3^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7 + 4\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2$$

$$C_{55} = 4\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 + 18\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 - 6\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 +$$
$$12\omega_{20}\omega_{11}^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 + 30\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7^2 - 9\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7^2 -$$
$$12\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 - 9\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2v_3^2\omega_{19}^2\omega_7^2 - 18\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7^2 +$$
$$6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_7^2 - 54\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_7 + 6\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 +$$
$$54\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}cs^2\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6^2v_3^2\omega_{19}^2\omega_7 + 6\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2 +$$
$$6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6^2\omega_{19}^2cs^2\omega_7 - 6\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 -$$
$$6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6^2\omega_{19}^2\omega_7 + 42\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 12\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 - 6\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 -$$
$$9\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6^2\omega_{19}^2cs^2\omega_7 + 24\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2 - 12\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19} -$$
$$12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6v_3^2\omega_7 - 6\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 -$$
$$36\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 6\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 +$$
$$6\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}v_3^2\omega_{19}^2\omega_7^2 + 12\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6\omega_{19}^2\omega_7 + 6\omega_{20}\omega_{11}^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 36\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 -$$
$$42\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6^2v_3^2\omega_{19}^2\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 18\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 +$$
$$6\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7^2 - 54\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6\omega_{19}^2cs^2\omega_7 +$$
$$6\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 + 12\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 + 54\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_6^2\omega_{19}^2cs^2\omega_7 +$$
$$12\omega_{20}\omega_{11}^2\omega_8^2\omega_2^2\omega_6v_3^2\omega_{19}^2\omega_7 + 3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 6\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 + 12\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7 +$$
$$12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19} - 12\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - 24\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_{19}^2cs^2\omega_7 + 12\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 + 6\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}^2\omega_7 -$$
$$12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7^2 + \omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 + 12\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2 -$$
$$12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19} - 6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6\omega_{19}^2cs^2\omega_7 + 9\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6^2\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_6^2v_3^2\omega_{19}^2\omega_7 -$$
$$12\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_6\omega_{19}^2\omega_7 +$$
$$18\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2cs^2\omega_7^2 - 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_6v_3^2\omega_{18}\omega_6^2\omega_7 + 24\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_{19}^2cs^2\omega_7 - 24\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 +$$
$$3\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_6^2\omega_{19}^2\omega_7 - 36\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2cs^2\omega_7 - 36\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}cs^2 +$$
$$12\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 - 24\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_{19}^2cs^2\omega_7 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6\omega_{19}^2cs^2\omega_7 -$$
$$12\omega_{20}\omega_{11}^2\omega_8^2\omega_2^2\omega_6\omega_{19}^2\omega_7 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_6^2v_3^2\omega_{19}^2\omega_7 + 18\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 12\omega_{11}^2\omega_8\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}^2\omega_7 -$$
$$12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 24\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2 + 36\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2cs^2 +$$
$$24\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6\omega_{19}cs^2\omega_7 + 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_6^2\omega_{19}^2cs^2\omega_7 + 12\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 -$$
$$18\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19} + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2\omega_6v_3^2\omega_{19}^2\omega_7 -$$
$$6\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2 - 12\omega_{20}\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 6\omega_{11}^2\omega_8^2\omega_5^2\omega_{18}\omega_6^2\omega_{19}\omega_7 - 12\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}cs^2\omega_7^2 + 12\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2\omega_{19}^2cs^2\omega_7^2$$

$$C_{56} = \omega_{20}\omega_8^2\omega_5v_3^2\omega_{19}\omega_7\omega_3^3 - \omega_8^2\omega_5v_3^2\omega_{19}\omega_7\omega_3^3 - 5\omega_{20}\omega_8\omega_5^2\omega_6^2\omega_{19}^2cs^2\omega_7^2 + 5\omega_{20}\omega_8\omega_5^2\omega_{18}\omega_{19}^2cs^2\omega_7^3 + 2\omega_{20}\omega_8^2\omega_5^2\omega_{19}\omega_7 + 2\omega_8\omega_5\omega_{19}^2cs^2\omega_7^3 +$$
$$\omega_{20}\omega_8\omega_5^2\omega_{19}^2\omega_7^2 + 2\omega_8^2\omega_5^2v_3^2\omega_{19}\omega_7^2 - \omega_8^2\omega_5\omega_{19}^2cs^2\omega_7^3 - 2\omega_{20}\omega_8\omega_5v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_8\omega_5^2v_3^2\omega_{19}^2\omega_7 - 2\omega_8\omega_5\omega_{19}\omega_7^3 - \omega_{20}\omega_8\omega_5^2\omega_{19}^2\omega_7^3 -$$
$$11\omega_{20}\omega_8\omega_5^2\omega_{19}^2cs^2\omega_7^2 + 2\omega_8\omega_5v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_8\omega_5^2v_3^2\omega_{19}^2\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{19}\omega_7^2 - \omega_{20}\omega_8\omega_5\omega_{19}\omega_7^2 + \omega_{20}\omega_8\omega_5^2\omega_{19}\omega_7^3 + 6\omega_{20}\omega_8\omega_5^2\omega_{19}\omega_7cs^2\omega_7 -$$
$$2\omega_{20}\omega_8\omega_5^2cs^2\omega_7^2 - \omega_{20}\omega_8\omega_5^2v_3^2\omega_{19}^2\omega_7^2 + 2\omega_{20}\omega_5\omega_{19}^2cs^2\omega_7 - 2\omega_{20}\omega_8\omega_5\omega_{19}cs^2\omega_7^2 + 2\omega_8^2\omega_5^2\omega_{19}cs^2\omega_7^2 + 2\omega_{20}\omega_8\omega_5^2\omega_{19}^2cs^2\omega_7 - 4\omega_{20}\omega_8^2\omega_5^2\omega_{19}\omega_7 -$$
$$\omega_8^2\omega_5^2\omega_{19}\omega_7 - \omega_{20}\omega_8\omega_5v_3^2\omega_{19}\omega_7^2 - \omega_8^2\omega_5\omega_{19}^2cs^2\omega_7^2 - \omega_8^2\omega_5v_3^2\omega_{19}\omega_7 + \omega_{20}\omega_8\omega_5\omega_{19}cs^2\omega_7^3 + 13\omega_{20}\omega_8^2\omega_5^2\omega_{19}^2cs^2\omega_7 + \omega_{20}\omega_8\omega_5^2cs^2\omega_7^3 -$$
$$\omega_{20}\omega_8^2\omega_5\omega_{19}\omega_7^3 + \omega_8^2\omega_5^2\omega_{19}\omega_7^3 - \omega_{20}\omega_8^2\omega_5^2\omega_{19}\omega_7^3 + \omega_{20}\omega_5^2\omega_{19}^2cs^2\omega_7 - 7\omega_{20}\omega_8\omega_5\omega_{19}\omega_7cs^2\omega_7 - 2\omega_8\omega_5^2\omega_{19}cs^2\omega_7^3 - 2\omega_8^2\omega_5^2\omega_{19}cs^2\omega_7^2 -$$
$$\omega_{20}\omega_8^2\omega_5v_3^2\omega_{19}\omega_7^3 + 7\omega_{20}\omega_8^2\omega_5\omega_{19}^2cs^2\omega_7 + 2\omega_8^2\omega_5^2\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_8\omega_5\omega_{19}^2cs^2\omega_7 + \omega_8^2\omega_5\omega_{19}\omega_7^3 + 2\omega_{20}\omega_8\omega_5^2\omega_7^2 + 2\omega_{20}\omega_8\omega_5\omega_{19}\omega_7 -$$
$$2\omega_8^2\omega_5^2\omega_{19}\omega_7 - 2\omega_{20}\omega_8\omega_5^2\omega_{19}cs^2\omega_7 + \omega_8^2\omega_5^2\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_8^2\omega_5^2v_3^2\omega_{19}\omega_7 + \omega_{20}\omega_8\omega_5v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_8\omega_5^2\omega_{19}cs^2\omega_7^3 + 4\omega_{20}\omega_8\omega_5^2\omega_{19}cs^2\omega_7^2 -$$
$$2\omega_{20}\omega_8\omega_5^2v_3^2\omega_7^2 - 2\omega_8^2\omega_5^2v_3^2\omega_{19}\omega_7^2 - 8\omega_{20}\omega_8\omega_5^2\omega_{19}cs^2 - 2\omega_{20}\omega_8\omega_5^2v_3^2\omega_{19}\omega_7 - 2\omega_8\omega_5^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_8^2\omega_{19}^2cs^2\omega_7 - 2\omega_8\omega_5^2v_3^2\omega_{19}\omega_7^3 -$$
$$\omega_{20}\omega_8\omega_5v_3^2\omega_{19}^2\omega_7^3 - 6\omega_{20}\omega_8\omega_5\omega_{19}^2cs^2\omega_7 + \omega_8^2\omega_5^2v_3^2\omega_{19}\omega_7^3 + \omega_{20}\omega_8^2\omega_5^2v_3^2\omega_7^3 - \omega_{20}\omega_8^2\omega_5^2\omega_{19}cs^2\omega_7^3 + 2\omega_{20}\omega_8^2\omega_{19}^2cs^2\omega_7^2 - \omega_{20}\omega_8^2\omega_5\omega_{19}^2\omega_7 +$$
$$2\omega_8\omega_5^2v_3^2\omega_{19}^2\omega_7 + 2\omega_8\omega_5^2\omega_{19}^2\omega_7 + \omega_{20}\omega_8\omega_5\omega_{19}^2\omega_7^3$$

$C_{57} = 2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}v_3^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{19}^2\omega_7^2 - 8\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 + 2\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^2 - 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 + 12\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_{19}^2cs^2\omega_7^2 + 6\omega_{20}\omega_{11}\omega_8\omega_5\omega_6v_3^2\omega_{19}^2\omega_7^2 - 2\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8v_3^2\omega_{19}^2\omega_7 - 12\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 - 2\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6cs^2\omega_7^2 - 3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 12\omega_{11}^2\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 + 24\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 + 9\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_{19}^2\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 + 4\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 8\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 24\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 + 8\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7 - 6\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{19}^2cs^2\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 6\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 + 4\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6cs^2\omega_7 + 3\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_7 + 4\omega_{11}^2\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8\omega_6\omega_{19}^2\omega_7^2 + 2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^2 - 4\omega_{20}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 8\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}\omega_7 - 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8\omega_{19}^2cs^2\omega_7^2 - 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}v_3^2\omega_{19}^2\omega_7 - 6\omega_{20}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2 - 2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 4\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7^2 + 12\omega_{20}\omega_{11}^2\omega_8\omega_5v_3^2\omega_{19}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 - 4\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 + 2\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8\omega_{18}v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{19}^2\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_6v_3^2\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6v_3^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{19}^2cs^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2\omega_7^2 - 12\omega_{11}^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}cs^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 6\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2\omega_7 - 4\omega_{11}^2\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_7^2 + 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19} + 3\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2\omega_7^2 + 12\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_{19}^2cs^2\omega_7^2 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8\omega_6\omega_{19}^2cs^2\omega_7^2 - 2\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{19}cs^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 - 9\omega_{20}\omega_{11}\omega_8\omega_5\omega_6v_3^2\omega_{19}^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_6\omega_{19}^2\omega_7 + 12\omega_{11}^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 12\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19} - 4\omega_{20}\omega_{11}\omega_5\omega_{18}\omega_6\omega_{19}^2 + 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}cs^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{19}^2\omega_7 - 4\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2cs^2\omega_7^2 + 4\omega_{11}^2\omega_8\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 12\omega_{20}\omega_{11}^2\omega_8\omega_5v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_6\omega_{19}^2cs^2\omega_7 + 4\omega_{11}^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 6\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7$

$C_{58} = 12\omega_{11}^2\omega_{19}^2cs^2\omega_{10}\omega_7^3 - 12\omega_{11}v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_7^3\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 6\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3 + 6\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_7^3 + 144\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 42\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 24\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{10}\omega_7^2 - 24\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 15\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 9\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 72\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 36\omega_{11}^2\omega_{19}cs^4\omega_{10}\omega_7^3\omega_{23} + \omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{10}\omega_7^3 + 18\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}v_3^2v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 6\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}v_2^2\omega_{19}^2cs^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2\omega_{19}^2cs^2\omega_{10}\omega_7^2 + 3\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}^2\omega_{19}cs^4\omega_7^3\omega_{23} + 18\omega_{11}^2v_2^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 72\omega_{11}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 6\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 36\omega_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}v_2^2\omega_{19}^2\omega_7^3\omega_{23} - 24\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 36\omega_{11}\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2v_3^2\omega_{19}^2cs^2\omega_{10}\omega_7 - 36\omega_{11}^2\omega_{19}cs^4\omega_{10}\omega_7^3 - 6\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 36\omega_{11}\omega_{19}cs^4\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}v_3^2\omega_{19}^2cs^2\omega_7^3\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}\omega_{10}\omega_7^3 + 12\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_7^3 + 6\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 48\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 45\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 15\omega_{11}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3 - 6\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3 - 18\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^2v_2^2\omega_{19}\omega_{10}\omega_7^2 + 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 - 36\omega_{11}^2v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 36\omega_{11}^2\omega_{19}cs^4\omega_{10}\omega_7^2 - 60\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_3^2\omega_{19}^2cs^2\omega_{10}\omega_7^3 - 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 24\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 18\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11}^2v_3^2\omega_{19}cs^2\omega_7^3 + 5\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}^2v_3^2v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{11}^2\omega_{19}cs^2\omega_7^3\omega_{23} - 3\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 36\omega_{11}^2\omega_{19}cs^4\omega_7^3 + 36\omega_{11}v_2^2\omega_{19}^2cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}v_3^2v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}v_2^2\omega_{19}^2cs^2\omega_7^3\omega_{23} - 6\omega_{11}\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 12\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 + 12v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 36\omega_{11}^2v_2^2\omega_{19}cs^2\omega_7^3 - 5\omega_{11}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 156\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 36\omega_{11}^2v_2^2\omega_{19}cs^2\omega_{10}\omega_7^2 - 12\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 6\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 36\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}^2v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3 + 54\omega_{11}\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - 96\omega_{11}^2\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^3 + 6\omega_{11}^2v_3^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 27\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 6\omega_{11}^2v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 24\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 18\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3 - 18\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_7^3 - 12\omega_{11}v_3^2v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 15\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - \omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 18\omega_{11}\omega_{19}^2\omega_{16}cs^4\omega_7^3\omega_{23} + 18\omega_{11}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^8\omega_{10}\omega_7\omega_{23} + 12\omega_{11}\omega_{19}^2cs^2\omega_{10}\omega_7^2\omega_{23} - 72\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23} - 36\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 - 36\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2 + 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 18\omega_{11}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3 - 18\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 6v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2\omega_{19}cs^2\omega_7^3 - 6\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 3\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 18\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_7^3 + 18\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3 + 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 48\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 72\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2v_3^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 9\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 15\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 6\omega_{11}^2\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}^2\omega_7^3 - 12\omega_{11}^2v_3^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 108\omega_{11}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 36\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3 + 36\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7$

$C_{59} =$
$-24\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 + 12\omega_{11}^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + 18\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 18\omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 66\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 6\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^3\omega_{23} - 24\omega_{11}^2\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 4\omega_{11}v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 132\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 24\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7\omega_{23} - \omega_{11}^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 72\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{11}^2v_3^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 24\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 - 24\omega_{11}^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 3\omega_{11}^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6v_3^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 4\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 24\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 66\omega_{11}\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24\omega_{11}^2v_3^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 6\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 24\omega_{11}^2\omega_{19}cs^2\omega_{10}^2\omega_7^2\omega_{23} - 36\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 24\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 24\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}^2\omega_7 + 12\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 60\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} -$

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$18\omega_{11}v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 90\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 + 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 24\omega_{11}^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{11}^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} + 12\omega_{11}^2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2 + 12\omega_{11}\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} + 66\omega_{11}^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 24\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2 - 96\omega_{11}^2\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^2\omega_{23} - 36\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7\omega_{23} + 24\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{11}^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 24\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 24\omega_{11}^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 - 12\omega_{11}^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} - 24\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{23} + 36\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^2\omega_{23} - 84\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 36\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} - 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 + 72\omega_{11}^2\omega_{19}^2\omega_{16}cs^2\omega_{10}^2\omega_7\omega_{23} - 24\omega_{11}^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 - 12\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}^2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2 + 84\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 48\omega_{11}^2\omega_{16}^2cs^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 42\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^2 + 24\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 6\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 48\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3 + \omega_{11}^2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7^3 + 6\omega_{11}\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 18\omega_{19}^2\omega_{16}^2cs^2\omega_{10}^2\omega_7^3\omega_{23} + 24\omega_{11}^2\omega_{19}^2cs^2\omega_{10}\omega_7^3\omega_{23} - 24\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}^2\omega_7^2 + 12\omega_{11}^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 156\omega_{11}^2\omega_{19}\omega_{16}^2cs^2\omega_{10}\omega_7\omega_{23}$

$C_{60} = 12\omega_{11}^2\omega_{19}cs^2\omega_{10}\omega_7^3 - 12\omega_{11}v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}^2\omega_7^3\omega_{23} - 18\omega_{11}^2v_3^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3 + 6\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_7^3 + 48\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} + 36\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 72\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 36\omega_{11}^2v_3^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2 - 24\omega_{11}\omega_{19}^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 15\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 27\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2\omega_{19}cs^4\omega_{10}\omega_7^3\omega_{23} - 18\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 36\omega_{11}^2v_3^2v_2^2\omega_{19}^2\omega_{10}\omega_7^3 - 102\omega_{11}^2v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23} + 18\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_2^2\omega_{19}^2cs^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}^2v_3^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2\omega_{19}cs^2\omega_{10}\omega_7^2 - \omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}\omega_{19}^2cs^4\omega_7^3\omega_{23} + 6\omega_{11}^2v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{23} - 48\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 18\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 12v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 72\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 36\omega_{11}^2v_3^2\omega_{19}cs^2\omega_{10}\omega_7^2 - 12\omega_{11}^2\omega_{19}^2cs^4\omega_{10}\omega_7^3 - 18\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 15\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 12\omega_{11}\omega_{19}^2cs^4\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}v_3^2v_2^2cs^2\omega_7^3\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}^2\omega_{10}\omega_7^3 + 36\omega_{11}^2v_3^2v_2^2\omega_{19}^2\omega_7^3 + 6\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 48\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 108\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 15\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 - 18\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^2 - 6v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 36\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}^2\omega_{10}\omega_7\omega_{23} + 36\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 - 12\omega_{11}^2v_2^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2\omega_{19}cs^4\omega_{10}\omega_7^2 - 5\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}^2v_3^2\omega_{19}cs^2\omega_{10}\omega_7^3 - 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 72\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 6\omega_{11}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{23} + 6\omega_{11}^2v_2^2\omega_{19}^2\omega_{16}\omega_7^2 + 36\omega_{11}^2v_3^2\omega_{19}^2cs^2\omega_7^2 + 5\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 18\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{11}^2\omega_{19}cs^2\omega_7^3\omega_{23} + 30\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}^2\omega_{19}cs^4\omega_7^3 + 12\omega_{11}^2v_2^2\omega_{19}^2cs^2\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 36\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}v_2^2\omega_{19}^2cs^2\omega_7^3\omega_{23} - 6\omega_{11}\omega_{19}^2\omega_{16}cs^2\omega_7^3\omega_{23} + 12\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 18\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 + 36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}^2cs^2\omega_7^3 - 15\omega_{11}v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}^2cs^2\omega_{10}\omega_7^2 - 36\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 6\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 12\omega_{11}\omega_{19}^2cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 60\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}cs^2\omega_{10}\omega_7^3 + 18\omega_{11}\omega_{19}^2\omega_{16}cs^4\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_{23} - 12\omega_{11}^2v_3^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} + 9\omega_{11}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 6\omega_{11}^2v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 72\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^2 - 6\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_7^3 - 36\omega_{11}v_3^2v_2^2cs^2\omega_{10}\omega_7^2\omega_{23} - 45\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 36\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 18\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2 + 6\omega_{11}\omega_{19}^2\omega_{16}cs^4\omega_7^3\omega_{23} + 6\omega_{11}v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 60\omega_{11}^2v_3^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 24\omega_{11}v_2^2\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7 - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2 + 12\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 54\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 6\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3 - 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 - 18v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 12\omega_{11}^2\omega_{19}cs^2\omega_7^3 - 6\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7 + 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^3 + 6\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3 + \omega_{11}^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 144\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7\omega_{23} + 36\omega_{11}^2v_3^2\omega_{19}cs^2\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}^2v_2^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 9\omega_{11}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 5\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 12\omega_{11}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_7^3 + 24\omega_{11}^2v_3^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}v_2^2\omega_{19}^2\omega_{16}cs^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}cs^4\omega_{10}\omega_7^2 + 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}cs^2\omega_{10}\omega_7^2$

$C_{61} = -30\omega_{11}^2v_3^4\omega_{19}\omega_7^2 - 432\omega_{11}v_3^2\omega_{19}^2cs^2\omega_7 - 144\omega_{11}^2v_3^2cs^2\omega_7^2 - 216\omega_{11}^2v_3^2\omega_{19}cs^2 - 96\omega_{11}v_3^4\omega_{19}^2\omega_7 + 36v_3^2\omega_{19}^2\omega_7^2 + 12\omega_{11}^2v_3^4\omega_7^2 + 48\omega_{11}\omega_{19}^2cs^2\omega_7 + 72v_3^4\omega_{19}^2\omega_7 - 144v_3^2\omega_{19}^2cs^2\omega_7^2 - 12\omega_{11}^2cs^2\omega_7^2 - 24\omega_{19}^2cs^2\omega_7 - 96\omega_{11}^2v_3^2\omega_{19}\omega_7 - 36\omega_{11}v_3^2\omega_{19}^2\omega_7^2 + 12\omega_{11}^2\omega_{19}cs^2\omega_7^2 - 12\omega_{11}^2v_3^2\omega_{19}cs^2\omega_7^2 + 12\omega_{19}^2cs^2\omega_7^2 + 30\omega_{11}^2v_3^2\omega_{19}\omega_7^2 - 48\omega_{11}^2\omega_{19}cs^2\omega_7 + 96\omega_{11}v_3^2\omega_{19}^2\omega_7 - 36v_3^4\omega_{19}^2\omega_7^2 + 24\omega_{11}^2\omega_{19}cs^2 - \omega_{11}^2\omega_{19}cs^4\omega_7^2 + 288v_3^2\omega_{19}^2cs^2\omega_7 + 24\omega_{11}^2cs^2\omega_7 - 72v_3^2\omega_{19}^2\omega_7 - 24\omega_{11}^2v_3^4\omega_7 + 48\omega_{11}^2v_3^2\omega_{19} - 14\omega_{11}\omega_{19}^2cs^2\omega_7^2 + 150\omega_{11}v_3^2\omega_{19}^2cs^2\omega_7^2 + 48\omega_{11}v_3^4\omega_{19} + 96\omega_{11}^2v_3^4\omega_{19}\omega_7 + 72\omega_{11}^2v_3^2cs^2\omega_7^2 + 216\omega_{11}v_3^2\omega_{19}^2cs^2 - 24\omega_{11}\omega_{19}^2cs^2 + 36\omega_{11}v_3^4\omega_{19}^2\omega_7 - 24\omega_{11}^2\omega_{19}cs^4 + 12\omega_{11}^2cs^4\omega_7^2 - 126\omega_{11}^2v_3^2\omega_{19}cs^2\omega_7^2 + 24\omega_{19}^2cs^4\omega_7 - 12\omega_{11}^2\omega_{19}cs^4\omega_7^2 + 24\omega_{11}v_3^4\omega_{19}\omega_7^2 + 3\omega_{11}^2v_3^2\omega_{19}^2\omega_7^2 + 24\omega_{11}\omega_{19}^2cs^4 + 48\omega_{11}v_3^2\omega_{19}\omega_7 - 12\omega_{11}^2v_3^2\omega_7^2 + 72\omega_{11}v_3^2\omega_{19}cs^2\omega_7^2 - 48\omega_{11}\omega_{19}^2cs^4\omega_7 + 24\omega_{11}^2v_3^2\omega_7^4 + 14\omega_{11}\omega_{19}^2cs^4\omega_7^2 - 144\omega_{11}v_3^2\omega_{19}cs^2\omega_7 - 48\omega_{11}^2v_3^4\omega_{19} - 48\omega_{11}v_3^2\omega_{19} - 24\omega_{11}v_3^2\omega_{19}\omega_7^2 - 12\omega_{19}^2cs^4\omega_7^2 - 3\omega_{11}^2v_3^4\omega_{19}\omega_7^2 - 48\omega_{11}v_3^4\omega_{19}\omega_7 + 48\omega_{11}^2\omega_{19}cs^4\omega_7 + \omega_{11}^2\omega_{19}cs^2\omega_7^2 + 432\omega_{11}^2v_3^2\omega_{19}cs^2\omega_7 - 24\omega_{11}^2cs^4\omega_7$

$C_{62} = 6\omega_{19}cs^4\omega_7^3 + 6v_3^2\omega_{19}cs^2\omega_7^3 + 24v_3^2\omega_{19}^2\omega_7^2 + 24v_3^4\omega_{19}^2\omega_7^2 - 72v_3^2\omega_{19}^2cs^2\omega_7^2 - 24\omega_{19}cs^4\omega_7^2 + 12\omega_{19}cs^2\omega_7 - 3v_3^2\omega_{19}^2\omega_7^3 - 8\omega_{19}^2cs^2\omega_7^2 - 12v_3^2\omega_7^3 - 24v_3^4\omega_{19}\omega_7 - 96v_3^2\omega_{19}cs^2 + 156v_3^2\omega_{19}^2cs^2\omega_7 + 24\omega_{19}cs^4\omega_7 + 24v_3^2\omega_7^2 - 24v_3^2\omega_{19}\omega_7 + \omega_{19}^2cs^2\omega_7^3 + 3v_3^4\omega_{19}\omega_7^3 + 48v_3^2\omega_{19}\omega_7 + 24\omega_{19}cs^2\omega_7^2 - 48\omega_{19}cs^4\omega_7 - 24v_3^2\omega_{19}cs^2\omega_7 - 18v_3^4\omega_{19}\omega_7^2 - 6\omega_{19}cs^2\omega_7^3 + 72v_3^4\omega_{19}\omega_7^2 + 24\omega_{19}cs^4 - 24v_3^2cs^2\omega_7^2 - 24v_3^4\omega_7^2 - 48v_3^4\omega_{19}\omega_7 - 12v_3^2\omega_{19}cs^2\omega_7^3 - 3\omega_{19}cs^4\omega_7^3 + 18v_3^2\omega_{19}\omega_7^3 + 24\omega_{19}cs^4\omega_7^2 + 48v_3^2\omega_{19}cs^2\omega_7^2 + 12v_3^2cs^2\omega_7^3 + 12v_3^4\omega_7^3 - 72v_3^2\omega_{19}\omega_7^2 - 24\omega_{19}cs^2\omega_7$

$C_{63} = -60v_3^2\omega_{19}^2\omega_7^2 - 120\omega_{11}\omega_{19}^2cs^2\omega_7 + 21\omega_{11}^2\omega_{19}\omega_7^2 + 24\omega_{19}^2\omega_7^2 + 24\omega_{11}^2cs^2\omega_7 + 72\omega_{19}^2cs^2\omega_7 + 168\omega_{11}^2v_3^2\omega_{19}\omega_7 - 25\omega_{11}\omega_{19}^2\omega_7^2 + 61\omega_{11}v_3^2\omega_{19}^2\omega_7 - 33\omega_{11}^2\omega_{19}cs^2\omega_7^2 + 36\omega_{11}^2\omega_{19} - 36\omega_{19}^2cs^2\omega_7^2 + 72\omega_{11}\omega_{19}^2\omega_7 - 51\omega_{11}^2v_3^2\omega_{19}\omega_7 + 120\omega_{11}^2\omega_{19}cs^2\omega_7 - 168\omega_{11}v_3^2\omega_{19}^2\omega_7 - 48\omega_{19}^2\omega_7 - 60\omega_{11}^2\omega_{19}cs^2 - 48\omega_{11}^2cs^2\omega_7 + 120v_3^2\omega_{19}^2\omega_7 - 84\omega_{11}^2v_3^2\omega_{19} - 72\omega_{11}^2\omega_{19}\omega_7 + 39\omega_{11}\omega_{19}^2cs^2\omega_7 + 60\omega_{11}\omega_{19}^2cs^2 - 12\omega_{11}^2\omega_7 - 5\omega_{11}^2v_3^2\omega_{19}^2\omega_7 + 24\omega_{11}\omega_{19}\omega_7 + 12\omega_{11}\omega_{19}cs^2\omega_7^2 - 72\omega_{11}v_3^2\omega_{19}\omega_7 + 24\omega_{11}^2v_3^2\omega_7^2 - 48\omega_{11}^2v_3^2\omega_7 - 24\omega_{11}\omega_{19}cs^2\omega_7 - 12\omega_{11}\omega_{19}\omega_7^2 + 84\omega_{11}v_3^2\omega_{19} - 36\omega_{11}\omega_{19}^2 + 36\omega_{11}v_3^2\omega_{19}\omega_7^2 + 24\omega_{11}^2\omega_7 - 3\omega_{11}^2\omega_{19}cs^2\omega_7^2 + 2\omega_{11}^2\omega_{19}^2\omega_7^2$

2.3.5 Conservation of momentum: ρv_3

📎 attached text file: `output_d3q27_nse_mrt2_symbolic_pde_03.txt`

$v_3 \frac{\partial \rho}{\partial t} + \rho \frac{\partial v_3}{\partial t} + \frac{v_1 \delta_l v_3}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{\rho \delta_l v_3}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{\rho v_1 \delta_l}{\delta_t} \frac{\partial v_3}{\partial x_1} + \frac{\delta_l v_3 v_2}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{\rho \delta_l v_3}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{\rho \delta_l v_2}{\delta_t} \frac{\partial v_3}{\partial x_2} + (v_3^2 + cs^2) \frac{\delta_l}{\delta_t} \frac{\partial \rho}{\partial x_3} +$

$\frac{2 \rho \delta_l v_3}{\delta_t} \frac{\partial v_3}{\partial x_3} + (-2 + \omega_6) \frac{\delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial \rho}{\partial x_1} \frac{\partial v_3}{\partial x_1} + (-2 + \omega_6) \frac{\delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial \rho}{\partial x_1} \frac{\partial v_1}{\partial x_3} + (-2 + \omega_7) \frac{\delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial \rho}{\partial x_2} \frac{\partial v_3}{\partial x_2} + (-2 + \omega_7) \frac{\delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial \rho}{\partial x_2} \frac{\partial v_2}{\partial x_3}$

$+ (-2 + \omega_{11} - 2\omega_{11} cs^2 + 6v_3^2 + 4cs^2 - 3\omega_{11} v_3^2) \frac{\delta_l^2}{\omega_{11} \delta_t} \frac{\partial \rho}{\partial x_3} \frac{\partial v_3}{\partial x_3} + (2 - \omega_{11}) \frac{3\rho \delta_l^2 v_3}{\omega_{11} \delta_t} \left(\frac{\partial v_3}{\partial x_3}\right)^2 + (-2 + \omega_6) \frac{\rho \delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial^2 v_3}{\partial x_1^2} +$

$(-2 + \omega_7) \frac{\rho \delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial^2 v_3}{\partial x_2^2} + (-2 + \omega_6) \frac{\rho \delta_l^2 cs^2}{2\omega_6 \delta_t} \frac{\partial^2 v_1}{\partial x_1 \partial x_3} + (-2 + \omega_7) \frac{\rho \delta_l^2 cs^2}{2\delta_t \omega_7} \frac{\partial^2 v_2}{\partial x_2 \partial x_3} +$

$(-2 + \omega_{11} - 3\omega_{11} cs^2 + 2v_3^2 + 6cs^2 - \omega_{11} v_3^2) \frac{\delta_l^2 v_3}{2\omega_{11} \delta_t} \frac{\partial^2 \rho}{\partial x_3^2} + (-2 + \omega_{11} - \omega_{11} cs^2 + 6v_3^2 + 2cs^2 - 3\omega_{11} v_3^2) \frac{\rho \delta_l^2}{2\omega_{11} \delta_t} \frac{\partial^2 v_3}{\partial x_3^2} +$

$C_1 \frac{v_1 \delta_l^3 v_3}{12\omega_9 \omega_6 \delta_t \omega_{13}} \frac{\partial^3 \rho}{\partial x_1^3} + C_2 \frac{\rho \delta_l^3 v_3}{12\omega_9 \omega_6 \delta_t \omega_{13}} \frac{\partial^3 v_1}{\partial x_1^3} + C_3 \frac{\rho v_1 \delta_l^3}{6\omega_6^2 \delta_t \omega_{13}} \frac{\partial^3 v_3}{\partial x_1^3} +$

$(-\omega_8 \omega_5 \omega_6 \omega_7 + 6\omega_8 \omega_6 \omega_7 - 6\omega_8 \omega_6 + 6\omega_5 \omega_7 + 6\omega_5 \omega_6 - 6\omega_8 \omega_7 - 6\omega_5 \omega_6 \omega_7) \frac{\rho \delta_l^3 cs^2 v_3}{6\omega_8 \omega_5 \omega_6 \delta_t \omega_7} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} +$

$(\omega_6^2 + \omega_6 \omega_7 + \omega_8 \omega_6 \omega_7 - \omega_8 \omega_6 - \omega_8 \omega_7 - \omega_6^2 \omega_7) \frac{\rho \delta_l^3 cs^2 v_2}{\omega_8 \omega_6^2 \delta_t \omega_7} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_2} +$

$(-\omega_8 \omega_5 \omega_6 \omega_7 + 6\omega_8 \omega_6 \omega_7 - 6\omega_8 \omega_6 + 6\omega_5 \omega_7 + 6\omega_5 \omega_6 - 6\omega_8 \omega_7 - 6\omega_5 \omega_6 \omega_7) \frac{\rho \delta_l^3 cs^2 v_3}{6\omega_8 \omega_5 \omega_6 \delta_t \omega_7} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} +$

$(\omega_6 \omega_7 - \omega_6 \omega_7^2 + \omega_8 \omega_6 \omega_7 - \omega_8 \omega_6 - \omega_8 \omega_7 + \omega_7^2) \frac{\rho v_1 \delta_l^3 cs^2}{\omega_8 \omega_6 \delta_t \omega_7^2} \frac{\partial^3 v_3}{\partial x_1 \partial x_2^2} + C_4 \frac{\delta_l^3 v_3 v_2}{12\delta_t \omega_{16} \omega_{10} \omega_7} \frac{\partial^3 \rho}{\partial x_2^3} + C_5 \frac{\rho \delta_l^3 v_3}{12\delta_t \omega_{16} \omega_{10} \omega_7} \frac{\partial^3 v_2}{\partial x_2^3} +$

$C_6 \frac{\rho \delta_l^3 v_2}{6\delta_t \omega_{16} \omega_7^2} \frac{\partial^3 v_3}{\partial x_2^3} + (-12 - \omega_6^2 + 12\omega_6) \frac{\delta_l^3 cs^4}{6\omega_6^2 \delta_t} \frac{\partial^3 \rho}{\partial x_1^2 \partial x_3} + (-\omega_6^2 + \omega_6 \omega_{13} + 2\omega_6 - 2\omega_{13}) \frac{\rho v_1 \delta_l^3 cs^2}{\omega_6^2 \delta_t \omega_{13}} \frac{\partial^3 v_1}{\partial x_1^2 \partial x_3} +$

$(-12\omega_{11} \omega_{18} - 12\omega_{18} \omega_6 + 12\omega_6^2 + 12\omega_{11} \omega_{18} \omega_6 - \omega_{11} \omega_{18} \omega_6^2 - 12\omega_{11} \omega_6^2 + 12\omega_{11} \omega_6) \frac{\rho \delta_l^3 cs^2 v_3}{6\omega_{11} \omega_{18} \omega_6^2 \delta_t} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} +$

$(\omega_6^2 + \omega_6 \omega_7 + \omega_8 \omega_6 \omega_7 - \omega_8 \omega_6 - \omega_8 \omega_7 - \omega_6^2 \omega_7) \frac{\rho \delta_l^3 cs^2 v_2}{\omega_8 \omega_6^2 \delta_t \omega_7} \frac{\partial^3 v_1}{\partial x_1 \partial x_2 \partial x_3} +$

$(\omega_6 \omega_7 - \omega_6 \omega_7^2 + \omega_8 \omega_6 \omega_7 - \omega_8 \omega_6 - \omega_8 \omega_7 + \omega_7^2) \frac{\rho v_1 \delta_l^3 cs^2}{\omega_8 \omega_6 \delta_t \omega_7^2} \frac{\partial^3 v_2}{\partial x_1 \partial x_2 \partial x_3} + (-12 + 12\omega_7 - \omega_7^2) \frac{\delta_l^3 cs^4}{6\delta_t \omega_7^2} \frac{\partial^3 \rho}{\partial x_2^2 \partial x_3} +$

$(\omega_{16} \omega_7 - 2\omega_{16} + 2\omega_7 - \omega_7^2) \frac{\rho \delta_l^3 cs^2 v_2}{\delta_t \omega_{16} \omega_7^2} \frac{\partial^3 v_2}{\partial x_2^2 \partial x_3} +$

$(12\omega_{11} \omega_7 - 12\omega_{11} \omega_7^2 + 12\omega_{11} \omega_{19} \omega_7 - 12\omega_{11} \omega_{19} - 12\omega_{19} \omega_7 - \omega_{11} \omega_{19} \omega_7^2 + 12\omega_7^2) \frac{\rho \delta_l^3 cs^2 v_3}{6\omega_{11} \omega_{19} \delta_t \omega_7^2} \frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} +$

$C_7 \frac{v_1 \delta_l^3 v_3}{\omega_{11}^2 \omega_{18} \omega_6 \delta_t} \frac{\partial^3 \rho}{\partial x_1 \partial x_3^2} + C_8 \frac{\rho \delta_l^3 v_3}{12\omega_{11}^2 \omega_{18} \omega_6^2 \delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} + C_9 \frac{\rho v_1 \delta_l^3}{\omega_{11}^2 \omega_{18} \omega_6 \delta_t} \frac{\partial^3 v_3}{\partial x_1 \partial x_3^2} + C_{10} \frac{\delta_l^3 v_3 v_2}{\omega_{11}^2 \omega_{19} \delta_t \omega_7} \frac{\partial^3 \rho}{\partial x_2 \partial x_3^2} +$

$C_{11} \frac{\rho \delta_l^3 v_3}{12\omega_{11}^2 \omega_{19} \delta_t \omega_7^2} \frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} + C_{12} \frac{\rho \delta_l^3 v_2}{\omega_{11}^2 \omega_{19} \delta_t \omega_7} \frac{\partial^3 v_3}{\partial x_2 \partial x_3^2} + C_{13} \frac{\delta_l^3}{12\omega_{11}^2 \delta_t} \frac{\partial^3 \rho}{\partial x_3^3} +$

$(-24 - 4\omega_{11}^2 + 11\omega_{11}^2 v_3^2 + 24\omega_{11} - 36\omega_{11} cs^2 + 60v_3^2 + 5\omega_{11}^2 cs^2 + 36cs^2 - 60\omega_{11} v_3^2) \frac{\rho \delta_l^3 v_3}{6\omega_{11}^2 \delta_t} \frac{\partial^3 v_3}{\partial x_3^3} +$

$C_{14} \frac{\delta_l^4 v_3}{24\omega_9 \omega_6^2 \delta_t \omega_{13}^2} \frac{\partial^4 \rho}{\partial x_1^4} + C_{15} \frac{\rho v_1 \delta_l^4 v_3}{12\omega_9 \omega_6^2 \delta_t \omega_{13}} \frac{\partial^4 v_1}{\partial x_1^4} + C_{16} \frac{\rho \delta_l^4}{24\omega_6^3 \delta_t \omega_{13}^2} \frac{\partial^4 v_3}{\partial x_1^4} + C_{17} \frac{v_1 \delta_l^4 v_3 v_2}{4\omega_{14} \omega_8 \omega_5 \omega_9^2 \omega_{12} \omega_6^2 \delta_t \omega_{13}^2 \omega_7} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} +$

$C_{18} \frac{\rho \delta_l^4 v_3 v_2}{4\omega_{14} \omega_8 \omega_5 \omega_9^2 \omega_{12} \omega_6^2 \delta_t \omega_{13}^2 \omega_7} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + C_{19} \frac{\rho v_1 \delta_l^4 v_3}{12\omega_{14} \omega_8^2 \omega_5 \omega_9^2 \omega_6^2 \delta_t \omega_{13}^2 \omega_7} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + C_{20} \frac{\rho v_1 \delta_l^4 v_2}{14\omega_{14} \omega_8 \omega_6^3 \delta_t \omega_{13}^2 \omega_7^2} \frac{\partial^4 v_3}{\partial x_1^3 \partial x_2} +$

$C_{21} \frac{\delta_l^4 cs^4 v_3}{6\omega_8 \omega_5^2 \omega_6^2 \delta_t \omega_7^2} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} + C_{22} \frac{\rho v_1 \delta_l^4 cs^2 v_3}{2\omega_{14} \omega_8^2 \omega_5 \omega_9 \omega_{12} \omega_6^2 \delta_t \omega_{13} \omega_7^2} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + C_{23} \frac{\rho \delta_l^4 cs^2 v_3 v_2}{2\omega_{17} \omega_8^2 \omega_5 \omega_{15} \omega_6^2 \delta_t \omega_{16} \omega_{10} \omega_7^2} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} +$

$C_{24} \frac{\rho \delta_l^4 cs^2}{2\omega_{17} \omega_{14} \omega_8^2 \omega_6^3 \delta_t \omega_{16} \omega_{13} \omega_7^3} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2^2} + C_{25} \frac{v_1 \delta_l^4 v_3 v_2}{4\omega_{17} \omega_8 \omega_5 \omega_{15} \omega_6 \delta_t \omega_{16}^2 \omega_{10}^2 \omega_7^2} \frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} + C_{26} \frac{\rho \delta_l^4 v_3 v_2}{12\omega_{17} \omega_8^2 \omega_5 \omega_{15} \omega_6^2 \delta_t \omega_{16}^2 \omega_{10}^2 \omega_7^2} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$

$C_{27} \frac{\rho v_1 \delta_l^4 v_3}{4\omega_{17} \omega_8 \omega_5 \omega_{15} \omega_6 \delta_t \omega_{16}^2 \omega_{10}^2 \omega_7^2} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} + C_{28} \frac{\rho v_1 \delta_l^4 v_2}{2\omega_{17} \omega_8^2 \omega_6^2 \delta_t \omega_{16} \omega_{16}^2 \omega_7^3} \frac{\partial^4 v_3}{\partial x_1 \partial x_2^3} + C_{29} \frac{\delta_l^4 v_3}{24\delta_t \omega_{16}^2 \omega_{10}^2 \omega_7^2} \frac{\partial^4 \rho}{\partial x_2^4} + C_{30} \frac{\rho \delta_l^4 v_3 v_2}{12\delta_t \omega_{16}^2 \omega_{10}^2 \omega_7^2} \frac{\partial^4 v_2}{\partial x_2^4} +$

$C_{31} \frac{\rho \delta_l^4}{24\delta_t \omega_{16}^2 \omega_7^3} \frac{\partial^4 v_3}{\partial x_2^4} + C_{32} \frac{v_1 \delta_l^4}{12\omega_{11} \omega_{18} \omega_9 \omega_6^3 \omega_{22} \delta_t \omega_{13}^2} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_3} + C_{33} \frac{\rho \delta_l^4}{12\omega_{11} \omega_{18} \omega_9 \omega_6^3 \omega_{22} \delta_t \omega_{13}^2} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} +$

$C_{34} \frac{\rho v_1 \delta_l^4 v_3}{12\omega_{11}^2 \omega_{18}^2 \omega_9 \omega_6^3 \omega_{22} \delta_t \omega_{13}^2} \frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} + C_{35} \frac{\delta_l^4}{2\omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \delta_t \omega_{13} \omega_7^2} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} +$

$C_{36} \frac{\rho \delta_l^4}{2\omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \delta_t \omega_{13}^2 \omega_7} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2 \partial x_3} + C_{37} \frac{\rho \delta_l^4}{12\omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \delta_t \omega_{13} \omega_7^3} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} +$

$C_{38} \frac{\rho \delta_l^4 v_3}{2\omega_{20} \omega_{11}^2 \omega_{14} \omega_8^2 \omega_5 \omega_{18}^2 \omega_6^3 \omega_{22} \omega_{19} \delta_t \omega_{13} \omega_7^2} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + C_{39} \frac{\delta_l^4}{2\omega_{20} \omega_{17} \omega_{11} \omega_8^2 \omega_{18} \omega_6^2 \omega_{19} \delta_t \omega_{16} \omega_7^3 \omega_{23}} \frac{\partial^4 \rho}{\partial x_1 \partial x_2^2 \partial x_3} +$

$C_{40} \frac{\rho \delta_l^4}{12\omega_{20} \omega_{17} \omega_{11} \omega_8^2 \omega_5 \omega_{18} \omega_6^3 \omega_{19} \delta_t \omega_{16} \omega_7^3 \omega_{23}} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} + C_{41} \frac{\rho \delta_l^4 v_2}{\omega_{20} \omega_{17} \omega_{11} \omega_8^2 \omega_{18} \omega_6^3 \omega_{19} \delta_t \omega_{16} \omega_7^3 \omega_{23}} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^2 \partial x_3} +$

$C_{42} \frac{\rho \delta_l^4 v_3}{2\omega_{20} \omega_{17} \omega_{11}^2 \omega_8^2 \omega_5 \omega_{18} \omega_6^2 \omega_{19}^2 \delta_t \omega_{16} \omega_7^3 \omega_{23}} \frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} + C_{43} \frac{\delta_l^4 v_2}{12\omega_{11} \omega_{19} \delta_t \omega_{16}^2 \omega_{10}^2 \omega_7^3 \omega_{23}} \frac{\partial^4 \rho}{\partial x_2^2 \partial x_3} +$

$C_{44}\dfrac{\rho\delta_l^4}{12\omega_{11}\omega_{19}\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}}\dfrac{\partial^4 v_2}{\partial x_2^3\partial x_3}$ + $C_{45}\dfrac{\rho\delta_l^4 v_3 v_2}{12\omega_{11}^2\omega_{19}^2\delta_t\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}}\dfrac{\partial^4 v_3}{\partial x_2^3\partial x_3}$ + $C_{46}\dfrac{\delta_l^4 v_3}{12\omega_{11}^3\omega_{18}^2\omega_6^3\omega_{22}\delta_t\omega_{13}}\dfrac{\partial^4\rho}{\partial x_1^2\partial x_3^2}$ +

$C_{47}\dfrac{\rho v_1\delta_l^4 v_3}{2\omega_{11}^3\omega_{18}^2\omega_9\omega_6^3\omega_{22}\delta_t\omega_{13}^2}\dfrac{\partial^4 v_1}{\partial x_1^2\partial x_3^2}$ + $C_{48}\dfrac{\rho\delta_l^4}{12\omega_{11}^3\omega_{18}^2\omega_6^3\omega_{22}\delta_t\omega_{13}}\dfrac{\partial^4 v_3}{\partial x_1^2\partial x_3^2}$ + $C_{49}\dfrac{v_1\delta_l^4 v_3 v_2}{\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}^2\delta_t\omega_7^2}\dfrac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2}$ +

$C_{50}\dfrac{\rho\delta_l^4 v_3 v_2}{2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\delta_t\omega_7^2}\dfrac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2}$ + $C_{51}\dfrac{\rho v_1\delta_l^4 v_3}{2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}^2\delta_t\omega_7^3}\dfrac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2}$ +

$C_{52}\dfrac{\rho v_1\delta_l^4 v_2}{\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}^2\delta_t\omega_7^2}\dfrac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2}$ + $C_{53}\dfrac{\delta_l^4 v_3}{12\omega_{11}^3\omega_{19}^2\delta_t\omega_{16}\omega_7^3\omega_{23}}\dfrac{\partial^4\rho}{\partial x_2^2\partial x_3^2}$ + $C_{54}\dfrac{\rho\delta_l^4 v_3 v_2}{2\omega_{11}^3\omega_{19}^2\delta_t\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}}\dfrac{\partial^4 v_2}{\partial x_2^2\partial x_3^2}$ +

$C_{55}\dfrac{\rho\delta_l^4}{12\omega_{11}^3\omega_{19}^2\delta_t\omega_{16}\omega_7^3\omega_{23}}\dfrac{\partial^4 v_3}{\partial x_2^2\partial x_3^2}$ + $C_{56}\dfrac{v_1\delta_l^4}{4\omega_{11}^3\omega_{18}^2\omega_6^2\delta_t}\dfrac{\partial^4\rho}{\partial x_1\partial x_3^3}$ + $C_{57}\dfrac{\rho\delta_l^4}{12\omega_{11}^3\omega_{18}^2\omega_6^3\delta_t}\dfrac{\partial^4 v_1}{\partial x_1\partial x_3^3}$ + $C_{58}\dfrac{\rho v_1\delta_l^4 v_3}{4\omega_{11}^3\omega_{18}^2\omega_6^2\delta_t}\dfrac{\partial^4 v_3}{\partial x_1\partial x_3^3}$ +

$C_{59}\dfrac{\delta_l^4 v_2}{4\omega_{11}^3\omega_{19}^2\delta_t\omega_7^2}\dfrac{\partial^4\rho}{\partial x_2\partial x_3^3}$ + $C_{60}\dfrac{\rho\delta_l^4}{12\omega_{11}^3\omega_{19}^2\delta_t\omega_7^3}\dfrac{\partial^4 v_2}{\partial x_2\partial x_3^3}$ + $C_{61}\dfrac{\rho\delta_l^4 v_3 v_2}{4\omega_{11}^3\omega_{19}^2\delta_t\omega_7^2}\dfrac{\partial^4 v_3}{\partial x_2\partial x_3^3}$ + $C_{62}\dfrac{\delta_l^4 v_3}{12\omega_{11}^3\delta_t}\dfrac{\partial^4\rho}{\partial x_3^4}$ + $C_{63}\dfrac{\rho\delta_l^4}{12\omega_{11}^3\delta_t}\dfrac{\partial^4 v_3}{\partial x_3^4}$

$= 0,$

where:

$C_1 = 3cs^2\omega_9\omega_6\omega_{13} + 36cs^2\omega_{13} + 6\omega_6\omega_{13} - \omega_9\omega_6\omega_{13} - 6\omega_9\omega_6 - 36cs^2\omega_9 + 12\omega_9 - 6v_1^2\omega_6\omega_{13} + 12v_1^2\omega_{13} + 6v_1^2\omega_9\omega_6 + 18cs^2\omega_9\omega_6 + v_1^2\omega_9\omega_6\omega_{13} - 12v_1^2\omega_9 - 12\omega_{13} - 18cs^2\omega_6\omega_{13}$

$C_2 = cs^2\omega_9\omega_6\omega_{13} + 12cs^2\omega_{13} + 6\omega_6\omega_{13} - \omega_9\omega_6\omega_{13} - 6\omega_9\omega_6 - 12cs^2\omega_9 + 12\omega_9 - 18v_1^2\omega_6\omega_{13} + 36v_1^2\omega_{13} + 18v_1^2\omega_9\omega_6 + 6cs^2\omega_9\omega_6 + 3v_1^2\omega_9\omega_6\omega_{13} - 36v_1^2\omega_9 - 12\omega_{13} - 6cs^2\omega_6\omega_{13}$

$C_3 = -3cs^2\omega_6^2\omega_{13} - 6v_1^2\omega_6 - 3\omega_6^2 - 12cs^2\omega_{13} - 3\omega_6\omega_{13} - v_1^2\omega_6^2\omega_{13} + 3v_1^2\omega_6^2 + 3v_1^2\omega_6\omega_{13} + 6\omega_6 + \omega_6^2\omega_{13} - 6cs^2\omega_6 + 3cs^2\omega_6^2 + 15cs^2\omega_6\omega_{13}$

$C_4 = 6v_2^2\omega_{10}\omega_7 - 36cs^2\omega_{10} + 36cs^2\omega_{16} + v_2^2\omega_{16}\omega_{10}\omega_7 - 6v_2^2\omega_{16}\omega_7 - 6\omega_{10}\omega_7 + 6\omega_{16}\omega_7 + 12v_2^2\omega_{16} - 12v_2^2\omega_{10} - \omega_{16}\omega_{10}\omega_7 - 12\omega_{16} - 18cs^2\omega_{16}\omega_7 + 12\omega_{10} + 3cs^2\omega_{16}\omega_{10}\omega_7 + 18cs^2\omega_{10}\omega_7$

$C_5 = 18v_2^2\omega_{10}\omega_7 - 12cs^2\omega_{10} + 12cs^2\omega_{16} + 3v_2^2\omega_{16}\omega_{10}\omega_7 - 18v_2^2\omega_{16}\omega_7 - 6\omega_{10}\omega_7 + 6\omega_{16}\omega_7 + 36v_2^2\omega_{16} - 36v_2^2\omega_{10} - \omega_{16}\omega_{10}\omega_7 - 12\omega_{16} - 6cs^2\omega_{16}\omega_7 + 12\omega_{10} + cs^2\omega_{16}\omega_{10}\omega_7 + 6cs^2\omega_{10}\omega_7$

$C_6 = \omega_{16}\omega_7^2 - 12cs^2\omega_{16} + 3v_2^2\omega_{16}\omega_7 + 3cs^2\omega_7^2 - 6v_2^2\omega_7 - v_2^2\omega_{16}\omega_7^2 + 3v_2^2\omega_7^2 - 6cs^2\omega_7 - 3\omega_{16}\omega_7 - 3cs^2\omega_{16}\omega_7^2 + 15cs^2\omega_{16}\omega_7 + 6\omega_7 - 3\omega_7^2$

$C_7 = \omega_{11}^2 - \omega_{11}^2\omega_6 + \omega_{18}\omega_6 v_3^2 - \omega_{11}\omega_{18} + \omega_{11}\omega_{18}v_3^2 - \omega_{18}\omega_6 - \omega_{11}^2 v_3^2 + \omega_{11}\omega_{18}\omega_6 + \omega_{11}^2\omega_6 v_3^2 - \omega_{11}\omega_{18}\omega_6 v_3^2 - 3\omega_{11}\omega_{18}cs^2\omega_6 + 3\omega_{11}^2 cs^2\omega_6 + 3\omega_{18}cs^2\omega_6 - 3\omega_{11}cs^2\omega_6 + 3\omega_{11}\omega_{18}cs^2 - 3\omega_{11}^2 cs^2 - \omega_{11}\omega_6 v_3^2 + \omega_{11}\omega_6$

$C_8 = 12\omega_{11}^2\omega_6 + 36\omega_{18}cs^2\omega_6^2 + 12\omega_{11}^2 cs^2\omega_6^2 - 12\omega_{11}^2\omega_6 v_3^2 - 18\omega_{11}\omega_{18}cs^2\omega_6^2 - 12\omega_{11}\omega_6^2 v_3^2 - 3\omega_{11}^2\omega_{18}\omega_6^2 v_3^2 - 24\omega_{11}\omega_{18}cs^2\omega_6 - 24\omega_{11}^2\omega_{18}cs^2 - 12\omega_{11}^2 cs^2\omega_6 + 6\omega_{11}\omega_{18}\omega_6^2 - 12\omega_{11}^2\omega_6^2 - 12\omega_{18}\omega_6^2 + 12\omega_{11}\omega_6^2 + 3\omega_{11}^2\omega_{18}\omega_6^2 + 6\omega_{11}^2\omega_{18}\omega_6 v_3^2 - 11\omega_{11}^2\omega_{18}cs^2\omega_6^2 - 6\omega_{11}\omega_{18}\omega_6^2 v_3^2 + 42\omega_{11}^2\omega_{18}cs^2\omega_6 - 6\omega_{11}^2\omega_{18}\omega_6 - 12\omega_{11}cs^2\omega_6^2 + 12\omega_{18}\omega_6^2 v_3^2 + 12\omega_{11}^2\omega_6^2 v_3^2$

$C_9 = \omega_{11}^2 - \omega_{11}^2\omega_6 + 3\omega_{18}\omega_6 v_3^2 - \omega_{11}\omega_{18} + 3\omega_{11}\omega_{18}v_3^2 - \omega_{18}\omega_6 - 3\omega_{11}^2 v_3^2 + \omega_{11}\omega_{18}\omega_6 + 3\omega_{11}^2\omega_6 v_3^2 - 3\omega_{11}\omega_{18}\omega_6 v_3^2 - \omega_{11}\omega_{18}cs^2\omega_6 + \omega_{11}^2 cs^2\omega_6 + \omega_{18}cs^2\omega_6 - \omega_{11}cs^2\omega_6 + \omega_{11}\omega_{18}cs^2 - \omega_{11}^2 cs^2 - 3\omega_{11}\omega_6 v_3^2 + \omega_{11}\omega_6$

$C_{10} = \omega_{11}^2 + \omega_{11}\omega_7 - \omega_{11}v_3^2\omega_7 + 3cs^2\omega_{19}\omega_7 - \omega_{11}^2 v_3^2 - 3\omega_{11}cs^2\omega_{19}\omega_7 - 3\omega_{11}cs^2\omega_7 + 3\omega_{11}^2 cs^2\omega_7 + v_3^2\omega_{19}\omega_7 + \omega_{11}v_3^2\omega_{19} + \omega_{11}\omega_{19}\omega_7 - \omega_{11}\omega_{19} - \omega_{11}v_3^2\omega_{19}\omega_7 - \omega_{19}\omega_7 - 3\omega_{11}^2 cs^2 + \omega_{11}^2 v_3^2\omega_7 - \omega_{11}^2\omega_7 + 3\omega_{11}cs^2\omega_{19}$

$C_{11} = 3\omega_{11}^2\omega_{19}\omega_7^2 - 24\omega_{11}^2 cs^2\omega_{19} + 6\omega_{11}^2 v_3^2\omega_{19}\omega_7 - 24\omega_{11}cs^2\omega_{19}\omega_7 - 12\omega_{11}cs^2\omega_7^2 - 3\omega_{11}^2 v_3^2\omega_{19}\omega_7^2 - 18\omega_{11}cs^2\omega_{19}\omega_7^2 + 36cs^2\omega_{19}\omega_7^2 - 6\omega_{11}^2\omega_{19}\omega_7 + 12\omega_{11}\omega_7^2 - 12\omega_{11}v_3^2\omega_7^2 - 12\omega_{11}^2 cs^2\omega_7 - 12\omega_{11}^2\omega_7 + 42\omega_{11}^2 cs^2\omega_{19}\omega_7 + 12\omega_{11}^2 v_3^2\omega_7^2 - 12\omega_{19}\omega_7^2 - 12\omega_{11}^2 v_3^2\omega_7 + 6\omega_{11}\omega_{19}\omega_7^2 - 11\omega_{11}^2 cs^2\omega_{19}\omega_7^2 - 6\omega_{11}v_3^2\omega_{19}\omega_7^2 + 12\omega_{11}^2\omega_7 + 12v_3^2\omega_{19}\omega_7^2 + 12\omega_{11}^2 cs^2\omega_7^2$

$C_{12} = \omega_{11}^2 + \omega_{11}\omega_7 - 3\omega_{11}v_3^2\omega_7 + cs^2\omega_{19}\omega_7 - 3\omega_{11}^2 v_3^2 - \omega_{11}cs^2\omega_{19}\omega_7 - \omega_{11}cs^2\omega_7 + \omega_{11}^2 cs^2\omega_7 + 3v_3^2\omega_{19}\omega_7 + 3\omega_{11}v_3^2\omega_{19} + \omega_{11}\omega_{19}\omega_7 - \omega_{11}\omega_{19} - 3\omega_{11}v_3^2\omega_{19}\omega_7 - \omega_{19}\omega_7 - \omega_{11}^2 cs^2 + 3\omega_{11}^2 v_3^2\omega_7 - \omega_{11}^2\omega_7 + \omega_{11}cs^2\omega_{19}$

$C_{13} = 12cs^4 - 7\omega_{11}^2 v_3^2 - 36\omega_{11}v_3^4 + 12\omega_{11}cs^2 + \omega_{11}^2 cs^4 + 24\omega_{11}^2 cs^2 v_3^2 - 36v_3^2 - 12\omega_{11}cs^4 + 36v_3^4 + 144cs^2 v_3^2 - \omega_{11}^2 cs^2 - 144\omega_{11}cs^2 v_3^2 + 7\omega_{11}^2 v_3^4 - 12cs^2 + 36\omega_{11}v_3^2$

$C_{14} = -96v_1^2\omega_9^2\omega_6\omega_{13} + 288v_1^2 cs^2\omega_6\omega_{13}^2 + 48v_1^4\omega_9\omega_{13}^2 - 24v_1^4\omega_9^2\omega_6 + 14cs^4\omega_9\omega_6^2\omega_{13}^2 + 12cs^4\omega_9^2\omega_6^2 - 3v_1^4\omega_9\omega_6^2\omega_{13}^2 - 126v_1^2 cs^2\omega_9^2\omega_6^2\omega_{13} + 36v_1^2\omega_6^2\omega_{13}^2 - 24cs^2\omega_9\omega_{13}^2 + 24cs^2\omega_9^2\omega_6 - 216v_1^2 cs^2\omega_9^2\omega_{13} - 24v_1^2\omega_9\omega_6^2\omega_{13} - 96v_1^4\omega_9\omega_6\omega_{13} - 12cs^4\omega_6^2\omega_{13}^2 - 144v_1^2 cs^2\omega_9\omega_6\omega_{13} + 12cs^2\omega_9^2\omega_6^2\omega_{13} - 12v_1^2\omega_9^2\omega_6^2 - 48v_1^4\omega_9\omega_6\omega_{13} - 432v_1^2 cs^2\omega_9\omega_6\omega_{13}^2 + cs^2\omega_9^2\omega_6^2\omega_{13}^2 + 24v_1^2\omega_9^2\omega_6 - 48v_1^2\omega_9\omega_{13}^2 - 12cs^2\omega_9^2\omega_6^2 + 48cs^4\omega_9\omega_6\omega_{13} - 36v_1^4\omega_6^2\omega_{13}^2 - 36v_1^4\omega_9\omega_6\omega_{13} + 48cs^2\omega_9\omega_6\omega_{13}^2 - 24cs^4\omega_9^2\omega_6 + 24cs^4\omega_9\omega_6^2 - 30v_1^4\omega_9^2\omega_6^2\omega_{13} - 12v_1^2 cs^2\omega_9^2\omega_6^2\omega_{13} + 12cs^2\omega_6^2\omega_{13} + 12v_1^4\omega_9^2\omega_6 - 14cs^4\omega_9\omega_6^2\omega_{13} + 96v_1^4\omega_9\omega_6\omega_{13}^2 + 3v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 24cs^2\omega_6\omega_{13}^2 - 48v_1^4\omega_9\omega_{13} + 150v_1^2 cs^2\omega_9\omega_6^2\omega_{13} + 24v_1^4\omega_9\omega_6^2\omega_{13} - 12cs^4\omega_9\omega_6^2\omega_{13} + 216v_1^2 cs^2\omega_9\omega_{13}^2 - 144v_1^2 cs^2\omega_9^2\omega_6 + 24cs^2\omega_9^3\omega_{13} + 96v_1^2\omega_9\omega_6\omega_{13}^2 + 72v_1^4\omega_6\omega_{13}^2 + 72v_1^2 cs^2\omega_9^2\omega_6^2 - cs^4\omega_9^2\omega_6^2\omega_{13}^2 + 48v_1^2\omega_9\omega_6\omega_{13} + 24cs^4\omega_6\omega_{13}^2 + 72v_1^2 cs^2\omega_9\omega_6^2\omega_{13} + 36v_1^4\omega_9\omega_6^2\omega_{13} + 48v_1^2\omega_9\omega_{13} - 48cs^2\omega_9^2\omega_6\omega_{13} - 144v_1^2 cs^2\omega_6^2\omega_{13} + 30v_1^4\omega_9^2\omega_6^2\omega_{13} - 48cs^4\omega_9\omega_6\omega_{13} - 24cs^4\omega_9^2\omega_{13} - 72v_1^2\omega_6\omega_{13} + 432v_1^2 cs^2\omega_9^2\omega_6\omega_{13}$

$C_{15} = 2\omega_9^2\omega_6^2\omega_{13}^2 + 168v_1^2\omega_9^2\omega_6\omega_{13} + 36\omega_6^2\omega_{13} - 24cs^2\omega_9\omega_6\omega_{13} - 60v_1^2\omega_6^2\omega_{13} + 60cs^2\omega_9\omega_{13}^2 - 48cs^2\omega_9^2\omega_6 + 72\omega_9\omega_6\omega_{13}^2 + 36v_1^2\omega_9\omega_6^2\omega_{13} - 48\omega_6\omega_{13}^2 - 33cs^2\omega_9^2\omega_6\omega_{13} + 24v_1^2\omega_9^2\omega_6 - 3cs^2\omega_9^2\omega_6^2\omega_{13} - 48v_1^2\omega_9^2\omega_6 + 84v_1^2\omega_9\omega_{13}^2 + 24cs^2\omega_9^2\omega_6 + 24\omega_9\omega_6\omega_{13} + 61v_1^2\omega_9\omega_6^2\omega_{13} - 120cs^2\omega_9\omega_6\omega_{13}^2 +$

$$21\omega_9^2\omega_6^2\omega_{13} - 36cs^2\omega_6^2\omega_{13}^2 - 36\omega_9\omega_{13}^2 + 24\omega_9^2\omega_6 + 39cs^2\omega_9\omega_6^2\omega_{13}^2 - 5v_1^2\omega_9\omega_6^2\omega_{13}^2 + 72cs^2\omega_6\omega_{13}^2 - 72\omega_9^2\omega_6\omega_{13} - 60cs^2\omega_9^2\omega_{13} - 168v_1^2\omega_9\omega_6\omega_{13}^2 - 12\omega_9\omega_6^2\omega_{13} - 72v_1^2\omega_9\omega_6\omega_{13} - 25\omega_9\omega_6^2\omega_{13} + 24\omega_6^2\omega_{13} - 84v_1^2\omega_9^2\omega_{13} + 120cs^2\omega_9^2\omega_6\omega_{13} - 51v_1^2\omega_9^2\omega_6^2\omega_{13} + 12cs^2\omega_9\omega_6^2\omega_{13} - 12\omega_9^2\omega_6^2 + 120v_1^2\omega_6\omega_{13}^2$$

$C_{16} = 24cs^2\omega_6^2\omega_{13} + 3v_1^4\omega_6^3\omega_{13}^2 + 156v_1^2cs^2\omega_6\omega_{13}^2 - 24v_1^2cs^2\omega_6^2 + 24v_1^2\omega_6^2\omega_{13}^2 + 6cs^4\omega_6^3\omega_{13} + cs^2\omega_6^3\omega_{13}^2 + 72v_1^4\omega_6^2\omega_{13}^2 + 12v_1^2cs^2\omega_6^3 + 18v_1^2\omega_6^3\omega_{13} + 24cs^4\omega_6^2\omega_{13}^2 - 3v_1^2\omega_6^3\omega_{13}^2 - 24cs^4\omega_6^2\omega_{13} - 12v_1^2\omega_6^3 - 6cs^2\omega_6^3\omega_{13} - 24v_1^4\omega_6^2\omega_{13} - 72v_1^2\omega_6^2\omega_{13} - 3cs^4\omega_6^3\omega_{13}^2 - 8cs^2\omega_6^2\omega_{13}^2 - 18v_1^4\omega_6^3\omega_{13} - 24v_1^2cs^2\omega_6\omega_{13} + 24v_1^2\omega_6^2 + 48v_1^2\omega_6\omega_{13} + 48v_1^2cs^2\omega_6^2\omega_{13} - 96v_1^2cs^2\omega_{13}^2 + 12cs^2\omega_6\omega_{13}^2 + 24cs^4\omega_6\omega_{13} + 6v_1^2cs^2\omega_6^3\omega_{13}^2 + 24v_1^4\omega_6\omega_{13}^2 - 12v_1^2cs^2\omega_6^3\omega_{13} - 48v_1^4\omega_6\omega_{13} - 48cs^4\omega_6\omega_{13}^2 - 24v_1^4\omega_6^2 - 72v_1^2cs^2\omega_6^2\omega_{13} - 24cs^2\omega_6\omega_{13} + 12v_1^4\omega_6^3 - 24v_1^2\omega_6\omega_{13}^2 + 24cs^4\omega_{13}^2$

$C_{17} = -12\omega_{14}\omega_8cs^2\omega_9^2\omega_6^2\omega_{13}^2 - 4\omega_{14}\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 4\omega_8v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 + 4\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 - 12\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 2\omega_{14}\omega_8\omega_5\omega_9\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 - 24\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 4\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2 + 4\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} + 6\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8cs^2\omega_9^3\omega_6\omega_{13}^2\omega_7 + 2\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 + 6\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_6^2\omega_{13}^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 2\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_7 + 12\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 2\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8\omega_5cs^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_6^2\omega_{13}^2\omega_7 - 6\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 + 12\omega_{14}\omega_8cs^2\omega_9\omega_{12}\omega_6^2\omega_6^2\omega_{13} - 12\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_7 - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_9^2\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_6\omega_{13}^2\omega_7 - 8\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 8\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_{13}\omega_7 + 12\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_7 + 3\omega_{14}\omega_8\omega_5\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 12\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5cs^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 6\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 8\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_{14}\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 2\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_9^2\omega_6^2\omega_{13} - 6\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 2\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 12\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 4\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 8\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_9^2\omega_6^2\omega_{13} + 12\omega_{14}\omega_8cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_7 - 12\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 3\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 24\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2 + 4\omega_{14}\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 9\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_7 + 4\omega_{14}\omega_8v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8v_1^2\omega_9^2\omega_6^2\omega_{13} - 4\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_6\omega_{13}^2\omega_7 + 4\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_6\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8cs^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6^2\omega_{13} + 6\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 2\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2 - 4\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7 + 4\omega_{14}\omega_8v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2$

$C_{18} = -4\omega_{14}\omega_8cs^2\omega_9^2\omega_6^2\omega_{13}^2 - 12\omega_{14}\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 12\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 9\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 + 12\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 6\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 - 4\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 2\omega_{14}\omega_8\omega_5\omega_9\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 - 8\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 4\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 + 4\omega_{14}\omega_8\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13} + 2\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8cs^2\omega_9^3\omega_6\omega_{13}^2\omega_7 + 2\omega_8\omega_5\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2 + 2\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_6^2\omega_{13}^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 6\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_7 + 4\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 2\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5cs^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8cs^2\omega_9\omega_{12}\omega_6^2\omega_{13} - 4\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_{13}\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_7 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_6\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 4\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_9^2\omega_6\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_6\omega_{13}^2\omega_7 - 24\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 8\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_{13}\omega_7 + 4\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_7 + 3\omega_{14}\omega_8\omega_5\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 4\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_5cs^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 24\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13} - 2\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_9^2\omega_6^2\omega_{13} - 2\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 6\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 4\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 4\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 8\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_6^2\omega_{13} + 4\omega_{14}\omega_8cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_7 - 4\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 9\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 8\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 + 6\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2 + 12\omega_{14}\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 3\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_7 + 12\omega_{14}\omega_8v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8v_1^2\omega_9^2\omega_6^2\omega_{13} - 12\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 + 4\omega_{14}\omega_8\omega_5\omega_9\omega_6\omega_{13}^2\omega_7 + 12\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8cs^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_6^2\omega_{13} + 2\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} - 6\omega_{14}\omega_8\omega_5v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7 + 12\omega_{14}\omega_8v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2$

$C_{19} = 12\omega_8\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7^2 - 6\omega_8^2\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 - 36\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 + 6\omega_8^2\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7 - 24\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_{12}\omega_{13}^2\omega_7^2 - 12\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_{13}^2\omega_7^2 - 42\omega_{14}\omega_8\omega_5^2cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_8^2\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 9\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 24\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_{14}\omega_5^2cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 54\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2\omega_{13}^2\omega_7 - 24\omega_{14}\omega_8^2cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 3\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_8^2\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_9\omega_6^2\omega_{13}^2\omega_7^2 - 6\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13} + 12\omega_{14}\omega_8\omega_9\omega_9\omega_6\omega_{13}^2\omega_7^2 - 12\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 + 36\omega_{14}\omega_8\omega_5^2cs^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 + 6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 - 18\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 18\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_{12}\omega_6^2\omega_7 - \omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 30\omega_{14}\omega_8\omega_5^2cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8\omega_5\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_{14}\omega_5^2cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 +$

$$12\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_6\omega_{13}^2\omega_7 - 9\omega_{14}\omega_8^2\omega_5^2cs^2\omega_9\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2 -$$
$$6\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_8\omega_5^2cs^2\omega_9v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_7 - 18\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$12\omega_8\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_6^2\omega_{13}^2\omega_7 + 42\omega_{14}\omega_8^2\omega_5cs^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8^2\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_7^2 - 12\omega_{14}\omega_8^2\omega_5v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7 -$$
$$6\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_6\omega_{13}^2\omega_7 - 24\omega_{14}\omega_8^2cs^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 18\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 +$$
$$6\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_7^2 - 6\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 36\omega_{14}\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_{13}^2\omega_7 +$$
$$4\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 6\omega_8^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 54\omega_{14}\omega_8\omega_5^2cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5^2\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$12\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2\omega_{13}^2\omega_7 + 6\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 - 18\omega_{14}\omega_8^2\omega_5cs^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_6^2\omega_{13}\omega_7 +$$
$$18\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + \omega_{14}\omega_8^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_6^2\omega_{13}^2\omega_7 + 9\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_6^2\omega_{13}^2\omega_7 +$$
$$12\omega_8\omega_5^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7 + 12\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 24\omega_{14}\omega_8\omega_5cs^2\omega_9^2\omega_{12}\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$36\omega_{14}\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_6\omega_7^2 + 3\omega_{14}\omega_8^2\omega_5\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_8^2\omega_5v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8\omega_5v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7 +$$
$$54\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_6\omega_{13}^2\omega_7 + 3\omega_{14}\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_8^2\omega_5v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 -$$
$$9\omega_{14}\omega_8^2\omega_5v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7 + 12\omega_8\omega_5^2cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_6^2\omega_{13}^2\omega_7 - 12\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8^2cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 +$$
$$6\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8\omega_5^2cs^2\omega_9\omega_{12}\omega_6^2\omega_{13} + 12\omega_{14}\omega_8\omega_5^2cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 +$$
$$6\omega_8^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 + 54\omega_{14}\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2 + 12\omega_{14}\omega_8^2\omega_5v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7 + 36\omega_{14}\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_{13}^2\omega_7^2 +$$
$$12\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_9\omega_{12}\omega_6^2\omega_7 - 6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 24\omega_{14}\omega_8^2cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 24\omega_{14}\omega_8\omega_5cs^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 +$$
$$12\omega_{14}\omega_8^2\omega_5^2\omega_9\omega_6\omega_{13}^2\omega_7 + 6\omega_{14}\omega_8^2\omega_5^2cs^2\omega_9\omega_6^2\omega_{13}^2\omega_7 - 6\omega_8^2\omega_5^2cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 - 6\omega_{14}\omega_8\omega_5^2v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 12\omega_{14}\omega_8^2\omega_5cs^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7$$

$C_{20} = -5\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{13}^2\omega_7^2 + \omega_{14}\omega_8^2v_1^2\omega_6^3\omega_7^2 + \omega_{14}\omega_8^2\omega_6^2\omega_{13}^2\omega_7^2 - \omega_8^2cs^2\omega_6^3\omega_{13}^2\omega_7 - 2\omega_8^2v_1^2\omega_6^2\omega_{13}^2\omega_7^2 + \omega_{14}\omega_8^2v_1^2\omega_6\omega_{13}^2\omega_7^2 - 8\omega_{14}\omega_8^2cs^2\omega_{13}^2\omega_7^2 +$
$2\omega_{14}cs^2\omega_6^2\omega_{13}^2\omega_7^2 + \omega_{14}\omega_8^2cs^2\omega_6^3\omega_{13}\omega_7 - \omega_{14}\omega_8\omega_6^3\omega_{13}^2\omega_7^2 + 2\omega_8v_1^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2cs^2\omega_6\omega_{13}^2\omega_7 + 2\omega_8^2cs^2\omega_6^2\omega_{13}^2\omega_7 -$
$\omega_{14}\omega_8^2\omega_6^3\omega_{13}\omega_7 - \omega_{14}\omega_8v_1^2\omega_6^3\omega_{13}^2\omega_7 - 11\omega_{14}\omega_8cs^2\omega_6^2\omega_{13}^2\omega_7^2 - 2\omega_8\omega_6^3\omega_{13}^2\omega_7 + \omega_8^2\omega_6^3\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2cs^2\omega_6^2\omega_7^2 + 2\omega_8cs^2\omega_6^3\omega_{13}^2\omega_7 +$
$4\omega_{14}\omega_8^2v_1^2\omega_6^2\omega_{13}^2\omega_7 - \omega_8^2v_1^2\omega_6^3\omega_{13}^2\omega_7^2 + 4\omega_{14}\omega_8cs^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8\omega_6^3\omega_{13}^2\omega_7^2 - 2\omega_{14}\omega_8^2v_1^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_8cs^2\omega_6^3\omega_{13}^2\omega_7^2 - 2\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{13} -$
$2\omega_{14}\omega_8^2v_1^2\omega_6^2\omega_7^2 - \omega_{14}\omega_8^2cs^2\omega_6^3\omega_{13}\omega_7 + \omega_{14}\omega_8\omega_6^3\omega_{13}^2\omega_7 + \omega_{14}\omega_8v_1^2\omega_6^3\omega_{13}^2\omega_7 + \omega_{14}\omega_8^2\omega_6^3\omega_{13}^2\omega_7 + \omega_{14}\omega_8^2cs^2\omega_6^3\omega_7 + 2\omega_8^2\omega_6^2\omega_{13}^2\omega_7 +$
$7\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{13}^2\omega_7 + \omega_8^2cs^2\omega_6^3\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_6^2\omega_{13}^2\omega_7 + 5\omega_{14}\omega_8cs^2\omega_6^3\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2v_1^2\omega_6^3\omega_{13}^2\omega_7 - 2\omega_8^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8cs^2\omega_6^3\omega_{13} -$
$2\omega_8v_1^2\omega_6^3\omega_{13}^2\omega_7 + \omega_{14}\omega_8\omega_6\omega_6^2\omega_{13}^2\omega_7^2 - 2\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{13}\omega_7 - \omega_8^2cs^2\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_6\omega_{13}^2\omega_7 + \omega_8^2v_1^2\omega_6^3\omega_{13}^2\omega_7 - 2\omega_{14}cs^2\omega_6^3\omega_{13}^2\omega_7^2 +$
$\omega_{14}\omega_8^2v_1^2\omega_6^2\omega_{13}^2\omega_7 + \omega_8^2\omega_6^3\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_6^2\omega_7^2 - 6\omega_{14}\omega_8^2cs^2\omega_6\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2cs^2\omega_6^2\omega_{13}^2\omega_7 + 13\omega_{14}\omega_8cs^2\omega_6\omega_{13}^2\omega_7 -$
$\omega_8^2v_1^2\omega_6^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2v_1^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_{14}cs^2\omega_6^3\omega_{13}^2\omega_7 - \omega_8^2\omega_6^3\omega_{13}^2\omega_7 - \omega_{14}\omega_8^2\omega_6^3\omega_7 + 4\omega_{14}\omega_8^2cs^2\omega_6\omega_{13}^2\omega_7 + 2\omega_8v_1^2\omega_6^3\omega_{13}^2\omega_7 -$
$4\omega_{14}\omega_8^2\omega_6^2\omega_{13}^2\omega_7 - \omega_{14}\omega_8v_1^2\omega_6^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2v_1^2\omega_6\omega_{13}^2\omega_7 - 2\omega_8^2\omega_6^2\omega_{13}^2\omega_7 - 7\omega_{14}\omega_8cs^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8^2v_1^2\omega_6^2\omega_{13}^2\omega_7 + 2\omega_8cs^2\omega_6^2\omega_{13}^2\omega_7^2 +$
$\omega_{14}\omega_8^2v_1^2\omega_6^3\omega_{13}\omega_7 + 6\omega_{14}\omega_8cs^2\omega_6\omega_{13}^2\omega_7^2$

$C_{21} = -14\omega_8^2\omega_5\omega_6^2\omega_7^2 + 12\omega_8^2\omega_6^2\omega_7^2 - 24\omega_8^2\omega_5\omega_6^2\omega_7 - 12\omega_8^2\omega_5\omega_6^2 + 12\omega_8\omega_5^2\omega_6^2\omega_7^2 + 12\omega_8^2\omega_6^2 + 12\omega_5^2\omega_6\omega_7^2 + 24\omega_8^2\omega_5\omega_6\omega_7 - 12\omega_8^2\omega_6^2\omega_7 +$
$12\omega_8\omega_5^2\omega_7^2 - 12\omega_8^2\omega_6^2\omega_7^2 - 12\omega_8^2\omega_5\omega_6 - 24\omega_8\omega_5^2\omega_6\omega_7 + \omega_8^2\omega_5^2\omega_6^2\omega_7^2 + 24\omega_8^2\omega_5\omega_6\omega_7^2 + 12\omega_5^2\omega_6^2\omega_7 - 12\omega_8^2\omega_6\omega_7^2$

$C_{22} = 4\omega_{14}\omega_8^2\omega_5\omega_6\omega_{13}\omega_7^2 + 4\omega_{14}\omega_8^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 - 4\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 +$
$6\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_6\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_7^2 -$
$2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13} + 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 -$
$4\omega_{14}\omega_8^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 4\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 2\omega_{14}\omega_8\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13} - 4\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6\omega_7^2 +$
$2\omega_{14}\omega_8^2\omega_5\omega_{12}\omega_6^2\omega_{13}\omega_7 - 6\omega_{14}\omega_8\omega_8\omega_5^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 2\omega_{14}\omega_8^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2\omega_{13}\omega_7 + 2\omega_8^2\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_7^2 +$
$4\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 + 4\omega_{14}\omega_8\omega_8\omega_5^2\omega_9\omega_{12}\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2\omega_5\omega_9\omega_6^2\omega_{13}\omega_7 - 4\omega_8^2\omega_5\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 -$
$2\omega_{14}\omega_8^2\omega_5\omega_6^2\omega_{13}\omega_7 + 3\omega_{14}\omega_8^2\omega_5\omega_9\omega_6\omega_{13}\omega_7^2 + 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_9\omega_{12}\omega_6\omega_7^2 + 2\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8\omega_5\omega_9\omega_6^2\omega_{13}\omega_7 -$
$3\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 - 4\omega_{14}\omega_8^2\omega_5\omega_9\omega_{12}\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8\omega_5\omega_9\omega_{12}\omega_6\omega_{13}\omega_7 - 2\omega_{14}\omega_5^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2$

$C_{23} = -2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 - 4\omega_8\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8^2\omega_5^2\omega_6^2\omega_{16}\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{10}\omega_7 +$
$2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 6\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 + 2\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10} + 2\omega_{17}\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 -$
$4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_7 - 4\omega_{17}\omega_8^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 + 4\omega_{17}\omega_8^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_7^2 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_{16}\omega_{10}\omega_7 +$
$4\omega_{17}\omega_8^2\omega_5\omega_6\omega_{16}\omega_{10}\omega_7^2 - 3\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 + 4\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10} - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6^2\omega_{10}\omega_7 +$
$4\omega_{17}\omega_8^2\omega_5^2\omega_6^2\omega_{16}\omega_7 - 2\omega_{17}\omega_8^2\omega_5^2\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8^2\omega_5^2\omega_6^2\omega_{16}\omega_{10}\omega_7 - 6\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 + 2\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{10}\omega_7^2 - 2\omega_{17}\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 2\omega_8^2\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_{16}\omega_{10}\omega_7 +$
$4\omega_{17}\omega_8^2\omega_5\omega_6^2\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8^2\omega_5\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{17}\omega_8^2\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 4\omega_{17}\omega_8^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 +$
$4\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 - 4\omega_8^2\omega_5^2\omega_{15}\omega_6^2\omega_{10}\omega_7 + 3\omega_{17}\omega_8^2\omega_5^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2 + 2\omega_{17}\omega_8\omega_5^2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7 -$
$4\omega_8\omega_5^2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2$

$C_{24} = -\omega_{17}\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{13}\omega_7^3 - 2\omega_{17}\omega_8v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 - \omega_{17}\omega_8^2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{17}\omega_{14}\omega_8cs^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 + 2\omega_{17}\omega_{14}\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^2 -$
$6\omega_{17}\omega_{14}\omega_8\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^2 + \omega_{14}\omega_8^2\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^2 + \omega_{17}\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2 - 4\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_6\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{17}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_7^2 +$
$\omega_{17}\omega_8^2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 - \omega_{17}\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{16}\omega_{13}\omega_7 + 2\omega_{17}\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{13}\omega_7^2 - 6\omega_{17}\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_6^3\omega_{16}\omega_{13} -$
$\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_6^3\omega_{16}\omega_7^2 - 2\omega_{17}\omega_{14}\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^2 + 2\omega_{17}\omega_{14}\omega_8\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7 + 2\omega_{17}\omega_{14}\omega_8^2\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7 +$
$2\omega_{17}\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7 - 2\omega_{17}\omega_8v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 + 4\omega_{17}\omega_{14}\omega_8v_1^2\omega_6\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{13}\omega_7^2 + 2\omega_{17}\omega_{14}\omega_8cs^2\omega_6^2\omega_{16}\omega_7^2 +$
$\omega_{17}\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 + 4\omega_{17}\omega_{14}\omega_8\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7 + 2\omega_{17}\omega_8^2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 + \omega_{14}\omega_8^2\omega_6^3v_2^2\omega_{13}\omega_7^3 + 2\omega_{17}\omega_8v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 -$
$2\omega_{14}\omega_8\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^3 + \omega_{17}\omega_8^2v_1^2\omega_6^3\omega_{16}\omega_7^2 + 2\omega_{17}\omega_{14}\omega_8cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 + \omega_{14}\omega_8^2cs^2\omega_6^3\omega_{13}\omega_7^2 + 4\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2 -$
$\omega_{17}\omega_{14}\omega_8^2cs^2\omega_6\omega_{16}\omega_{13}\omega_7^3 - \omega_{17}\omega_{14}\omega_8^2\omega_6^2v_2^2\omega_{16}\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8cs^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^2 - 4\omega_{17}\omega_{14}\omega_8v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 +$
$2\omega_{17}\omega_{14}v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 + \omega_{14}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2 + 2\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_6\omega_{16}\omega_7^2 + \omega_{17}\omega_8^2cs^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{17}\omega_{14}\omega_8^2\omega_6v_2^2\omega_{16}\omega_{13}\omega_7^2 +$
$3\omega_{17}\omega_{14}\omega_8^2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7 + 2\omega_{17}\omega_{14}\omega_8v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{17}\omega_{14}v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3 - 2\omega_{14}\omega_8cs^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 + \omega_{17}\omega_8^2cs^2\omega_6^3\omega_{16}\omega_7^2 +$
$2\omega_{14}\omega_8\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^2 - 2\omega_{17}\omega_{14}\omega_8^2v_2^2\omega_{16}\omega_{13}\omega_7^2 + 2\omega_{17}\omega_{14}\omega_8^2cs^2\omega_6\omega_{16}\omega_{13}\omega_7^2 + 4\omega_{17}\omega_{14}\omega_8\omega_6^2v_2^2\omega_{16}\omega_{13}\omega_7^2 + 3\omega_{17}\omega_{14}\omega_8^2\omega_6v_2^2\omega_{16}\omega_{13}\omega_7^3 -$
$2\omega_{17}\omega_8cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 - \omega_{17}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 - 2\omega_{17}\omega_8^2v_1^2\omega_6^2\omega_{16}\omega_7^2 - 6\omega_{17}\omega_{14}\omega_8v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 + 2\omega_{17}\omega_{14}\omega_8\omega_6^2v_2^2\omega_{16}\omega_{13}\omega_7^2 +$
$2\omega_{17}\omega_{14}v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2 - \omega_{14}\omega_8^2\omega_6^3v_2^2\omega_{16}\omega_{13}\omega_7^3 - \omega_{17}\omega_{14}\omega_8^2\omega_6^2v_2^2\omega_{13}\omega_7^3 + 2\omega_{17}\omega_8^2cs^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 +$

$$2\omega_{17}\omega_{14}\omega_8\omega_6 v_2^2 \omega_{16}\omega_{13}\omega_7^3 + 2\omega_{17}\omega_8 cs^2 \omega_6^3 \omega_{16}\omega_{13}\omega_7^3 - 4\omega_{17}\omega_{14}\omega_8^2 \omega_6^2 v_2^2 \omega_{16}\omega_{13}\omega_7 - \omega_{14}\omega_8^2 cs^2 \omega_6^3 \omega_{16}\omega_{13}\omega_7^3 + 2\omega_{17}\omega_{14}\omega_8^2 \omega_6^2 v_2^2 \omega_{13}\omega_7^2 -$$
$$\omega_{17}\omega_{14}\omega_8^2 cs^2 \omega_6^3 \omega_{16}\omega_7^2 + 2\omega_{14}\omega_8^2 \omega_6^3 v_2^2 \omega_{16}\omega_{13}\omega_7^2 - 4\omega_{17}\omega_{14}\omega_8 \omega_6^2 v_2^2 \omega_{16}\omega_{13}\omega_7 + 2\omega_{17}\omega_{14}\omega_8 v_1^2 \omega_6^2 \omega_{16}\omega_{13}\omega_7^2 + 2\omega_{17}\omega_{14}\omega_6^2 v_2^2 \omega_{16}\omega_{13}\omega_7^2 -$$
$$2\omega_{14}\omega_8 cs^2 \omega_6^2 \omega_{16}\omega_{13}\omega_7^3 - \omega_{17}\omega_{14}\omega_8^2 v_1^2 \omega_6^3 \omega_{16}\omega_{13}\omega_7^2 - 2\omega_{17}\omega_{14}\omega_8^2 v_1^2 \omega_6^2 \omega_{16}\omega_{13}\omega_7 - 2\omega_{17}\omega_8 cs^2 \omega_6^3 \omega_{16}\omega_{13}\omega_7 + 2\omega_{17}\omega_{14}\omega_8 v_1^2 \omega_6^3 \omega_{16}\omega_{13}\omega_7$$

$C_{25} = -12\omega_{17}\omega_8 cs^2 \omega_6 \omega_{16}^2 \omega_{10}^2 \omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_7^2 + 4\omega_{17}\omega_5\omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 + 4\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 -$
$6\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7^2 - 8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 - 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16} v_2^2 \omega_{10}^2 \omega_7 -$
$24\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{10}^2 \omega_7 + 12\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7^2 + 12\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7 -$
$12\omega_{17}\omega_8 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 3\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 -$
$12\omega_{17}\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 + 24\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{10}^2 \omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_7 + 8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 -$
$4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10} + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 cs^2 \omega_{16}\omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_6 v_2^2 \omega_{16}^2 \omega_{10}^2 \omega_7 + 4\omega_{17}\omega_8\omega_{16}^2 \omega_{10}^2 \omega_7^2 +$
$4\omega_{17}\omega_8\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{10}^2 \omega_7^2 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_7 + 6\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7 -$
$2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8\omega_5 cs^2 \omega_6\omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 - 12\omega_{17}\omega_8 cs^2 \omega_{16}^2 \omega_{10}^2 \omega_7 -$
$4\omega_{17}\omega_8\omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_7 + 12\omega_{17}\omega_8 cs^2 \omega_6\omega_{16}^2 \omega_{10}^2 \omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}\omega_{10} - 6\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 -$
$4\omega_{17}\omega_8\omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 + 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 4\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 2\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}^2 \omega_7^2 + 2\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7^2 +$
$12\omega_{17}\omega_8 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7^2 + 2\omega_{17}\omega_8\omega_5 v_2^2 \omega_{16}^2 \omega_{10}^2 \omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{10}^2 \omega_7^2 +$
$9\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 4\omega_5\omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 +$
$2\omega_8\omega_5\omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7^2 - 12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 4\omega_{17}\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 8\omega_{17}\omega_8\omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7 -$
$4\omega_{17}\omega_8 v_2^2 \omega_{16}^2 \omega_{10}^2 \omega_7 - 12\omega_{17}\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 12\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_{16}^2 \omega_{10}\omega_7^2 - 4\omega_{17}\omega_8\omega_5\omega_6 v_2^2 \omega_{16}\omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8 cs^2 \omega_{15}\omega_6\omega_{16}\omega_7 - 4\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 2\omega_{17}\omega_8\omega_5\omega_{15} v_2^2 \omega_{16}\omega_{10}\omega_7^2 + 6\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7^2 - 2\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7^2 +$
$8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10} + 12\omega_{17}\omega_8\omega_5 cs^2 \omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 + 6\omega_{17}\omega_8\omega_5 cs^2 \omega_{16}^2 \omega_{10}^2 \omega_7^2 +$
$2\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}^2 \omega_7 + 4\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7^2 - 12\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 -$
$4\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}^2 \omega_7 - 9\omega_{17}\omega_8\omega_5 cs^2 \omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 - 4\omega_{17}\omega_8\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 + 12\omega_{17}\omega_8 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7 - 4\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 +$
$12\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 12\omega_{17}\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{16}^2 \omega_{10}\omega_7 + 4\omega_5\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2 \omega_{10}\omega_7 -$
$2\omega_8\omega_5\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 4\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 4\omega_{17}\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_7^2 -$
$4\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10} + 4\omega_{17}\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}\omega_{10}^2 \omega_7 - 2\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10} - 4\omega_{17}\omega_8\omega_5\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 3\omega_{17}\omega_8\omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}^2 \omega_7^2 - 4\omega_{17}\omega_5\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{10}^2 \omega_7^2$

$C_{26} = -12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8^2 \omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 24\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 -$
$6\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 36\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}\omega_{10} +$
$42\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - \omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8^2 \omega_5\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 +$
$6\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 4\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 +$
$12\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_7 + 12\omega_{17}\omega_8 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 24\omega_{17}\omega_8 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6\omega_{16}\omega_{10} +$
$24\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 + 24\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}\omega_{10} - 3\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 12\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 -$
$12\omega_{17}\omega_8^2 \omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_8\omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 12\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6 v_2^2 \omega_{10}\omega_7 - 12\omega_8^2 \omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 -$
$6\omega_{17}\omega_8^2 \omega_5\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_{17}\omega_8^2 \omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}\omega_{10} + 18\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 +$
$6\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 6\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6 v_2^2 \omega_{10}\omega_7^2 + 12\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8^2 \omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 +$
$6\omega_8^2 \omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 42\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2 \omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 -$
$12\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 3\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_5^2 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 +$
$6\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 9\omega_{17}\omega_8^2 \omega_5\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 18\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 +$
$6\omega_{17}\omega_8\omega_5^2 \omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 12\omega_8^2 \omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 - 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_7^2 + 12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 +$
$6\omega_{17}\omega_8\omega_5 cs^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8^2 \omega_5\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 12\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 + 6\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 +$
$18\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 6\omega_8^2 \omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2 \omega_5\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 24\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10} + 12\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 +$
$12\omega_8\omega_5^2 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 9\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 36\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}\omega_{10} - 36\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8^2 \omega_5\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 + 12\omega_{17}\omega_8\omega_5 cs^2 \omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 18\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_7^2 -$
$12\omega_8^2 \omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 - 12\omega_{17}\omega_8^2 \omega_5\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 18\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 12\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10} -$
$54\omega_{17}\omega_8\omega_5^2 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 6\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 24\omega_{17}\omega_8 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 -$
$6\omega_{17}\omega_8^2 \omega_5^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 18\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_7^2 - 24\omega_{17}\omega_8^2 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 54\omega_{17}\omega_8^2 \omega_5^2 cs^2 \omega_{15}\omega_6^2 \omega_{16}\omega_{10}\omega_7 +$
$12\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}\omega_{10}\omega_7 + 30\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_8^2 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 + 36\omega_{17}\omega_8^2 cs^2 \omega_{15}\omega_6^2 \omega_{16}\omega_7 -$
$12\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + 6\omega_8\omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10} + 9\omega_{17}\omega_8^2 \omega_5^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 -$
$6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 54\omega_{17}\omega_8^2 \omega_5^2 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 12\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 54\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 -$
$6\omega_8^2 \omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 36\omega_{17}\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{10}\omega_7 - 12\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 \omega_{16}\omega_7 - 12\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 -$
$12\omega_{17}\omega_8\omega_5 cs^2 \omega_6^2 \omega_{16}^2 \omega_{10}\omega_7 - 6\omega_8^2 \omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8^2 \omega_5\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 12\omega_8^2 \omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 4\omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 +$
$12\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_{17}\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7^2 + \omega_{17}\omega_8^2 \omega_5\omega_{15}\omega_6^2 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 9\omega_{17}\omega_8^2 \omega_5^2 cs^2 \omega_6^2 \omega_{16}^2 \omega_{10}\omega_7^2$

$C_{27} = -4\omega_{17}\omega_8 cs^2 \omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_7^2 + 4\omega_{17}\omega_5\omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 + 12\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}\omega_{10}^2 \omega_7^2 - 12\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 -$
$2\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7^2 - 24\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7 - 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7 -$
$8\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{10}^2 \omega_7 + 4\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7^2 + 4\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7 - 4\omega_{17}\omega_8 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 -$
$4\omega_{17}\omega_8\omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 + 12\omega_{17}\omega_8\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 + 3\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7 +$
$8\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{10}^2 \omega_7^2 + 12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_7 + 24\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}\omega_{10}^2 \omega_7 -$
$4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_{10} + 2\omega_{17}\omega_8\omega_5 cs^2 \omega_6\omega_{16}\omega_{10}\omega_7^2 - 4\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 - 12\omega_{17}\omega_8\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_{16}^2 \omega_{10}^2 \omega_7^2 +$
$12\omega_{17}\omega_8\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 2\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 \omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{10}^2 \omega_7^2 - 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_7^2 + 2\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}^2 \omega_7^2 -$
$6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7^2 - 4\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2 \omega_{10}^2 \omega_7 - 4\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_6\omega_{16}\omega_{10}^2 - 4\omega_{17}\omega_8 cs^2 \omega_{16}^2 \omega_{10}^2 \omega_7 -$
$12\omega_{17}\omega_8\omega_5\omega_6 v_2^2 \omega_{16}^2 \omega_{10}\omega_7 - 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2 \omega_7 + 4\omega_{17}\omega_8 cs^2 \omega_6\omega_{16}^2 \omega_{10}^2 \omega_7^2 + 12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2 \omega_{16}\omega_{10} - 2\omega_{17}\omega_8\omega_5 cs^2 \omega_{15}\omega_{16}^2 \omega_{10}\omega_7^2 -$

$$4\omega_{17}\omega_8\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 + 9\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 12\omega_{17}\omega_8\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}\omega_7 - 6\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 2\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 +$$
$$4\omega_{17}\omega_8 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 - 2\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 + 6\omega_{17}\omega_8\omega_5 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{10}^2\omega_7^2 +$$
$$3\omega_{17}\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 - 4\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 - 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2 + 6\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7^2 +$$
$$2\omega_8\omega_5\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2 - 4\omega_{17}\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{10}^2\omega_7 + 12\omega_{17}\omega_8\omega_5\omega_6 v_2^2\omega_{16}^2\omega_{10}\omega_7 - 4\omega_{17}\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 - 8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 -$$
$$12\omega_{17}\omega_8 v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 - 4\omega_{17}\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 - 4\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 - 12\omega_{17}\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}\omega_7 +$$
$$4\omega_{17}\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_7 - 12\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 - 6\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 2\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 - 2\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 +$$
$$8\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + 4\omega_{17}\omega_8\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10} + 4\omega_{17}\omega_8\omega_5 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2 + 2\omega_{17}\omega_8\omega_5 cs^2\omega_{16}^2\omega_{10}\omega_7^2 +$$
$$6\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 4\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 - 4\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 - 3\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + 4\omega_8\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 -$$
$$12\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 3\omega_{17}\omega_8\omega_5 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2 - 4\omega_{17}\omega_8\omega_6\omega_{16}^2\omega_{10}\omega_7^2 + 4\omega_{17}\omega_8 cs^2\omega_{15}\omega_{16}^2\omega_{10}\omega_7 - 4\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 +$$
$$4\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + 4\omega_{17}\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2\omega_{10}\omega_7 + 12\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16}^2\omega_{10}\omega_7 -$$
$$6\omega_{17}\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 12\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}\omega_7 + 12\omega_{17}\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 2\omega_{17}\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_7^2 -$$
$$12\omega_{17}\omega_8\omega_5\omega_{15}\omega_6 v_2^2\omega_{16}\omega_{10}^2 + 4\omega_{17}\omega_5\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 + 2\omega_{17}\omega_8\omega_5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{17}\omega_8\omega_5\omega_{15}\omega_{16} v_2^2\omega_{10}\omega_7 - 2\omega_{17}\omega_8\omega_5\omega_6\omega_{16}^2\omega_{10}\omega_7^2 +$$
$$4\omega_{17}\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{16}^2\omega_{10} - 12\omega_{17}\omega_8\omega_5\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7 - 9\omega_{17}\omega_8\omega_5\omega_6 v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 - 12\omega_{17}\omega_5\omega_{15} v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 2\omega_{17}\omega_8\omega_5 cs^2\omega_{15}\omega_6\omega_{10}^2\omega_7^2$$

$C_{28} = \omega_{17}\omega_8\omega_6^2 v_2^2\omega_{16}^2\omega_7^3 - 7\omega_{17}\omega_8 cs^2\omega_6\omega_{16}^2\omega_7^3 + 2\omega_{17}\omega_8^2\omega_6\omega_{16}\omega_7^2 + 2\omega_8^2\omega_6^2\omega_{16}^2\omega_7 + 7\omega_{17}\omega_8^2 cs^2\omega_6\omega_{16}^2\omega_7 - \omega_{17}\omega_8^2\omega_6^2 v_2^2\omega_{16}^2\omega_7 - 2\omega_{17} cs^2\omega_6^2\omega_{16}^2\omega_7 -$
$\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_{16}\omega_7^3 + \omega_{17}\omega_8^2\omega_6^2\omega_{16}^2\omega_7 - 8\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_{16} - \omega_{17}\omega_8^2\omega_6\omega_{16}\omega_7^3 + 4\omega_{17}\omega_8 cs^2\omega_6\omega_{16}^2\omega_7 - \omega_{17}\omega_8\omega_6^2 v_2^2\omega_{16}^2\omega_7 + 4\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_{16}\omega_7 +$
$2\omega_{17} cs^2\omega_6^2\omega_{16}^2\omega_7 - 2\omega_{17}\omega_8^2 cs^2\omega_{16}^2\omega_7^2 - \omega_8^2\omega_6^2\omega_{16}^2\omega_7^3 - 2\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_{16}\omega_7 + \omega_{17}\omega_8^2 cs^2\omega_6^2\omega_7^3 + \omega_{17}\omega_8\omega_6 v_2^2\omega_{16}\omega_7^3 + 2\omega_8\omega_6^2 v_2^2\omega_{16}^2\omega_7^3 -$
$\omega_{17}\omega_8^2\omega_6^2\omega_7^3 + \omega_8^2\omega_6^2 v_2^2\omega_{16}\omega_7^3 - \omega_8^2 cs^2\omega_6\omega_{16}\omega_7^3 + 2\omega_8^2 cs^2\omega_6^2\omega_{16}\omega_7^3 + \omega_{17}\omega_8\omega_6\omega_{16}^2\omega_7^3 - 2\omega_8\omega_6^2\omega_{16}^2\omega_7^3 - 2\omega_{17}\omega_8\omega_6 v_2^2\omega_{16}\omega_7^3 -$
$2\omega_8\omega_6\omega_{16}^2\omega_7^3 - 2\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_7 + \omega_{17}\omega_8^2\omega_6^2 v_2^2\omega_{16}\omega_7 - 6\omega_{17}\omega_8^2 cs^2\omega_6\omega_{16}\omega_7 - \omega_8^2 cs^2\omega_6\omega_{16}^2\omega_7^3 - 2\omega_8^2\omega_6 v_2^2\omega_{16}\omega_7^2 + \omega_{17}\omega_8\omega_6 v_2^2\omega_{16}^2\omega_7^3 +$
$2\omega_8 cs^2\omega_6^2\omega_{16}^2\omega_7 - 2\omega_8\omega_6^2\omega_{16}^2\omega_7 - 2\omega_{17}\omega_8^2\omega_6^2 v_2^2\omega_7^2 + 2\omega_{17}\omega_8 cs^2\omega_{16}^2\omega_7^3 - 2\omega_{17}\omega_8^2\omega_6^2 v_2^2\omega_{16}\omega_7 + 2\omega_{17}\omega_8^2\omega_6^2\omega_7^2 + 6\omega_{17}\omega_8 cs^2\omega_6^2\omega_{16}^2\omega_7 -$
$\omega_{17}\omega_8\omega_6^2\omega_{16}^3\omega_7^3 + 2\omega_8^2\omega_6^2 v_2^2\omega_{16}\omega_7^3 + \omega_8^2 cs^2\omega_6^2\omega_{16}^2\omega_7^3 - \omega_{17}\omega_8\omega_6 v_2^2\omega_{16}^2\omega_7^3 + \omega_{17}\omega_8^2\omega_6^2 v_2^2\omega_7^3 + 2\omega_8\omega_6\omega_{16}^2\omega_7^3 + 13\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_{16}^2\omega_7 -$
$2\omega_8 cs^2\omega_6^2\omega_{16}^2\omega_7^3 - 2\omega_8^2 cs^2\omega_6^2\omega_{16}^2\omega_7 - \omega_8^2\omega_6^2 v_2^2\omega_{16}^2\omega_7^3 + 2\omega_{17}\omega_8^2\omega_6\omega_{16}\omega_7 + \omega_{17}\omega_8\omega_6^2\omega_{16}^2\omega_7 - \omega_{17}\omega_8^2\omega_6^2\omega_7^3 - 4\omega_{17}\omega_8^2\omega_6\omega_{16}^2\omega_7 - \omega_8^2\omega_6 v_2^2\omega_{16}^2\omega_7^3 +$
$5\omega_{17}\omega_8 cs^2\omega_6^2\omega_{16}^2\omega_7^3 + 2\omega_{17} cs^2\omega_6\omega_{16}^2\omega_7^3 - \omega_{17}\omega_8^2\omega_6^2 v_2^2\omega_{16}^2\omega_7^3 + \omega_{17}\omega_8^2 cs^2\omega_6\omega_{16}\omega_7^3 - 5\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_{16}^2\omega_7 + \omega_8^2\omega_6^2\omega_{16}^2\omega_7^3 - 11\omega_{17}\omega_8^2 cs^2\omega_6^2\omega_{16}^2\omega_7 +$
$\omega_{17}\omega_8^2\omega_6\omega_{16}^2\omega_7^3 - \omega_{17}\omega_8^2\omega_6\omega_{16}^2\omega_7^3 + \omega_8^2\omega_6\omega_{16}^2\omega_7^3 - 2\omega_8^2\omega_6^2\omega_{16}^2\omega_7 + 2\omega_8\omega_6 v_2^2\omega_{16}^2\omega_7^3 - 2\omega_{17}\omega_8^2 cs^2\omega_6\omega_{16}\omega_7^2 + 4\omega_{17}\omega_8^2\omega_6^2 v_2^2\omega_{16}\omega_7^2$

$C_{29} = -30v_2^4\omega_{16}^2\omega_{10}\omega_7^2 + 24 cs^2\omega_{16}^2\omega_{10}\omega_7 + 48v_2^2\omega_{16}^2\omega_{10} - cs^4\omega_{16}^2\omega_{10}\omega_7^2 + 48 cs^2\omega_{16}^2\omega_{10}\omega_7 - 12 cs^4\omega_{16}^2\omega_7 - 126 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 +$
$48v_2^2\omega_{16}^2\omega_{10}\omega_7 - 24 cs^2\omega_{16}^2\omega_7 + 36v_2^4\omega_{16}^2\omega_{10}\omega_7^2 + 150 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 12 cs^4\omega_{16}^2\omega_{10}\omega_7^2 + 24 cs^4\omega_{16}^2\omega_{10} - 48 cs^2\omega_{16}^2\omega_{10}\omega_7^2 - 24 cs^4\omega_{10}^2\omega_7 -$
$432 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7 - 216 cs^2 v_2^2\omega_{16}^2\omega_{10} + 3v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 12 cs^2\omega_{16}^2\omega_{10}\omega_7^2 - 48v_2^4\omega_{16}^2\omega_{10} + 12 cs^2\omega_{16}^2\omega_7 - 96v_2^4\omega_{16}^2\omega_{10}\omega_7 + 24 cs^4\omega_{16}^2\omega_7 -$
$14 cs^2\omega_{16}^2\omega_{10}\omega_7^2 + 432 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7 - 24v_2^2\omega_{16}^2\omega_{10}\omega_7 + 96v_2^4\omega_{16}^2\omega_{10}\omega_7^2 - 12 cs^2\omega_{10}^2\omega_7 - 24 cs^2\omega_{16}^2\omega_{10} + cs^2\omega_{16}^2\omega_{10}\omega_7^2 + 72v_2^4\omega_{16}^2\omega_7 +$
$30v_2^2\omega_{16}^2\omega_{10}\omega_7 + 288 cs^2 v_2^2\omega_{16}^2\omega_7 - 144 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7 - 48v_2^4\omega_{16}^2\omega_{10}\omega_7 - 12v_2^2\omega_{10}^2\omega_7 - 48v_2^2\omega_{16}^2\omega_{10} - 48 cs^4\omega_{16}^2\omega_{10}\omega_7 - 36v_2^2\omega_{16}^2\omega_{10}\omega_7 -$
$24v_2^4\omega_{10}^2\omega_7 - 24 cs^4\omega_{16}^2\omega_{10} - 144 cs^2 v_2^2\omega_{10}^2\omega_7 + 36v_2^2\omega_{16}^2\omega_7 + 48 cs^4\omega_{16}^2\omega_{10}\omega_7 - 72v_2^2\omega_{16}^2\omega_7 - 12 cs^4\omega_{16}^2\omega_{10}\omega_7 - 3v_2^4\omega_{16}^2\omega_{10}\omega_7 + 12v_2^4\omega_{10}^2\omega_7 +$
$96v_2^2\omega_{16}^2\omega_{10}\omega_7 + 216 cs^2 v_2^2\omega_{16}^2\omega_{10} - 12 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 48v_2^4\omega_{16}^2\omega_{10} + 72 cs^2 v_2^2\omega_{10}^2\omega_7 + 24v_2^2\omega_{10}^2\omega_7 + 24v_2^4\omega_{16}^2\omega_{10}\omega_7 + 24 cs^2\omega_{16}^2\omega_{10} +$
$14 cs^4\omega_{16}^2\omega_{10}\omega_7^2 - 36v_2^2\omega_{16}^2\omega_7^2 - 144 cs^2 v_2^2\omega_{16}^2\omega_7^2 - 96v_2^2\omega_{16}^2\omega_{10}\omega_7 + 72 cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^2$

$C_{30} = -48 cs^2\omega_{10}^2\omega_7 + 21\omega_{16}\omega_{10}^2\omega_7 - 84v_2^2\omega_{16}^2\omega_{10} - 120 cs^2\omega_{16}^2\omega_{10}\omega_7 - 72v_2^2\omega_{16}\omega_{10}\omega_7 + 72 cs^2\omega_{16}^2\omega_7 - 25\omega_{16}^2\omega_{10}\omega_7 + 120 cs^2\omega_{16}\omega_{10}\omega_7 -$
$5v_2^2\omega_{16}^2\omega_{10}\omega_7 - 33 cs^2\omega_{16}\omega_{10}\omega_7 + 36\omega_{16}\omega_{10} - 36 cs^2\omega_{16}^2\omega_7 + 72\omega_{16}\omega_{10}\omega_7 + 39 cs^2\omega_{16}\omega_{10}\omega_7 + 36v_2^2\omega_{16}\omega_{10}\omega_7 - 72\omega_{16}\omega_{10}^2\omega_7 + 24 cs^2\omega_{10}^2\omega_7 +$
$60 cs^2\omega_{16}^2\omega_{10} - 3 cs^2\omega_{16}^2\omega_{10}\omega_7 - 48\omega_{16}^2\omega_7 - 51v_2^2\omega_{16}\omega_{10}^2\omega_7 + 24\omega_{16}\omega_{10}\omega_7 + 24v_2^2\omega_{10}^2\omega_7 + 84v_2^2\omega_{16}^2\omega_{10} + 61v_2^2\omega_{16}\omega_{10}^2\omega_7 + 24\omega_{10}^2\omega_7 +$
$12 cs^2\omega_{16}\omega_{10}^2\omega_7 - 60v_2^2\omega_{16}^2\omega_7 + 120v_2^2\omega_{16}^2\omega_7 + 2\omega_{16}^2\omega_{10}^2\omega_7 - 168v_2^2\omega_{16}^2\omega_{10}\omega_7 - 12\omega_{10}^2\omega_7 - 36\omega_{16}^2\omega_{10} - 24 cs^2\omega_{16}\omega_{10}\omega_7 - 12\omega_{16}\omega_{10}\omega_7 -$
$48v_2^2\omega_{10}^2\omega_7 - 60 cs^2\omega_{16}\omega_{10} + 24\omega_{16}^2\omega_7^2 + 168v_2^2\omega_{16}\omega_{10}\omega_7$

$C_{31} = 72v_2^4\omega_{16}\omega_7^2 + 24 cs^4\omega_{16}^2\omega_7 + 48 cs^2 v_2^2\omega_{16}\omega_7^2 + 12 cs^2\omega_{16}^2\omega_7 + 48v_2^2\omega_{16}^2\omega_7 - 12 cs^2 v_2^2\omega_{16}\omega_7^3 - 3 cs^4\omega_{16}^2\omega_7^3 - 18v_2^4\omega_{16}\omega_7^3 - 8 cs^2\omega_{16}^2\omega_7^2 -$
$72v_2^2\omega_{16}^2\omega_7^2 + 24v_2^2\omega_7^2 - 48v_2^4\omega_{16}\omega_7 - 48 cs^4\omega_{16}^2\omega_7 - 24 cs^2 v_2^2\omega_{16}\omega_7 - 12v_2^2\omega_7^3 + 18v_2^2\omega_{16}\omega_7^3 + cs^2\omega_{16}^2\omega_7^3 + 24 cs^4\omega_{16}\omega_7 + 24v_2^4\omega_{16}^2\omega_7 +$
$156 cs^2 v_2^2\omega_{16}\omega_7 - 6 cs^2\omega_{16}\omega_7^3 - 3v_2^2\omega_{16}^2\omega_7^3 + 24v_2^2\omega_{16}^2\omega_7 - 96 cs^2 v_2^2\omega_{16} + 24 cs^2\omega_{16}\omega_7^2 - 24v_2^2\omega_{16}\omega_7 + 24 cs^4\omega_{16} - 24 cs^2\omega_{16}\omega_7 + 12 cs^2 v_2^2\omega_7^3 +$
$6 cs^2 v_2^2\omega_{16}\omega_7^3 + 12v_2^4\omega_7^3 + 3v_2^4\omega_{16}^2\omega_7^3 + 6 cs^4\omega_{16}\omega_7^3 - 24 cs^4\omega_{16}\omega_7^2 - 24v_2^4\omega_{16}^2\omega_7^2 - 72 cs^2 v_2^2\omega_{16}^2\omega_7^2 - 24v_2^4\omega_7^2 - 24 cs^2 v_2^2\omega_7^2$

$C_{32} = 12\omega_{11} v_1^2\omega_{18} cs^2\omega_9^3\omega_6^2\omega_{13} - 12\omega_{11} v_1^2\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 + 6\omega_{18} cs^2\omega_9^2\omega_6^3\omega_{13}^2 - 15\omega_{11}\omega_{18} cs^4\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 24\omega_{11} v_1^2\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 -$
$6\omega_{11}\omega_{18}\omega_9^3\omega_6^3\omega_{22} v_3^2 - 18\omega_{18} cs^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 12 cs^2\omega_9^3\omega_6^3\omega_{13}^2 - 12\omega_{11} cs^2\omega_9^3\omega_6^2\omega_6^2\omega_{13}^2 + 36\omega_{11}\omega_{18} cs^4\omega_9^3\omega_6^2\omega_{13} + 144\omega_{11}\omega_{18} cs^2\omega_9^3\omega_6^2\omega_{22} v_3^2\omega_{13}^2 -$
$24v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} v_3^2\omega_{13} - 6\omega_{11}\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 12v_1^2 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 5\omega_{11}\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 18\omega_{11}\omega_{18} cs^2\omega_9^3\omega_6^3 v_3^2\omega_{13} +$
$36 cs^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 36\omega_{11}\omega_{18} cs^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 - 60\omega_{11}\omega_{18} cs^4\omega_9^2\omega_6^2\omega_{22} v_3^2\omega_{13}^2 - 12\omega_{11} v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 + 36\omega_{11} cs^2\omega_9^3\omega_6^2\omega_6^2\omega_{13}^2 -$
$12\omega_{11} v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22} v_3^2 - 12\omega_{11}\omega_{18}\omega_6^2\omega_{22} v_3^2\omega_{13}^2 - 5\omega_{11} v_1^2\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 6\omega_{11} v_1^2\omega_{18} cs^2\omega_9^2\omega_6^3\omega_{13} + 12\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 -$
$12\omega_{11}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 + 12v_1^2 cs^2\omega_9\omega_6^3\omega_{13}^2 - 6\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^3\omega_{22} + 27\omega_{11}\omega_{18} cs^2\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 - 6v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 -$
$12\omega_{11} v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 18\omega_{11}\omega_{18} cs^2\omega_6^3\omega_{22} v_3^2\omega_{13}^2 + 18\omega_{11}\omega_{18} cs^4\omega_9\omega_6^3\omega_{13}^2 - 24\omega_{11}\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 - 18\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} -$
$36\omega_{11} cs^4\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 36 cs^4\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 6\omega_{11}\omega_{18}\omega_6^3\omega_{22} v_3^2\omega_{13}^2 + 12\omega_{11} v_1^2\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13} + 12\omega_{11} cs^2\omega_9^3\omega_6^3\omega_{13}^2 +$
$18\omega_{11}\omega_{18} cs^2\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13} - 96\omega_{11}\omega_{18} cs^4\omega_9^2\omega_{22}\omega_{13}^2 - 24v_1^2\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 - 6v_1^2\omega_{18} cs^2\omega_9^2\omega_6^3\omega_{13}^2 - 18\omega_{11}\omega_{18} cs^4\omega_9^2\omega_6^3\omega_{13}^2 +$
$36\omega_{11}\omega_{18} cs^2\omega_6^2\omega_{22} v_3^2\omega_{13}^2 + 12 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{11} v_1^2\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 - 42 cs^4\omega_9\omega_6^2\omega_{22}\omega_{13} +$
$24v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13}^2 - 108\omega_{11}\omega_{18} cs^2\omega_9\omega_6^2\omega_{22} v_3^2\omega_{13}^2 + 12\omega_{11}\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 - 12\omega_{11}\omega_6^2\omega_6^3 v_3^2\omega_{13}^2 - 6\omega_{11} v_1^2\omega_{18} cs^2\omega_9^2\omega_6^3\omega_{13} +$
$6\omega_{11}\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13} + 12\omega_{11}\omega_{18} cs^2\omega_9\omega_6\omega_{22}\omega_{13}^2 - 36\omega_{11}\omega_{18} cs^4\omega_9^2\omega_6^2\omega_{13}^2 + 18\omega_{18} cs^4\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{22} +$
$18\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 - 36\omega_{11}\omega_{18} cs^4\omega_9\omega_6\omega_{22}\omega_{13}^2 + 18\omega_{11}\omega_{18} cs^2\omega_9^3\omega_6^3\omega_{22} v_3^2 + 18\omega_{11} v_1^2\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11} v_1^2\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{13} +$
$12\omega_{11} v_1^2 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 12v_1^2\omega_{18}\omega_6^2\omega_6^3\omega_{22} v_3^2\omega_{13} - 45\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^3\omega_{22} v_3^2\omega_{13}^2 + 24\omega_{11}\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 - 6\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 -$
$12\omega_{11} v_1^2 cs^2\omega_9\omega_6^3\omega_{13}^2 - \omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 + 24\omega_{18}\omega_9^2\omega_6^2\omega_{22} v_3^2\omega_{13} + 15\omega_{11}\omega_{18}\omega_9^3\omega_6^3\omega_{22} v_3^2\omega_{13}^2 +$
$12\omega_{11}\omega_{18} cs^2\omega_9^3\omega_6\omega_{22}\omega_{13} - 18\omega_{18} cs^4\omega_9^3\omega_6^3\omega_{13}^2 + 6\omega_{11} v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2\omega_{13}^2 + 6\omega_{11} v_1^2\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 72\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6\omega_{22} v_3^2\omega_{13}^2 -$
$36\omega_{11} cs^2\omega_9^3\omega_6^3 v_3^2\omega_{13} + 6\omega_{11} v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22} v_3^2 + 72\omega_{18} cs^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 - 36\omega_{11} v_1^2\omega_{18}\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 + 12\omega_{11} v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}^2 +$
$3\omega_{11}\omega_{18} cs^4\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2 + 12v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 + 36\omega_{11} cs^4\omega_9^2\omega_6^2\omega_{13}^2 + 12\omega_{11}\omega_{18} cs^4\omega_9^2\omega_6\omega_{22}\omega_{13} + 36 cs^4\omega_9^3\omega_6^3\omega_{13}^2 +$
$18\omega_{11} v_1^2\omega_{18} cs^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}\omega_{18} cs^2\omega_9^2\omega_6^2\omega_{13} + 12\omega_{11}\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 - 36 cs^2\omega_9\omega_6\omega_{22} v_3^2\omega_{13}^2 + 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 +$

$$36\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - 36\omega_{11}cs^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} + 6\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 36\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2v_3^2\omega_{13} - 18\omega_{11}\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 +$$
$$12\omega_{11}v_1^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 6\omega_{11}v_1^2\omega_{18}cs^2\omega_9^3\omega_{22} - 12\omega_9^3\omega_6^2v_3^2\omega_{13}^2 + \omega_{11}v_1^2\omega_{18}cs^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{11}v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13}^2 -$$
$$6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13}^2 - 6\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 12\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 + 54\omega_{11}\omega_{18}cs^4\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2 +$$
$$36\omega_{18}cs^2\omega_9^2\omega_{22}v_3^2\omega_{13} - 15\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 6\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^3\omega_{22} - 36\omega_{11}cs^4\omega_9^2\omega_6^3\omega_{13}^2 - 3\omega_{11}v_1^2\omega_{18}cs^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} -$$
$$12\omega_{11}v_1^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - 24\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 36\omega_{11}cs^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 36\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}v_3^2 + 6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13}^2 -$$
$$9\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 12v_1^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 72\omega_{11}\omega_{18}cs^2\omega_9\omega_6\omega_{22}v_3^2\omega_{13}^2 - 12\omega_{11}v_1^2cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 -$$
$$12\omega_{11}\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{13} + 48\omega_{11}v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 72\omega_{18}cs^2\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 36\omega_{11}\omega_{18}cs^2\omega_9\omega_6^2v_3^2\omega_{13}^2 +$$
$$12\omega_{11}v_1^2cs^2\omega_9^2\omega_6^2\omega_{13}^2 - 6\omega_{11}v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 15\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 12\omega_{11}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 +$$
$$12\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^2\omega_{22} - 48\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 12\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}\omega_9^2\omega_6^3v_3^2\omega_{13}^2 + 156\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6\omega_{22}\omega_{13}^2 +$$
$$12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13}^2 + 6v_1^2\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 6v_1^2\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{11}v_1^2\omega_{18}cs^2\omega_9^3\omega_6^2\omega_{22} + 36\omega_{11}cs^4\omega_9\omega_6^3\omega_{22}\omega_{13}^2 +$$
$$3\omega_{11}\omega_{18}cs^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 6\omega_{11}v_1^2\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 + 9\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 18\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}$$

$C_{33} = 36\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{13} - 15\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 6\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13}^2 - 5\omega_{11}\omega_{18}cs^4\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 72\omega_{11}v_1^2\omega_{18}\omega_9\omega_6\omega_{22}v_3^2\omega_{13}^2 -$
$6\omega_{11}\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2 - 6\omega_{18}cs^2\omega_9^2\omega_6^3v_3^2\omega_{13}^2 - 12cs^2\omega_9^2\omega_6^3\omega_6^3\omega_{13}^2 - 12\omega_{11}cs^2\omega_9^2\omega_6^2\omega_{13}^2 + 12\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^2\omega_{13} + 48\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} -$
$72v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 6\omega_{11}\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2 - 36v_1^2cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 5\omega_{11}\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3v_3^2\omega_{13} + 12cs^2\omega_9^2\omega_6^3v_3^2\omega_{13} -$
$12\omega_{11}\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 5\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 - 36\omega_{11}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{13} + 12\omega_{11}cs^2\omega_9^2\omega_6^2v_3^2\omega_{13} - 36\omega_{11}v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2 -$
$12\omega_{11}\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13} - 15\omega_{11}v_1^2\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 18\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13}^2 + \omega_{11}\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 12\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 +$
$36v_1^2cs^2\omega_9^2\omega_6^2\omega_{13}^2 + 9\omega_{11}\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - 18v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 36\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22} - 6\omega_{11}v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{13}^2 +$
$6\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^3\omega_{13}^2 - 24\omega_{11}\omega_{18}\omega_9\omega_6\omega_{22}v_3^2\omega_{13}^2 + 18\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}\omega_{13} - 12\omega_{11}cs^4\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 12cs^4\omega_9\omega_6^3\omega_{22}\omega_{13}^2 +$
$6\omega_{11}\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 36\omega_{11}v_1^2\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{13} + 12\omega_{11}cs^2\omega_9^2\omega_6^3\omega_{13}^2 + 6\omega_{11}\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 12\omega_{11}\omega_{18}cs^4\omega_9^2\omega_{22}\omega_{13}^2 -$
$72\omega_{11}v_1^2\omega_{18}\omega_9\omega_6\omega_{22}v_3^2\omega_{13} - 18v_1^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13}^2 - 6\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^3\omega_{13} + 12\omega_{11}\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13}^2 + 12cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 -$
$36\omega_{11}v_1^2\omega_{18}cs^2\omega_9\omega_6\omega_{22}\omega_{13}^2 + 12\omega_{11}cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 18\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 + 72v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - 36\omega_{11}\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 -$
$48\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_{22}\omega_{13}^2 + 12\omega_{11}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - 12\omega_{11}\omega_9\omega_6^2v_3^2\omega_{13}^2 - 18\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6\omega_{13} + 6\omega_{11}\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13} +$
$12\omega_{11}\omega_{18}cs^2\omega_9\omega_6\omega_{22}\omega_{13}^2 - 12\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^2\omega_{13} + 6\omega_{18}cs^4\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3v_3^2\omega_{13} - 12\omega_{11}\omega_{18}cs^4\omega_9\omega_6\omega_{22}\omega_{13}^2 +$
$6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}v_3^2 - 102\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 - 36\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13} + 36\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 36v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13} -$
$15\omega_{11}v_1^2\omega_{18}cs^4\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11}\omega_{18}\omega_9\omega_6\omega_{22}v_3^2\omega_{13} - 6\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}v_3^2\omega_{13} - 36\omega_{11}v_1^2cs^2\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} +$
$24\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 15\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 12\omega_{11}\omega_{18}cs^2\omega_9\omega_6\omega_{22}\omega_{13} - 6\omega_{18}cs^4\omega_9^2\omega_6^3\omega_{13}^2 + 18\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} +$
$18\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2 - 24\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}v_3^2\omega_{13} - 12\omega_{11}cs^2\omega_9^2\omega_6^3v_3^2\omega_{13} + 18\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2 + 24\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} -$
$108\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 36\omega_{11}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{13}^2 - \omega_{11}\omega_{18}cs^4\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 + 36v_1^2\omega_9^2\omega_6^3v_3^2\omega_{13}^2 + 12\omega_{11}cs^4\omega_9^2\omega_6^2\omega_{13} + 12\omega_{11}\omega_{18}cs^4\omega_9^2\omega_6\omega_{22}\omega_{13} +$
$12cs^4\omega_9^2\omega_6^3\omega_{13}^2 + 54\omega_{11}v_1^2\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{13} + 12\omega_{11}\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{13}^2 - 12cs^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2 +$
$36\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - 12\omega_{11}cs^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 6\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2v_3^2\omega_{13} - 18\omega_{11}\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 +$
$36\omega_{11}v_1^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 12\omega_{11}v_1^2cs^2\omega_9^2\omega_6^3\omega_{22} - 12\omega_9^2\omega_6^3v_3^2\omega_{13}^2 + 36\omega_{11}v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - 6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13}^2 - 6\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 +$
$60\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}2\omega_{13} + 18\omega_{11}\omega_{18}cs^4\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{11}\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2 + 12\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 45\omega_{11}v_1^2\omega_{18}\omega_9^3\omega_6^2\omega_{22}v_3^2\omega_{13}^2 -$
$12\omega_{11}cs^4\omega_9^2\omega_6^3\omega_{13}^2 + 30\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 - 24\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}cs^2\omega_9^2\omega_6^2v_3^2\omega_{13}^2 -$
$12\omega_{11}cs^2\omega_9^2\omega_6^2\omega_{22}v_3^2 + 6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13} - 9\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 60\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 36v_1^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 +$
$24\omega_{11}\omega_{18}cs^2\omega_9\omega_6\omega_{22}v_3^2\omega_{13}^2 - 36\omega_{11}v_1^2cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 12\omega_{11}\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{13} + 144\omega_{11}v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 24\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} +$
$12\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2v_3^2\omega_{13} + 36\omega_{11}v_1^2cs^2\omega_9^2\omega_6^2\omega_{13} - 18\omega_{11}v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 6\omega_{11}\omega_{18}cs^4\omega_9^3\omega_6^3\omega_{22}\omega_{13} -$
$36\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 12\omega_{11}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 48\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 12\omega_{18}\omega_9^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}\omega_9^2\omega_6^3v_3^2\omega_{13}^2 +$
$18\omega_{11}\omega_{18}cs^4\omega_9\omega_6\omega_{22}\omega_{13}^2 + 12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13} + 18v_1^2\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 18v_1^2\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2 + 24\omega_{11}v_1^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22} +$
$12\omega_{11}cs^4\omega_9^3\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13} + 27\omega_{11}v_1^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 6\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}$

$C_{34} = -42\omega_{11}^2\omega_{18}^2cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 4\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 24\omega_{11}^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{13} + 24\omega_{11}\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 6\omega_{11}^2v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}^2 +$
$12\omega_{11}^2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2 - 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{11}^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 24\omega_{11}^2cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{11}^2\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2 -$
$24\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2 - 36\omega_{11}^2\omega_{18}^2cs^2\omega_9\omega_6\omega_{22}\omega_{13} - 24\omega_{11}\omega_{18}^2cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} +$
$3\omega_{11}^2\omega_{18}^2cs^2\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 48\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 4\omega_{11}^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 72\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}\omega_{13} -$
$24\omega_{18}^2cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22} - 48\omega_{11}^2\omega_{18}^2cs^2\omega_9\omega_6^2\omega_{22} - 12\omega_{11}^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}^2 - 6\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{13} -$
$18\omega_{11}^2\omega_{18}^2cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 60\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 156\omega_{11}^2\omega_{18}cs^2\omega_9\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{13} +$
$84\omega_{11}\omega_{18}^2cs^2\omega_9^2\omega_6\omega_{22}\omega_{13} - 24\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 66\omega_{11}^2v_1^2\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13} + 24\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22} - 24\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22} -$
$12\omega_{11}v_1^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} - 66\omega_{11}^2cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 6\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2 - 12\omega_{11}^2\omega_{18}cs^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11}^2v_1^2\omega_{18}\omega_9^2\omega_6^2\omega_{13} -$
$12\omega_{11}^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11}cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}^2\omega_{18}\omega_9^2\omega_6^3\omega_{13} + 12\omega_{11}^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{13} -$
$84\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 18\omega_{11}^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{13} + 6\omega_{11}^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 24\omega_{11}\omega_{18}\omega_9^2\omega_6^3\omega_{13} -$
$24\omega_{11}v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13} + 24\omega_{11}v_1^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{13} + 12\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} - 96\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} -$
$36\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} - 72\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6\omega_{22}\omega_{13} - 66\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + \omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 -$
$12\omega_{11}^2\omega_{18}^2\omega_9\omega_6\omega_{22} + 36\omega_{11}^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^2v_1^2\omega_{18}^2\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} - \omega_{11}^2\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} +$
$12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 18\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^2\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13} + 24\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{13} -$
$24\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13} + 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{13} - 12\omega_{11}\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} + 6\omega_{11}^2\omega_{18}cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$
$12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{13} + 12\omega_{11}^2\omega_{18}cs^2\omega_9\omega_6\omega_{22}\omega_{13} + 24\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6\omega_{13} - 12\omega_{11}^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 24\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{13} +$
$18\omega_{11}^2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 24\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^3\omega_{13} - 24\omega_{11}\omega_{18}^2\omega_9^2\omega_6^3\omega_{13} +$
$12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 24\omega_{18}cs^2\omega_9^2\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}^2v_1^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 90\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} +$
$12\omega_{11}^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} - 132\omega_{11}^2\omega_{18}cs^2\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 24\omega_{11}^2\omega_{18}\omega_9^2\omega_6^2\omega_{22} + 12\omega_{11}\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} + 36\omega_{11}^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13}$

$C_{35} = 2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}7 - \omega_{20}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7 + 2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 -$
$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 +$
$2\omega_{11}\omega_{14}\omega_8^2v_1cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7 +$

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$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_6^3 v_3 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 + 2\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_2 \omega_{19}\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_8 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 \omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2 cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{13}\omega_7^2 +$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 \omega_{13}\omega_7 + 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{14}\omega_8^2 v_1^2 cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{14}\omega_8^2 v_1 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7 + \omega_{20}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$\omega_{20}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{14}\omega_8^2 v_1^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^4 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13} - 8\omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^4 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2 v_1^2 \omega_6^3 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 + \omega_{20}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2^2 \omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 -$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 v_2 \omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 \omega_{19}\omega_7^2 + 2\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{13}\omega_7^2 -$$

$$\omega_{20}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 \omega_6^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 v_2 \omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_{18} cs^4 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$\omega_{20}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 - \omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{13}\omega_7^2 -$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2^2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8^2 cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7 -$$

$$2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_6^3 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 \omega_{13}\omega_7 +$$

$$4\omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^4 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^4 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13} +$$

$$2\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$\omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2 \omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_8^2 cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 \omega_6^2 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2^2 \omega_{19}\omega_7^2 +$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3^2 v_2 \omega_{19}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7 -$$

$$2\omega_{11}\omega_{14}\omega_8^2 cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 v_3^2 v_2 \omega_{19}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2^2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 v_2^2 \omega_{19}\omega_7^2 -$$

$$2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^2 \omega_6^3 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 -$$

$$2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^3 v_3^2 v_2 \omega_{19}\omega_7^2 -$$

$$2\omega_{20}\omega_{14}\omega_8^2 cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 +$$

$$2\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 v_2 \omega_{13}\omega_7 - 2\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6 v_3^2 \omega_{19}\omega_{13}\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 -$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^4 \omega_6 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 -$$

$$\omega_{20}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_{18} cs^4 \omega_6^3 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 -$$

$$2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 cs^2 \omega_6^3 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^3 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^2 \omega_6^3 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^4 \omega_6 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1^2 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 -$$

$$2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 \omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6 v_3^2 v_2 \omega_{19}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_3^2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^3 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2 \omega_{18} cs^2 \omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$\omega_{20}\omega_{14}\omega_8^2 v_1^2 \omega_{18}\omega_6^3 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18}\omega_6^3 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7 -$$

$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2 v_1^2 \omega_6^2 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_2 \omega_{19}\omega_{13}\omega_7^2 +$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{13}\omega_7 + 8\omega_{20}\omega_{11}\omega_{14}\omega_8^2 \omega_{18} cs^4 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2 v_1^2 cs^2 \omega_6^2 v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_2 \omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1^2 \omega_6^2 v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2^2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2 v_1 \omega_6^2 \omega_{22} v_3^2 v_2 \omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^2 \omega_{22} v_2 \omega_{19}\omega_{13}\omega_7^2 -$$

$$2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2v_1^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$$
$$2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 + 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_7^2 +$$
$$2\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_8v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 - 2\omega_{14}\omega_8^2v_1cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1cs^2\omega_6^3v_2^2\omega_{19}\omega_{13}\omega_7^2 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 -$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4\omega_6\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7 + 2\omega_{11}\omega_{14}\omega_8^2v_1\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 -$$
$$2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_7^2 -$$
$$8\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^4\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 -$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_8^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8^2v_1cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_{18}cs^4\omega_8^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 -$$
$$8\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^4\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^2 -$$
$$2\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2v_1cs^2\omega_6^3v_2^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}\omega_7^2 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_6^2v_3^2v_2^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8^2v_1^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_{14}\omega_8^2v_1cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1cs^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2v_1^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{14}\omega_8^2v_1\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}\omega_7^2$$

$C_{36} = $
$$4\omega_{20}\omega_{14}\omega_8^2v_1\omega_6^3v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 +$$
$$4\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 +$$
$$6\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 +$$
$$\omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3v_2\omega_{19}\omega_{13}^2\omega_7^2 + 4\omega_{11}\omega_{14}\omega_8v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3v_2\omega_{19}\omega_{13}^2\omega_7^2 - \omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2v_2^2\omega_{19}\omega_{13}^2\omega_7^2 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{11}\omega_{14}\omega_8v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7^2 + \omega_{20}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2 -$$
$$2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 +$$
$$2\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13} -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_6^3v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 + \omega_{20}\omega_{11}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2\omega_6^3v_2^2\omega_{19}\omega_{13}^2\omega_7^2 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{11}\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7^2 +$$
$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3v_2^2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}^2\omega_7 +$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^2v_2\omega_{19}\omega_{13}^2\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}^2\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7^2 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}^2\omega_7^2 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{22}v_2v_2\omega_{19}\omega_{13}^2\omega_7^2 -$$
$$2\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 + 4\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 +$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7^2 + 2\omega_{20}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}^2\omega_7^2 +$$
$$4\omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_2^2\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$4\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}\omega_7 +$$
$$4\omega_{14}\omega_8^2v_1cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 + 10\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{22}v_2v_2\omega_{19}\omega_{13}^2\omega_7^2 +$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3v_2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$4\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 - 2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$4\omega_{20}\omega_{14}\omega_8^2v_1\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 +$$
$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_6^3v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$12\omega_{20}\omega_{11}\omega_{14}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_6^3v_2^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1cs^2\omega_6^3v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{14}\omega_8^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 -$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^2\omega_{22}v_3^2v_2^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2v_1\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}^2\omega_7 +$$

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$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{11}\omega_{14}\omega_8 cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^2 -$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8^2 v_1\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 -$$
$$4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_2\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{14}\omega_8^2 v_1 cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_6^2 v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2 v_1 cs^2\omega_6^3 v_2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_2\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 - 8\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$8\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 +$$
$$\omega_{20}\omega_{11}\omega_8^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2\omega_6^3 v_2\omega_{19}\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 +$$
$$4\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7 - \omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{13}\omega_7 -$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2\omega_{19}\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{11}\omega_{14}\omega_8 v_1 cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1 cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 +$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13} - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$$
$$2\omega_{14}\omega_8^2 cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{20}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_{14}v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 -$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3 v_3^2 v_2^2\omega_{19}\omega_{13}\omega_7 + 4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 - 4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 +$$
$$4\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 + \omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}^2\omega_7 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3 v_2\omega_{19}\omega_{13}\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2 v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2^2\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7 - \omega_{20}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{14}\omega_8^2\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{14}\omega_8^2\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{13}^2\omega_7 +$$
$$2\omega_{11}\omega_{14}\omega_8^2\omega_6^3\omega_{22}v_3^2 v_2^2\omega_{19}\omega_{13}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}^2\omega_7 +$$
$$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_6^3 v_2^2\omega_{19}\omega_{13}^2\omega_7$$

$C_{37} = 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7^3 -$
$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 +$
$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^3 -$
$12\omega_{14}\omega_8^2\omega_5^2 cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1 cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$
$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^3 - 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 -$
$24\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$
$18\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2 v_2\omega_{13}\omega_7^3 - 24\omega_{11}\omega_{14}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 +$
$12\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7^3 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_7^3 -$
$24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^3 v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7^3 +$
$6\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 18\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$
$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2 cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^3 +$
$24\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 +$
$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^3 -$
$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7^3 +$
$24\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5 cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 +$
$12\omega_{20}\omega_{14}\omega_8^2\omega_5 cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2 cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 +$
$6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 +$
$12\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 10\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_7^3 +$
$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 + 12\omega_{11}\omega_{14}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$
$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13} - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3\omega_{22}v_3^2 v_2\omega_{19}\omega_{13}\omega_7^2 + 36\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 -$
$6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$
$12\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^3 +$
$24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 + 12\omega_{20}\omega_{11}\omega_{14}\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$

$$24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2v_2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_7^3 -$$

$$60\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$$

$$18\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 +$$

$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^3 - 48\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs\,\omega_6^2\omega_{22}\omega_{19}\omega_7^2 + 24\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 +$$

$$24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1cs^2\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 - 24\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 +$$

$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_7^3 + 42\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_7^3 -$$

$$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 +$$

$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 + 24\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 +$$

$$24\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6\omega_{22}v_3^2\omega_{19}\omega_7^3 -$$

$$12\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6\omega_{22}v_3^2v_2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$$

$$24\omega_{14}\omega_8^2\omega_5^2v_1cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^3 + 18\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 -$$

$$12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1cs^2\omega_6^2v_2\omega_{19}\omega_{13}\omega_7^3 +$$

$$24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 +$$

$$6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$$

$$24\omega_{20}\omega_{11}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 -$$

$$24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_8\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 -$$

$$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 -$$

$$24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2 -$$

$$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_7^3 +$$

$$36\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 +$$

$$24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 - \omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 -$$

$$24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2v_3^2v_2\omega_{19}\omega_7^3 + 12\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$$

$$24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_7^3 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6\omega_{22}v_3^2\omega_{19}\omega_7^3 +$$

$$24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 36\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 +$$

$$24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_7^3 - 12\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2v_3^2\omega_{19}\omega_7^3 -$$

$$24\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 +$$

$$6\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^3 + 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 +$$

$$24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3v_2\omega_{19}\omega_7^3 -$$

$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 +$$

$$24\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^3 -$$

$$6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_7^3 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^3 - 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 + 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 -$$

$$12\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{11}\omega_{14}\omega_8\omega_5^2cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 +$$

$$6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3v_3^2v_2\omega_{19}\omega_7^3 + 24\omega_{20}\omega_{14}\omega_8^2\omega_5v_1cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^3 - 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2v_2\omega_{19}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 +$$

$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_7^3 - 60\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 - 24\omega_{20}\omega_{11}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 +$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^4\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 +$$

$$12\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3 +$$

$$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$$

$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^3\omega_{19}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 +$$

$$6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{11}\omega_{14}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 +$$

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$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^3 -$$
$$18\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2 -$$
$$24\omega_{20}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^2v_3^2v_2\omega_{19}\omega_{13}\omega_7^2 - 24\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_7^3 -$$
$$12\omega_{11}\omega_{14}\omega_8\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{20}\omega_{11}\omega_{14}\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^3 +$$
$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^2 - 6\omega_{20}\omega_{14}\omega_8^2\omega_5^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^3 +$$
$$12\omega_{20}\omega_{11}\omega_8\omega_5^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 - 12\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1^2cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3 -$$
$$6\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 + 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^3\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3\omega_{22}v_3^2v_2\omega_{13}\omega_7^2 -$$
$$12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_6^2\omega_{22}v_3^2v_2\omega_{19}\omega_{13}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 -$$
$$12\omega_{11}\omega_{14}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2 + 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2\omega_6^3\omega_{22}v_3^2\omega_{19}\omega_{13}\omega_7^3 - 24\omega_{11}\omega_{14}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2$$

$C_{38} = -4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3v_2\omega_{19}\omega_7^2 - 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 +$
$2\omega_{11}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - \omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 +$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^2cs^2\omega_6^3\omega_{19}\omega_7^2 + 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}^2cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7 +$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2v_2\omega_{13}\omega_7 - 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^2\omega_6^3\omega_{22}v_2^3\omega_{13}\omega_7 + 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 +$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3v_2^2\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5v_1\omega_{18}^2\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 - 8\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2v_2\omega_{19}\omega_7^2 -$
$4\omega_{11}\omega_{14}\omega_8^2\omega_5v_1v_1\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}\omega_8\omega_5v_1v_1\omega_{18}^2cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3v_2^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 +$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3v_2^2\omega_{19}\omega_7^2 + 4\omega_{11}^2\omega_{14}\omega_8\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 +$
$8\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1^2\omega_{18}\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 +$
$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3v_2v_2\omega_{19}\omega_{13}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2cs^2\omega_6\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13} +$
$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$
$8\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$
$2\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2v_2\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_5\omega_{18}^2cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^2v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 +$
$4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{11}^2\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^2 +$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}^3\omega_6^3v_2^2\omega_{19}\omega_7^2 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 -$
$2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}^3\omega_6^3v_2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}cs^2\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 - 12\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 - 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{11}^2\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3\omega_{22}v_2\omega_{19}\omega_7^2 - 12\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2cs^2\omega_6^3v_2\omega_{19}\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{11}^2\omega_8^2\omega_5v_1\omega_{18}\omega_6^2v_2^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2v_2\omega_{13}\omega_7 + 4\omega_{11}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}^2cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3v_2^2\omega_{19}\omega_{13}\omega_7^2 +$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{13}\omega_7 + 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^2\omega_{22}v_2\omega_{19}\omega_7^2 +$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 -$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3v_2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}^2cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^3v_2v_2\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}cs^2\omega_6^2v_2\omega_{19}\omega_7^2 - 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1v_1^2\omega_{18}^2cs^2\omega_6^3v_2\omega_{19}\omega_{13}\omega_7^2 -$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 - 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}^3\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$
$4\omega_{20}\omega_{11}^2\omega_8\omega_5v_1\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3v_2^2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 +$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$
$2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{13}\omega_7 - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{22}v_2\omega_{19}^2 + 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$
$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13} - 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5v_1^2\omega_{18}\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5v_1\omega_{18}\omega_6^3\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 +$

$$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{11}^2\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 +$$
$$4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 -$$
$$4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_6^3\omega_{22}v_2^2\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 +$$
$$4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^3\omega_6^3\omega_{22}v_2^2\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 -$$
$$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_{18}^2 cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 +$$
$$4\omega_{11}^2\omega_{14}\omega_8\omega_5 v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 + 9\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 -$$
$$4\omega_{20}\omega_{14}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 -$$
$$4\omega_{11}^2\omega_{14}\omega_8\omega_5 v_1\omega_{18}^2\omega_6^2\omega_{22}v_2^2\omega_{19}\omega_{13}\omega_7^2 - 4\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 +$$
$$4\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2\omega_8\omega_{22}\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 +$$
$$4\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\omega_{18}cs^2\omega_6\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1^2\omega_{18}^2\omega_6^3 v_2\omega_{19}\omega_{13}\omega_7^2 + 4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5\omega_5\omega_{18}cs^2\omega_6^3\omega_{22}v_2\omega_{19}\omega_{13}\omega_7 -$$
$$4\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}^2\omega_6^2\omega_{22}v_2^2\omega_{13}\omega_7^2 + 4\omega_{11}^2\omega_{14}\omega_8^2\omega_5 v_1\omega_{18}^2 cs^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 + 2\omega_{20}\omega_{11}^2\omega_{14}\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{22}v_2\omega_{19}\omega_{13}\omega_7^2$$

$C_{39} = \omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^4\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 8\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^4\omega_6\omega_{19}\omega_{16}\omega_{23} +$
$\omega_{20}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{16}\omega_7^3 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{11}\omega_8 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^3 - 8\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2 v_1\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{16}\omega_7^3 -$
$\omega_{20}\omega_{17}\omega_8^2 v_1 cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8 v_1\omega_6 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{11}\omega_8 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$\omega_{20}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 + \omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3 -$
$2\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^2\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^3 -$
$2\omega_{17}\omega_8^2 v_1^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2 v_1 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$
$2\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2 v_1^2\omega_{18}\omega_6 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11} v_1\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^2 - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^2 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{16}\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8 v_1^2\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2 cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{16}\omega_7^2\omega_{23} - \omega_{20}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^3 + 4\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^3 -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{16}\omega_7^3 - 2\omega_{20}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} +$
$4\omega_{20}\omega_{17}\omega_{11} v_1\omega_{18}cs^4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^3 - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^4\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23} - \omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_7^3 +$
$2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_6 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2 v_1^2 cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6 v_3 v_2^2\omega_{16}\omega_7^2 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{16}\omega_7^3 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2\omega_{19}\omega_7^3 -$
$4\omega_{20}\omega_{17}\omega_{11} v_1\omega_{18}cs^4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}\omega_6 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{16}\omega_7^2\omega_{23} + \omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{11}\omega_8 v_1^2\omega_{18}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$
$8\omega_{20}\omega_{17}\omega_{11} v_1\omega_{18}cs^4\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{11}\omega_8 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{23} +$
$2\omega_{17}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 cs^2\omega_6^2 v_3\omega_{16}\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^2\omega_{23} +$
$\omega_{20}\omega_{17}\omega_8^2 v_1^2 cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^3 -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3^2\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3 v_2^2\omega_{16}\omega_7^3 -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{17}\omega_{11}\omega_8 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 - 2\omega_{17}\omega_8^2 v_1^2\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_6^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$

$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{16}\omega_7^2 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^2 - 2\omega_{17}\omega_8^2 cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$2\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{19}\omega_7^3 + 2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^4 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$\omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{19}\omega_7^2 \omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$$
$$2\omega_{17}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{16}\omega_7^3 \omega_{23} + 2\omega_{17}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 2\omega_{17}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{20}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$2\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{20}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{16}\omega_7^2 - \omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + \omega_{20}\omega_{17}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 -$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{16}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 +$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - \omega_{20}\omega_{17}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - \omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_7^3 - 2\omega_{17}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{16}\omega_7^3 \omega_{23} +$$
$$2\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2 \omega_6 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - \omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_7^3 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_7^3 -$$
$$2\omega_{20}\omega_{11}\omega_8 v_1^2 \omega_{18}\omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 cs^2 \omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{19}\omega_7^2 + 2\omega_{17}\omega_{11}\omega_8^2 v_1^2 cs^2 \omega_6 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - \omega_{20}\omega_{17}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{16}\omega_7^2 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + \omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_7^3 \omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{16}\omega_7^2 \omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} -$$
$$2\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_7^3 \omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_7^3 - 2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_7^3 - 2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6 v_3 v_2^2 \omega_{19}\omega_7^3 \omega_{23} - 2\omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_7^3 -$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{16}\omega_7^3 \omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 cs^2 \omega_6 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$2\omega_{17}\omega_{11}\omega_8 v_1^2 \omega_{18}\omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{16}\omega_7^3 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_7^3 -$$
$$2\omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 + 2\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8 v_1 cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$2\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{16}\omega_7^3 - 2\omega_{20}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_7^3 \omega_{23} +$$
$$2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{16}\omega_7^3 \omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{16}\omega_7^3 \omega_{23} + \omega_{20}\omega_{17}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{16}\omega_7^3 \omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^4 \omega_6^2 \omega_{19}\omega_{16}\omega_7 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1^2 cs^2 \omega_6 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{16}\omega_7^3 \omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{16}\omega_7^3 \omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18}\omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$$
$$2\omega_{17}\omega_{11}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + \omega_{20}\omega_{17}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{19}\omega_7^2 \omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1^2 \omega_{18}\omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$$
$$2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 + \omega_{20}\omega_{17}\omega_8^2 v_1^2 \omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - \omega_{20}\omega_{17}\omega_8^2 v_1^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6 v_3 \omega_{19}\omega_{16}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_7^2 + \omega_{20}\omega_{17}\omega_8^2 v_1 \omega_{18}\omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1^2 \omega_{18} cs^2 \omega_6 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^4 \omega_6 \omega_{19}\omega_{16}\omega_7 \omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_6 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^4 \omega_6^2 \omega_{19}\omega_{16}\omega_7 \omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8 \omega_{18} cs^2 \omega_6^2 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_7^2 \omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18}\omega_6^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 2\omega_{17}\omega_8^2 v_1 cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + \omega_{20}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$$
$$\omega_{20}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 2\omega_{17}\omega_{11}\omega_8 v_1 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7 + 2\omega_{20}\omega_{11}\omega_8 v_1 \omega_{18}\omega_6 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23}$$

$C_{40} = -12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 cs^4 \omega_6^3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{17}\omega_8^2 \omega_5^2 cs^2 \omega_6^3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 12\omega_{20}\omega_{11}\omega_8 \omega_5^2 \omega_{18} cs^4 \omega_6^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$
$12\omega_{20}\omega_{17}\omega_8^2 \omega_5^2 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{16}\omega_7^2 \omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2 \omega_5^2 v_1 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 12\omega_{20}\omega_{11}\omega_8 \omega_5 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$
$36\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 \omega_{16}\omega_7 + 12\omega_{20}\omega_{11}\omega_8 \omega_5^2 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$
$6\omega_{20}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18}\omega_6^3 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 \omega_{19}\omega_7^2 \omega_{23} + 12\omega_{20}\omega_{11}\omega_8 \omega_5^2 \omega_{18}\omega_6^3 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} -$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18}\omega_6^3 v_3^2 v_2^2 \omega_{19}\omega_7^2 \omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_5^2 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8 \omega_5^2 \omega_{18} cs^2 \omega_6^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2 \omega_5^2 cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 cs^4 \omega_6^3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$
$12\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18}\omega_6^3 v_3^2 v_2^2 \omega_{16}\omega_7^3 \omega_{23} - 12\omega_{20}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 - 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{19}\omega_7^2 -$
$24\omega_{17}\omega_{11}\omega_8 \omega_5^2 v_1 \omega_{18}\omega_6^3 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 12\omega_{20}\omega_{11}\omega_8 \omega_5^2 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{19}\omega_7^2 \omega_{23} + 12\omega_{20}\omega_{11}\omega_8 \omega_5^2 cs^2 \omega_6 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{16}\omega_7^2 - 12\omega_{20}\omega_{17}\omega_{11}\omega_8 \omega_5^2 \omega_{18} cs^4 \omega_6^3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 24\omega_{17}\omega_{11}\omega_8^2 \omega_5 v_1 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{16}\omega_7^2 \omega_{23} +$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18} cs^4 \omega_6^3 \omega_{19}\omega_{16}\omega_7 \omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} +$
$24\omega_{20}\omega_{11}\omega_8 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 24\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{16}\omega_7^3 \omega_{23} -$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18}\omega_6^3 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7 - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18} cs^2 \omega_6 v_2^2 \omega_{19}\omega_7^3 \omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 \omega_{19}\omega_{16}\omega_7 +$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 12\omega_{17}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 \omega_{19}\omega_{16}\omega_7^3 +$
$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18} cs^2 \omega_6^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2 \omega_5 \omega_{18} cs^4 \omega_6^3 \omega_{19}\omega_{16}\omega_7 \omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} -$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^2 v_3 \omega_{19}\omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18} cs^4 \omega_6^2 \omega_{19}\omega_{16}\omega_{23} - 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{16}\omega_7^3 \omega_{23} -$
$24\omega_{20}\omega_{17}\omega_{11}\omega_8 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 24\omega_{17}\omega_{11}\omega_8 \omega_5^2 v_1 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} + 6\omega_{20}\omega_{11}\omega_8 \omega_5^2 cs^4 \omega_6^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} +$
$42\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{17}\omega_8^2 \omega_5^2 \omega_6^3 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$
$12\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18} cs^4 \omega_6^3 \omega_{16}\omega_7^2 \omega_{23} - 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 \omega_{18} cs^2 \omega_6^3 v_3 \omega_{16}\omega_7 + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_{18} cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^2 +$
$24\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 v_1 cs^2 \omega_6^3 v_3 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2 \omega_5^2 \omega_{18} cs^2 \omega_6^3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 cs^2 \omega_6^3 v_3^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} -$
$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18} cs^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8 \omega_5^2 \omega_{18} cs^2 \omega_6 v_2^2 \omega_{19}\omega_{16}\omega_7^3 \omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18} cs^4 \omega_6 \omega_{19}\omega_7^2 \omega_{23} +$
$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5^2 \omega_{18}\omega_6^3 v_3 v_2^2 \omega_{19}\omega_{16}\omega_7^3 - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6^3 v_2^2 \omega_{16}\omega_7^2 \omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2 \omega_5 \omega_{18} cs^2 \omega_6 v_2^2 \omega_{19}\omega_{16}\omega_7^2 \omega_{23} -$

$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_7^3 -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^3 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}^2\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{16}^2\omega_7^3 + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_7^2\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$24\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{16}\omega_7^3\omega_{23} +$$
$$24\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_7^2\omega_{23} - 24\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2 v_2^2\omega_{16}\omega_7^2 +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_7^3 -$$
$$12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3 - 24\omega_{17}\omega_8^2\omega_5^2 v_1\omega_8^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 24\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{16}\omega_7^3\omega_{23} -$$
$$18\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} -$$
$$6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{16}\omega_7^2 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_7^3\omega_{23} +$$
$$24\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{16}\omega_7^3\omega_{23} - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^2 + 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 18\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_2^2\omega_{16}\omega_7^3\omega_{23} +$$
$$24\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2 +$$
$$12\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{16}\omega_7^3\omega_{23} -$$
$$60\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 18\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{16}^2\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{16}\omega_7^2\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_7^2 + 24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{16}\omega_7^2\omega_{23} -$$
$$24\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{16}\omega_7^3\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5 cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{16}\omega_7^3 - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2 +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^2 - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$24\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{16}\omega_7^3 -$$
$$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^2\omega_{23} +$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_7^3 -$$
$$24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_7^3\omega_{23} - 60\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_6^2 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$24\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{16}\omega_7^2\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7 - 12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2 v_2\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^2 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 10\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{16}\omega_7^3 + 12\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{16}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_7^3 +$$
$$12\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$48\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_5^2\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$18\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_5^2\omega_{18}cs^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_7^3 +$$
$$12\omega_{20}\omega_{17}\omega_8^2\omega_5 cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2 v_2\omega_{19}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_7^3 +$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 24\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2 cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_6^2 v_3^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 24\omega_{20}\omega_{11}\omega_8\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_7^3 + 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 v_1\omega_{18}\omega_6^3 v_3 v_2^2\omega_{19}\omega_7^2\omega_{23} +$$
$$12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3\omega_{16}\omega_7^2\omega_{23} +$$
$$12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2 cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^3 + 12\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{17}\omega_8^2\omega_5^2 v_1\omega_{18}cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} +$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{17}\omega_8^2\omega_5^2 cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2 cs^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{17}\omega_8^2\omega_5^2 v_1 cs^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$

$$12\omega_{20}\omega_{17}\omega_8^2\omega_5^2v_1\omega_6^3v_3v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}\omega_5^2\omega_{18}cs^2\omega_6^3v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3v_3v_2^2\omega_{19}\omega_{16}\omega_7^3 - 6\omega_{20}\omega_{17}\omega_{11}\omega_5^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_7^3 + 36\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3v_3v_2^2\omega_{16}\omega_7^3 + 24\omega_{20}\omega_{17}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23} -$$
$$6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{19}\omega_7^3\omega_{23} - 6\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_6^3v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 18\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$6\omega_{20}\omega_{11}\omega_8^2\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_6^3v_3v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_6^3v_3v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{11}\omega_8\omega_5^2v_1\omega_{18}\omega_6^3v_3v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$24\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3v_3v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2v_1\omega_{18}\omega_6^3v_3v_2^2\omega_{19}\omega_{16}\omega_7^3 + 24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$24\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_8^2\omega_5^2\omega_{18}cs^2\omega_6^3v_3^2\omega_{16}\omega_7^3 + 12\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3v_3\omega_{19}\omega_7^3 + 24\omega_{20}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 24\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3v_3^2v_2^2\omega_{16}\omega_7^3\omega_{23} + 24\omega_{17}\omega_{11}\omega_8\omega_5^2v_1\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2\omega_{18}\omega_6^3v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}cs^4\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2v_1\omega_{18}cs^2\omega_6^3v_3\omega_{16}\omega_7^3\omega_{23} + 12\omega_{17}\omega_{11}\omega_8\omega_5^2\omega_{18}\omega_6^3v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}$$

$C_{41} = -\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6v_{19}\omega_{16}^2\omega_7^2\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{16}^2\omega_7^3 + 2\omega_{17}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} -$
$2\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^2 -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^2 - 3\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7\omega_{23} -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 3\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} -$
$6\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_{18}cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$2\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^3 +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{20}\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^3 +$
$2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{20}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 5\omega_{20}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6v_3^2\omega_{16}^2\omega_7^2 + 2\omega_{17}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3 + \omega_{20}\omega_{17}\omega_8^2v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3 - \omega_{20}\omega_{17}\omega_8^2v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3 +$
$2\omega_{17}\omega_8^2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_8v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{16}^2\omega_7^3 - 2\omega_{17}\omega_{11}\omega_8^2v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23} +$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2 + \omega_{20}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{17}\omega_8^2v_1cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{16}^2\omega_7^2\omega_{23} -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2 -$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{20}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$2\omega_{17}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7 -$
$2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{20}\omega_{11}\omega_8v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$\omega_{20}\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3 - 2\omega_{20}\omega_{11}\omega_8v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2 - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_8^2v_1cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6v_3\omega_{16}^2\omega_7^3\omega_{23} -$
$4\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3 + 2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6v_3^2\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_8^2cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8\omega_{18}cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 3\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} +$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^3 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3 +$
$2\omega_{20}\omega_{17}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} +$
$2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7 + 2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3 + \omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3 +$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$\omega_{20}\omega_{11}\omega_8^2v_1\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^3 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$
$2\omega_{17}\omega_{11}\omega_8^2cs^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$\omega_{20}\omega_{17}\omega_{11}\omega_8^2v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^2\omega_{23} -$

$$2\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^2 - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{20}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_8^2 v_1\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23} -$$
$$2\omega_{17}\omega_{11}\omega_8^2 v_1^2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1^2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} -$$
$$6\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2\omega_{16}^2\omega_7^2 -$$
$$4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}^2\omega_{23} + 2\omega_{20}\omega_{11}\omega_8 v_1\omega_{18}\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + \omega_{20}\omega_{11}\omega_8^2\omega_{18}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}$$

$$C_{42} = 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3 +$$
$$4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^3\omega_{16}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2 + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2 cs^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3 +$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^3 +$$
$$\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1 cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} + 8\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 - 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$9\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}^2\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3 +$$
$$4\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23} +$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^3\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 4\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1 cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 4\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$12\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2 cs^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 4\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2 -$$
$$2\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 +$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2 v_3\omega_{19}^3\omega_{16}\omega_7^2\omega_{23} -$$
$$2\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2 cs^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23} -$$
$$14\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 4\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3 +$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$12\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7 +$$
$$\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^2\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^2 + 2\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_7^2\omega_{23} + \omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2 cs^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} +$$
$$6\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} - \omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7 + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7 -$$
$$4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1 cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2\omega_{19}\omega_{16}\omega_7^2 + 2\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_6 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{17}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{11}\omega_8\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1 cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3 +$$

$$2\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_7 -$$
$$\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3 + 8\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2 cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$8\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2 - 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3 -$$
$$2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1 cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}^2\omega_7^3 + \omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2 cs^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_6 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}\omega_8 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} -$$
$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}^3 - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} -$$
$$8\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} + 4\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 +$$
$$2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2 cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8 v_1\omega_{18}cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} -$$
$$4\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2\omega_6 v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 2\omega_{17}\omega_{11}\omega_8\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3 +$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 4\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^2 - 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_6^2 v_3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1 cs^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 4\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$2\omega_{17}\omega_{11}\omega_8^2\omega_5 v_1^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6^2 v_3 v_2^2\omega_{19}\omega_7^3\omega_{23} + \omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_7^3 -$$
$$8\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}cs^2\omega_6^2 v_3\omega_{19}^2\omega_{16}\omega_{23} - 4\omega_{17}\omega_{11}^2\omega_8^2\omega_5 v_1\omega_{18}\omega_6 v_3 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 2\omega_{17}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}$$

$C_{43} =$
$$-36cs^2 v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 156\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 18\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 +$$
$$3\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 6\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 12\omega_{11}v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + 12\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 18cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$$
$$12\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 36cs^2 v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3 + 12\omega_{11}v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + 12\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 +$$
$$24v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 18\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$36cs^4\omega_{16}^2\omega_{10}\omega_7^3 + 18\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 15\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 54\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 6\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$$
$$12v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}cs^2\omega_{19}\omega_{10}\omega_7\omega_{23} - 6cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 6\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 - 12\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$27\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}cs^2 v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 36\omega_{11}cs^2 v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} -$$
$$6cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 144\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 18\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 12\omega_{11}cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3 -$$
$$6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 6\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 18\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 36\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^2 -$$
$$24\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} + 12\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 5\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 6cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$$
$$6\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 36\omega_{11}cs^2 v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 96\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} + 12cs^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 45\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$$
$$12\omega_{11}cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 36\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 108\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + \omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}cs^2 v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} -$$
$$24\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 12\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{10}^2\omega_7\omega_{23} - 36cs^4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 -$$
$$24v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 6v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 42\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$36\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 36\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^3 - 6\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 12\omega_{11}cs^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 6cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 36\omega_{11}cs^2 v_3^2\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$18\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 15\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$72\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 12\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - \omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 -$$
$$18cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 12\omega_{11}cs^4\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} - 36\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} -$$
$$6v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 36cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 5\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$$
$$18\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 36\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}^2\omega_7^2 + 12\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 - 12cs^2\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$72cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 6\omega_{11}cs^2 v_3^2\omega_{16}^2\omega_{10}\omega_7^3 + 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 48\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 12\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} +$$
$$6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 9\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_{23} + 12v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 3\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$6\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 36\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 36\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 +$$
$$12\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}cs^4\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} - 36\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} -$$
$$12\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 - 9\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 12\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} +$$
$$12\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^3 - 12\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^3 - 6\omega_{11}cs^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 72\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 48\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$$
$$12\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 18cs^2 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 60\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 36\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$15\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 18\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 - 3\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} -$$
$$36\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^3 - 18cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 72cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} +$$
$$12cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3 - 12\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^3 + 6\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{11}cs^2 v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 18\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}$$

$C_{44} =$
$$-12cs^2 v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 72\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 18\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 -$$
$$6\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 18\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 36\omega_{11}v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3 - 48\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} + 12\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$$
$$6cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}cs^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 12cs^2 v_3^2\omega_{16}^2\omega_{10}\omega_7^3 + 36\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^2 +$$
$$36\omega_{11}v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 72v_3^2 v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 36\omega_{11}v_3^2 v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$
$$6\omega_{11}cs^2 v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 12cs^4\omega_{16}^2\omega_{10}\omega_7^3 + 6\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 6\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 18\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$

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$18\omega_{11}v_3^2v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 36v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 6\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 15\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} +$

$9\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}cs^2v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} + 36v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{11}cs^2v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} -$

$6cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 48\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 36v_3^2v_2^2\omega_{10}\omega_7^2\omega_{23} - 6\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 36\omega_{11}cs^2v_2^2\omega_{16}\omega_{10}\omega_7^3 -$

$6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 60\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} + 18\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 18\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^2 -$

$72\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 12\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 + 5\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 36\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7 + 18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$

$18\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 12\omega_{11}cs^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} + 12cs^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 15\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$

$36\omega_{11}cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 12\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 36\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 6\omega_{11}cs^2v_3^2\omega_{19}\omega_{10}^2\omega_7\omega_{23} - 24\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} -$

$36\omega_{11}v_3^2v_2^2\omega_{19}\omega_{10}^2\omega_7\omega_{23} - 5\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12cs^4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 72v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$

$18v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} -$

$12\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^3 - 18\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 6cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 12\omega_{11}cs^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2 + 6\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 +$

$15\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 36\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12v_3^2v_2^2\omega_{16}\omega_{10}\omega_7^3 + 24\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} +$

$12\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 - 6cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 12\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$

$12\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 6\omega_{11}v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} - 18v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 15\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$

$12\omega_{11}cs^2v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 36\omega_{11}cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 102\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} -$

$12\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 + 36\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 - 12cs^2\omega_{16}^2\omega_{10}^2\omega_7^2 + 24cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}cs^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3 +$

$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 144\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} + 6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 + 27\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} +$

$36v_3^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - \omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 12\omega_{11}cs^4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$

$12\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 + 12\omega_{11}v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 12\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + \omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 36cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$

$12\omega_{11}cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 12\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 - 9\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}cs^2v_3^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 6\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$

$60\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} + 12\omega_{11}v_3^2\omega_{16}^2\omega_{10}\omega_7^3 - 12\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^2 - 24\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 48\omega_{11}v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$

$12\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 6cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 5\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 108\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$

$45\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 6\omega_{11}cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}v_3^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7 + 30\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} -$

$12\omega_{11}cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 36\omega_{11}cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^3 - 6cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$

$36cs^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3 - 12\omega_{11}v_3^2\omega_{16}^2\omega_{10}^2\omega_7 + 6\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 24\omega_{11}cs^2v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} + 54\omega_{11}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}$

$C_{45} = -12\omega_{11}^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 24\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 - 132\omega_{11}^2cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$

$12\omega_{11}^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} + 36\omega_{11}\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 24\omega_{11}cs^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} +$

$12\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 72\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 12\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 +$

$6\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}^2cs^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 24\omega_{11}^2cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 +$

$12\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 66\omega_{11}^2cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 36\omega_{11}cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - \omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$

$12\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 6\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{11}^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 +$

$12\omega_{11}^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 24\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 36\omega_{11}^2cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 24\omega_{11}^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} -$

$36\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7 - 24\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 60\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} -$

$6\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 24\omega_{11}cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2cs^2\omega_{19}^2\omega_{10}\omega_{10}\omega_7^3\omega_{23} + 3\omega_{11}^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$

$24\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 18\omega_{11}^2cs^2\omega_{19}\omega_{16}^3\omega_7\omega_{23} + \omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 24\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 -$

$24\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 48\omega_{11}^2cs^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} - 24\omega_{11}^2cs^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$

$12\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 12\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 96\omega_{11}^2cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} - 84\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$

$24\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 24cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 18\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$

$12\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 90\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{11}^2v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 18\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 66\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$

$12\omega_{11}^2v_2^2\omega_{19}\omega_{16}^2\omega_7\omega_{23} + 4\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{11}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{11}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 48\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$

$12\omega_{11}cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 12\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 24\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 156\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} -$

$24\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{11}^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 6\omega_{11}^2v_2^2\omega_{19}\omega_{16}^3\omega_{23} - 12\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7 +$

$72\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 18\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 18\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 24cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 24\omega_{11}^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23} -$

$24\omega_{11}^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 24\omega_{11}^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7 - 66\omega_{11}\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 4\omega_{11}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 84\omega_{11}cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$

$42\omega_{11}^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}$

$C_{46} = 18\omega_{11}v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} + 150\omega_{11}^2\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{13} + 5\omega_{11}^3\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2 - 18\omega_{11}\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} -$

$18\omega_{11}^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^3v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} - 12\omega_{11}^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^3v_1^2\omega_{18}\omega_6^2v_3^2 + 18\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6^3\omega_{13} +$

$6\omega_{11}^2v_1^2\omega_{18}\omega_6^3\omega_{13} - 12\omega_{11}^2cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 18\omega_{11}^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} - 36\omega_{11}^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22} + 12\omega_{11}^3v_1^2\omega_{18}\omega_6^3v_3^2\omega_{13} -$

$12\omega_{11}^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^3v_1^2\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^3v_1^2\omega_{18}\omega_6\omega_{22} - 24\omega_{11}^2v_1^2\omega_{18}\omega_6\omega_{22}\omega_{13} - 12\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6^2 - 12\omega_{11}^3\omega_{18}cs^2\omega_6\omega_{22}v_3^2\omega_{13} +$

$36\omega_{11}^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{13} + 6\omega_{11}^2\omega_{18}cs^2\omega_6^3\omega_{13} - 36\omega_{11}\omega_{18}cs^4\omega_6^3\omega_{13} + 12\omega_{11}^3\omega_{18}cs^2\omega_6^2v_3^2 - 72\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^2cs^4\omega_6^3\omega_{22}\omega_{13} -$

$12\omega_{11}\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 6\omega_{11}^3\omega_{18}cs^2\omega_6^3 + 30\omega_{11}\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}^3v_1^2\omega_{18}\omega_6\omega_{22}\omega_{13} - 24\omega_{11}^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13} +$

$12\omega_{11}^3\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} - 36\omega_{11}^3v_1^2cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^3\omega_{18}cs^2\omega_6^3\omega_{13} - 36\omega_{11}^2v_1^2cs^2\omega_6^3\omega_{22}\omega_{13} + 2\omega_{11}^3\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} + 6\omega_{11}^3v_1^2\omega_{18}\omega_6^3v_3^2\omega_{13} +$

$72\omega_{11}^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2\omega_{18}cs^2\omega_6\omega_{22}\omega_{13} - 12\omega_{11}^3v_1^2\omega_{18}\omega_6^3\omega_{13} + 12\omega_{11}^3cs^4\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}^2cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} +$

$18\omega_{11}^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{22} - 12\omega_{11}\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^2v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^3\omega_{18}cs^4\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^3v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} -$

$6\omega_{11}^3v_1^2\omega_{18}\omega_6^3v_3^2 - 12\omega_{11}^2v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2 - 36\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^3\omega_{18}cs^2\omega_6^3v_3^2\omega_{13} - 36\omega_{11}^2v_1^2\omega_{18}cs^2\omega_6^3\omega_{13} +$

$6\omega_{11}^3v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^3v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^3v_1^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^3\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} +$

$12\omega_{11}^3cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 48\omega_{11}\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13} + 36\omega_{11}^3\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13} + 36\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} + 6\omega_{11}^3\omega_{18}cs^2\omega_6^3v_3^2\omega_{13} - 18\omega_{11}\omega_{18}cs^4\omega_6^3\omega_{13} +$

$24\omega_{11}^2v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} + 36\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} + 72\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^3\omega_{18}cs^2\omega_6\omega_{22}v_3^2\omega_{13} -$

$12\omega_{11}^3cs^2\omega_6\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^2v_1^2\omega_6^3\omega_{22}\omega_{13} + 180\omega_{11}^3\omega_{18}cs^4\omega_6\omega_{22}\omega_{13} - 6\omega_{11}^3\omega_{18}cs^2\omega_6^3v_3^2 + 36\omega_{11}^3\omega_{18}cs^4\omega_6^3\omega_{13} - 42\omega_{11}^2\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13} -$

$42\omega_{11}^3\omega_{18}cs^4\omega_6^2\omega_{22}\omega_{13} + 18\omega_{11}\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 18\omega_{11}^3\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^2\omega_{18}cs^2\omega_6^2\omega_{22} - 12\omega_{11}^3v_1^2\omega_{18}\omega_6^3 - 12\omega_{11}^3v_1^2\omega_{18}\omega_6^2v_3^2\omega_{13} -$

$36\omega_{11}^2v_1^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} - 6\omega_{11}^2v_1^2\omega_{18}\omega_6^3v_3^2\omega_{13} + 36\omega_{11}^3v_1^2cs^2\omega_6^2\omega_{22}\omega_{13} - \omega_{11}^3\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}^2\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} +$

$18\omega_{11}^2\omega_{18}cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} + \omega_{11}^3\omega_{18}cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^3v_1^2\omega_{18}\omega_6^3 - 18\omega_{11}^3\omega_{18}cs^4\omega_6^3 + 18\omega_{11}^2\omega_{18}cs^4\omega_6^3\omega_{22} - 36\omega_{11}^3v_1^2\omega_{18}cs^2\omega_6^3\omega_{13} +$

$12\omega_{11}\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} - 12\omega_{11}^3v_1^2\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}^2v_1^2\omega_{18}\omega_6\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^2cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^3\omega_{18}cs^2\omega_6^3\omega_{13} +$

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$$6\omega_{11}^3 v_1^2\omega_{18}^2\omega_6^3 + 12\omega_{11}^2 v_1^2\omega_{18}\omega_6^2\omega_{22} - 12\omega_{11}^3 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} + 36 v_1^2\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11} v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} - 6\omega_{11}^2\omega_{18} cs^4\omega_6^3\omega_{22}\omega_{13} -$$
$$88\omega_{11}^3\omega_{18}^2 cs^4\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11} v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 12 v_1^2\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13} - 72\omega_{11}^2 v_1^2\omega_{18}^2 cs^2\omega_6^2\omega_{22}\omega_{13} -$$
$$12\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{13} - 12\omega_{11}^3 v_1^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 18\omega_{11}^3\omega_{18}^2 cs^4\omega_6^3\omega_{13} + 36\omega_{11}^3\omega_{18} cs^4\omega_6^2 + 6\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} + 6\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2 -$$
$$12\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{13} - 54\omega_{11} v_1^2\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^3\omega_{18} cs^2\omega_6\omega_{22}\omega_{13} - 96\omega_{11}^3\omega_{18} cs^4\omega_{22}\omega_{13} - 18\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^3 - 84\omega_{11}^2\omega_{18} cs^4\omega_6\omega_{22}\omega_{13} +$$
$$36\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^2\omega_{13} + 12\omega_{11}^3 cs^2\omega_6^2\omega_{22}\omega_{13} - 36\omega_{11}^2\omega_{18} cs^4\omega_6^2\omega_{22} - 12\omega_{11}^3\omega_{18} cs^2\omega_6^2 v_3^2\omega_{13} - 6\omega_{11}^2\omega_{18} cs^2\omega_6^3 v_3^2\omega_{13} - 6\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{22} -$$
$$12\omega_{11}^2 cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 36\omega_{11}\omega_{18}^2 cs^4\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{13} + 12\omega_{11}^3 v_1^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 24\omega_{11}^2 v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 2\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} +$$
$$12\omega_{11}^3\omega_{18} cs^2\omega_6^2 v_3^2\omega_{13} - 12\omega_{11}^3\omega_{18}^2 cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^2\omega_{18} cs^2\omega_6^3 v_3^2\omega_{13} + 36\omega_{11}^3 v_1^2\omega_{18}^2 cs^2\omega_6^2 + 6\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2 +$$
$$108\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} - 36\omega_{11}^3\omega_{18} cs^4\omega_6^2\omega_{13} + 12\omega_{11}\omega_{18} cs^4\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 12\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13} -$$
$$12\omega_{11}^3 cs^4\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11} v_1^2\omega_{18}^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 12\omega_{11}^3\omega_{18} cs^2\omega_6\omega_{22}\omega_{13} - 36\omega_{11} v_1^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} - 24\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} -$$
$$6\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{13} - 36\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} + 12 v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 24\omega_{11}^3 v_1^2\omega_{18}\omega_6\omega_{22}v_3^2\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22} + 36\omega_{11}\omega_{18} cs^4\omega_6^3\omega_{13}$$

$$C_{47} = 7\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 9\omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 7\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 9\omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 - \omega_{11}^2\omega_{18} cs^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$$
$$3\omega_{11}^2\omega_{18}^2\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 + 11\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 2\omega_{11}\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 2\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{22} - 24\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6\omega_6^3\omega_{22}\omega_{13} +$$
$$12\omega_{18}^2 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 8\omega_{11}\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 2\omega_{11}^3\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} - 4\omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{13} + 4\omega_{11}^2\omega_{18} cs^2\omega_9\omega_6\omega_6^3\omega_{13} - 2\omega_{11}^2\omega_{18}^2 cs^2\omega_9\omega_6\omega_6^2\omega_{13} +$$
$$8\omega_{11}^3 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + \omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - \omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 - 2\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{13}^2 + 4\omega_{11}^3\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} + 2\omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} +$$
$$4\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6\omega_6^2\omega_{22} + 2\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{13} + 2\omega_{11}^3\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} - 2\omega_{11}^2\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 4\omega_{11}^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 5\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 -$$
$$4\omega_{11}^3\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} + 2\omega_{11}^2\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13} + 4\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + \omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - \omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13}^2 -$$
$$8\omega_{11}^3\omega_{18}^2 cs^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 4\omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{13} - 2\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 - 3\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13}^2 + 2\omega_{11}^3\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} - 4\omega_{11}^3\omega_9\omega_6^3\omega_{22}\omega_{13}^2 -$$
$$4\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{13} + 8\omega_{11}^2\omega_{18} cs^2\omega_9\omega_6^2\omega_{22}\omega_{13} + \omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 15\omega_{11}\omega_{18}^3 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 3\omega_{11}^2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} -$$
$$4\omega_{11}^3\omega_{18} cs^2\omega_6\omega_{22}\omega_{13} - 8\omega_{11}^2 cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 8\omega_{11}^3 cs^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 4\omega_{11}^3\omega_9\omega_6^2\omega_{22}v_3^2\omega_{13} - 2\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} +$$
$$2\omega_{11}^3\omega_{18}\omega_9\omega_6\omega_{22}v_3^2\omega_{13} + 2\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{13} - 6\omega_{11}^3\omega_{18}\omega_9\omega_6\omega_{22}v_3^2\omega_{13} + 26\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6\omega_{22}\omega_{13} - 4\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{13} +$$
$$4\omega_{11}^2\omega_9\omega_6^3\omega_{22}^2\omega_{13} + 4\omega_{11}^3\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13} - 5\omega_{11}\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 4\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{13} + 8\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 4\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^2\omega_{13} +$$
$$3\omega_{11}^2\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 3\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 2\omega_{11}^3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} - 5\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 4\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{13} -$$
$$4\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6\omega_{22}\omega_{13} + 2\omega_{11}\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 4\omega_{11}^3\omega_9\omega_6^2\omega_{22}\omega_{13} - 6\omega_{11}^2\omega_{18} cs^2\omega_9\omega_6\omega_{22}\omega_{13} -$$
$$4\omega_{11}\omega_{18}\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 4\omega_{18}^2\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} + 6\omega_{11}^3\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 2\omega_{11}\omega_{18}^3 cs^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6\omega_{22}\omega_{13} +$$
$$13\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 4\omega_{11}^3\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13} - 2\omega_{11}^3\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} - 2\omega_{11}\omega_{18}^3\omega_9\omega_6^2\omega_{22}\omega_{13} + 4\omega_{11}^3\omega_9\omega_6^3\omega_{22}v_3^2\omega_{13} - 4\omega_{18}^3\omega_9\omega_6^3\omega_{22}^2\omega_{13} -$$
$$2\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{13} + 4\omega_{11}^3\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13} + 4\omega_{11}^2\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13} + 2\omega_{11}^2\omega_{18}\omega_9\omega_6^3\omega_{13} - 16\omega_{11}^3\omega_{18} cs^2\omega_9\omega_{22}\omega_{13} + 4\omega_{11}^3\omega_{18} cs^2\omega_9\omega_6^3\omega_{13} -$$
$$4\omega_{11}^3\omega_{18}\omega_9\omega_6^3\omega_{13} - \omega_{11}^3\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 2\omega_{11}^3\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 2\omega_{11}^3\omega_{18}\omega_9\omega_6\omega_{22}v_3^2\omega_{13}$$

$$C_{48} = 18\omega_{11}v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}^2\omega_{18} cs^4\omega_6^2\omega_{22}\omega_{13} - \omega_{11}^3\omega_{18} cs^4\omega_6^3\omega_{22}\omega_{13} - 36\omega_{11}^2\omega_{18} cs^2\omega_6^2\omega_{22}v_3^2 + 24\omega_{11}\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} +$$
$$12\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} - 36\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} - 36\omega_{11}^2 v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13} + 36\omega_{11}^3 v_1^2\omega_{18}^2\omega_6^3 v_3^2 + 6\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^3\omega_{13} + 6\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{13} +$$
$$24\omega_{11}^3 cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 6\omega_{11}^2 v_1^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2\omega_{18} cs^2\omega_6^2\omega_{22} + 36\omega_{11}^2 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} + 36\omega_{11}^3 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} -$$
$$84\omega_{11}^2\omega_{18}^2 cs^4\omega_6\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^3 v_1^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^3 v_1^2\omega_6^3\omega_{13} - 24\omega_{11}^2 v_1^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}\omega_{18} cs^2\omega_6^2 + 60\omega_{11}\omega_{18} cs^2\omega_6\omega_{22}v_3^2\omega_{13} +$$
$$12\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{13} + 6\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{13} - 12\omega_{11}^3\omega_{18} cs^4\omega_6^3\omega_{13} + 36\omega_{11}^3\omega_{18} cs^2\omega_6^2 v_3^2 - 24\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6\omega_{22}v_3^2\omega_{13} + 18\omega_{11}\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} +$$
$$6\omega_{11}^3\omega_{18} cs^2\omega_6^3 + 12\omega_{11}\omega_{18} cs^4\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^3\omega_{18} cs^4\omega_6^3\omega_{22}\omega_{13} + 24\omega_{11}^3 v_1^2\omega_{18}\omega_6\omega_{22}\omega_{13} - 72\omega_{11}^2 v_1^2\omega_{18}^2\omega_6^2\omega_{22}v_3^2\omega_{13} -$$
$$12\omega_{11}^3 v_1^2 cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^3\omega_{18} cs^2\omega_6^2\omega_{13} - 12\omega_{11}^2 v_1^2 cs^2\omega_6^3\omega_{22}\omega_{13} + 6\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} + 18\omega_{11}^3 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} +$$
$$24\omega_{11}^2 v_1^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{11}^2\omega_{18} cs^2\omega_6\omega_{22}\omega_{13} - 12\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{13} - 108\omega_{11}\omega_{18}^2 cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 6\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^3\omega_{22} +$$
$$72\omega_{11}\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^2 v_1^2\omega_{18}\omega_6^2\omega_{22}\omega_{13} + 12\omega_{11}^3\omega_{18} cs^4\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}^3 v_1^2\omega_{18}\omega_6^3 v_3^2 -$$
$$36\omega_{11}^2 v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2 - 12\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} - 36\omega_{11}^3\omega_{18} cs^2\omega_6^3 v_3^2\omega_{13} - 12\omega_{11}^2 v_1^2\omega_{18} cs^2\omega_6^2\omega_{13} + 18\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} -$$
$$6\omega_{11}\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 36\omega_{11}^2 v_1^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}\omega_{18} cs^2\omega_6^3\omega_{13} - 24\omega_{11}^3 cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 12\omega_{11}\omega_{18}^2 cs^4\omega_6^2\omega_{22}\omega_{13} +$$
$$108\omega_{11}^3 v_1^2\omega_{18}\omega_6^2\omega_{22}v_3^2\omega_{13} + 18\omega_{11}^3 v_1^2\omega_{18} cs^4\omega_6^3 v_3^2\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18} cs^4\omega_6^3\omega_{13} + 72\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 12\omega_{11} v_1^2 cs^2\omega_6^2\omega_{22}\omega_{13} +$$
$$24\omega_{11}^2\omega_{18} cs^2\omega_6\omega_{22}\omega_{13} + 84\omega_{11}^3\omega_{18} cs^2\omega_6\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^2 v_1^2\omega_6^3\omega_{22}\omega_{13} + 18\omega_{11}^3\omega_{18} cs^4\omega_6\omega_{22}\omega_{13} - 18\omega_{11}^3\omega_{18} cs^2\omega_6^3 v_3^2 +$$
$$12\omega_{11}^3\omega_{18} cs^4\omega_6^2\omega_{13} - 12\omega_{11}^2\omega_{18} cs^4\omega_6^3\omega_{22}\omega_{13} - 24\omega_{11}^3\omega_{18} cs^4\omega_6^2\omega_{22}\omega_{13} - 144\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 132\omega_{11}^3\omega_{18} cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} +$$
$$12\omega_{11}^2\omega_{18} cs^2\omega_6^2\omega_{22} - 12\omega_{11}^3 v_1^2\omega_{18}\omega_6^3 - 36\omega_{11}^3 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} - 12\omega_{11}^2 v_1^2\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} - 18\omega_{11}^2 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} + 12\omega_{11}^2 v_1^2 cs^2\omega_6^3\omega_{22}\omega_{13} -$$
$$24\omega_{11}^2\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} + 180\omega_{11}^3\omega_{18} cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} - 48\omega_{11}^3\omega_{18} cs^2\omega_{22}v_3^2\omega_{13} + 12\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{13} - 6\omega_{11}^3\omega_{18} cs^4\omega_6^3 + 6\omega_{11}^2\omega_{18} cs^4\omega_6^3\omega_{22} -$$
$$12\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^3\omega_{13} + 12\omega_{11} v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 54\omega_{11} v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 12\omega_{11}^3 v_1^2\omega_6^3\omega_{22}\omega_{13} + 72\omega_{11}^2 v_1^2\omega_{18}^2\omega_6\omega_{22}v_3^2\omega_{13} +$$
$$12\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{13} + 6\omega_{11} v_1^2\omega_{18}^2\omega_6^3 + 12\omega_{11}^2 v_1^2\omega_{18}^2\omega_6\omega_{22} - 36\omega_{11}^3 v_1^2\omega_{18}\omega_6^3 v_3^2\omega_{13} + 12 v_1^2\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13} - 36\omega_{11} v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2\omega_{13} -$$
$$6\omega_{11}^2\omega_{18} cs^4\omega_6^3\omega_{22}\omega_{13} - 4\omega_{11}^3\omega_{18} cs^4\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11} v_1^2\omega_{18}^2\omega_6\omega_{22}\omega_{13} - 12 v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18} cs^2\omega_6^3\omega_{13} -$$
$$24\omega_{11}^2 v_1^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{13} - 36\omega_{11}^2 v_1^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 6\omega_{11}^3\omega_{18} cs^4\omega_6^3\omega_{13} + 12\omega_{11}^3\omega_{18} cs^4\omega_6^2 - 12\omega_{11}\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} +$$
$$18\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2 - 12\omega_{11}^3\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 12\omega_{11}^3\omega_{18} cs^2\omega_6\omega_{22}\omega_{13} -$$
$$12\omega_{11}^3\omega_{18} cs^4\omega_{22}\omega_{13} - 6\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^3 - 12\omega_{11}^2\omega_{18} cs^4\omega_6\omega_{22}\omega_{13} + 12\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^2\omega_{13} - 12\omega_{11}^2\omega_{18} cs^4\omega_6^2\omega_{22} - 36\omega_{11}^3\omega_{18} cs^2\omega_6^2 v_3^2\omega_{13} -$$
$$18\omega_{11}^2\omega_{18} cs^2\omega_6^3 v_3^2\omega_{13} - 6\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{22} + 24\omega_{11}^3 cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 6\omega_{11}\omega_{18} cs^4\omega_6^3\omega_{22}\omega_{13} - 6\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{13} + 36\omega_{11}^3 v_1^2\omega_6^3\omega_{22}v_3^2\omega_{13} +$$
$$24\omega_{11}^2 v_1^2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13} - 18\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 36\omega_{11}^3\omega_{18} cs^2\omega_6^3 v_3^2\omega_{13} - 42\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 36\omega_{11}^3\omega_{18} cs^2\omega_6^3 v_3^2\omega_{13} +$$
$$12\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^2 + 18\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}v_3^2 + 36\omega_{11}^3 v_1^2\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{11}^3\omega_{18} cs^4\omega_6^2\omega_{13} + 12\omega_{11}\omega_{18} cs^2\omega_6^2\omega_{22}\omega_{13} +$$
$$60\omega_{11}^2\omega_{18} cs^2\omega_6^2\omega_{22}v_3^2\omega_{13} + 78\omega_{11}^3\omega_{18} cs^2\omega_6^3\omega_{22}v_3^2\omega_{13} + 36\omega_{11} v_1^2\omega_{18}^2\omega_6\omega_{22}v_3^2\omega_{13} - 12\omega_{11} v_1^2\omega_{18} cs^2\omega_6^3\omega_{22}\omega_{13} - 24\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} -$$
$$6\omega_{11}^2\omega_{18} cs^2\omega_6^3\omega_{13} - 36\omega_{11}^3 v_1^2\omega_{18}\omega_6^3\omega_{22}\omega_{13} + 36 v_1^2\omega_{18}^2\omega_6^3\omega_{22}v_3^2\omega_{13} - 72\omega_{11}^3 v_1^2\omega_{18}\omega_6\omega_{22}v_3^2\omega_{13} - 6\omega_{11}^2 v_1^2\omega_{18}\omega_6^3\omega_{22} + 12\omega_{11}^2\omega_{18} cs^4\omega_6^3\omega_{13}$$

$$C_{49} = -2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^2\omega_8\omega_6^2 v_3^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19} - 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7 - 3\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 -$$
$$2\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 + \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_{19}\omega_7^2 +$$
$$\omega_{20}\omega_{11}^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}^3\omega_8 cs^2\omega_6^2\omega_{19}^2\omega_7 + 3\omega_{20}\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8\omega_{18} cs^2\omega_6\omega_{19}\omega_7^2 +$$
$$\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6\omega_{19}\omega_7 - \omega_{11}^3\omega_8\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7 -$$
$$3\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19} + \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}^2\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 +$$
$$\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}\omega_8\omega_{18} cs^2\omega_6\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}^2\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7 +$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_6 v_3^2\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7 - \omega_{11}^3\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7 + 3\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 + \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_7 -$$

$$\omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + \omega_{11}^3\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7 - \omega_{11}^2\omega_8\omega_{18}^2\omega_6\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19} - 3\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 -$$
$$\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_{18}v_3^2\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6\omega_{19}^2\omega_7 - \omega_{11}^2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 - 3\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7 -$$
$$6\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7 + 3\omega_{11}^3\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2 + \omega_{11}^3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7 - 3\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 +$$
$$2\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2 + 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_6 v_3^2\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7 +$$
$$\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}^2\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 +$$
$$\omega_{20}\omega_{11}\omega_8\omega_{18}^2 v_3^2\omega_{19}^2\omega_7 + 3\omega_{11}^2\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_6^2\omega_{19}\omega_7 + 2\omega_{20}\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 +$$
$$\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_7 - 3\omega_{20}\omega_{11}\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 +$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7 +$$
$$\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2 - 3\omega_{11}^3\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19} + \omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2\omega_7^2 +$$
$$\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}\omega_8\omega_{18}^2 v_3^2\omega_6^2\omega_{19}\omega_7 + \omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 + \omega_{20}\omega_{11}^2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 +$$
$$3\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2 v_3\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2 cs^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2 +$$
$$6\omega_{20}\omega_{11}\omega_8\omega_{18} cs^2\omega_6\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^2\omega_{18}^2\omega_6\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_6 v_3^2\omega_{19}^2\omega_7 + \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7 +$$
$$\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2 + 3\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_6^2\omega_{19}^2\omega_7 -$$
$$3\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_6\omega_{19}^2\omega_7 - \omega_{11}^3\omega_8\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 -$$
$$\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3\omega_{19} - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_6\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7 +$$
$$\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 + 3\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_7^2 -$$
$$3\omega_{20}\omega_{11}^2\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 + \omega_{11}^2\omega_8\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7 - 3\omega_{20}\omega_{11}^2\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 - 3\omega_{11}^2\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2 +$$
$$\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19} - 3\omega_{20}\omega_{11}\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7 -$$
$$\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 + 3\omega_{11}^3\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7^2 - 6\omega_{20}\omega_{11}\omega_8\omega_{18} cs^2\omega_6\omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7 - 9\omega_{20}\omega_{11}\omega_8\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7 - \omega_{11}^3\omega_{18}\omega_6\omega_{19}\omega_7 + \omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 -$$
$$\omega_{11}\omega_{11}^3\omega_8\omega_{18}\omega_6 v_3\omega_{19}\omega_6\omega_{19}\omega_7 - \omega_{11}^3\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7 + 3\omega_{20}\omega_{11}^2\omega_8\omega_{18} cs^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7 - 3\omega_{11}^3\omega_8\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2$$

$C_{50} = -4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 + 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 -$
$2\omega_{20}\omega_{11}\omega_8^3\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 2\omega_{11}^2\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 - 8\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 -$
$6\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_7^2 + 3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}^2\omega_5\omega_{18} cs^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7 - 6\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_7 +$
$12\omega_{20}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_7 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 -$
$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2\omega_6^3\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6 v_3^2\omega_{19}^2\omega_7 + 6\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 +$
$9\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 +$
$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19} + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - 5\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_7 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6\omega_{19}^2\omega_7 - 2\omega_{11}^2\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6 v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6 v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 +$
$2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_8^2\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 + 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 +$
$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}\omega_7 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 - 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7 - 15\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 +$
$6\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}^2\omega_7 -$
$\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 - 13\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 + 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 +$
$15\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6\omega_{19}^2\omega_7 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^2\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 + 4\omega_{20}\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}^2\omega_7 + 8\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 +$
$9\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19} - 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}\omega_7 +$
$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 +$
$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2\omega_6^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 -$
$4\omega_{20}\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7 + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 +$
$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19} - 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19} + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$2\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19} - 8\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 +$
$6\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 + 6\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19} - 11\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 +$
$\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 +$
$5\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 - 6\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19} - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 +$
$\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6 v_3^2\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 - 9\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2\omega_6^3\omega_6 v_3^2\omega_{19}^2\omega_7 + 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 - 8\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 +$
$\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 + 3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 -$
$2\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 + 11\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7 +$
$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7 + 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19} - 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 +$
$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 + 8\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6\omega_{19}^2\omega_7 -$
$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_7 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}^2\omega_7 + 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7 -$
$4\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7 -$
$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19} + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}^2\omega_7 - 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^3\omega_{19}\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^3\omega_{19}\omega_7 -$
$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}^2\omega_7 + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8\omega_{18} cs^2\omega_6^3\omega_{19}^2\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^3\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2\omega_6^3\omega_{19}^2\omega_7$

$C_{51} = -4\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6^2 v_3^2\omega_{19}^2\omega_7^3 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^3 - 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3 +$
$6\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^3 - 4\omega_{20}\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3 + 4\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18} cs^2\omega_6^2\omega_{19}^2\omega_7 -$
$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7^3 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7^3 - 4\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_6^2\omega_{19}^2\omega_7 +$
$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_7 + 6\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2 cs^2\omega_6^2\omega_{19}^2\omega_7 - 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7 -$
$4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2 cs^2\omega_6\omega_{19}^2\omega_7 - 6\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2\omega_6\omega_{19}^2\omega_7^3 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^3 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3 + 2\omega_{11}^3\omega_8\omega_5\omega_5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7 +$

$$2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_7^3 - 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7 + 3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3 + 5\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3 +$$
$$2\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + 4\omega_{20}\omega_8^2\omega_5\omega_{18}^2\omega_6^2v_3^2\omega_{19}^2\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7 -$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_7^2 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7^3 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^2 +$$
$$4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 8\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7^3 +$$
$$2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^3 +$$
$$3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}^2\omega_7^3 + 4\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^3 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{11}^3\omega_{11}\omega_5\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3 +$$
$$4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^3 + 9\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}^2\omega_7^3 -$$
$$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 - \omega_{20}\omega_{11}^3\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^3 -$$
$$13\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6\omega_{19}^2\omega_7 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6v_3^2\omega_{19}^2\omega_7 +$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^3 + 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}v_3^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6\omega_{19}\omega_7 + 11\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 +$$
$$\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 + 9\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6\omega_{19}\omega_7^3 - 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_7^3 +$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}^2\omega_7^3 - 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^3 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - 5\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^3 +$$
$$8\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^2 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^3 - 3\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^3 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 +$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2 - 11\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 -$$
$$2\omega_{20}\omega_{11}^3\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 12\omega_{20}\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^3 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_6^2\omega_7^3 + 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 -$$
$$4\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}v_3^2\omega_{19}^2\omega_7^3 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3 -$$
$$2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^3 - 8\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19} - 9\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}^2\omega_7^3 - 2\omega_{11}^3\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 +$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}^2\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7 -$$
$$2\omega_{11}^2\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}^2\omega_7^3 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2\omega_{19}\omega_7^3 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^3 -$$
$$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^3 - 2\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 -$$
$$8\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3 + 4\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^2 -$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 + 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_7^2 - 2\omega_{11}^3\omega_8\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{11}^3\omega_8^2\omega_5cs^2\omega_6^2\omega_{19}\omega_7^3 -$$
$$3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 - 4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_{19}\omega_7^3 + \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^3 - 15\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 +$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_7^3 + 2\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^3 +$$
$$15\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7 + 6\omega_{20}\omega_{11}^3\omega_8^2\omega_5cs^2\omega_6^2\omega_{19}\omega_7^3 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7 -$$
$$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^3 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}^2\omega_7^3 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^3 + 3\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^3 -$$
$$2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2cs^2\omega_6\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^3 - \omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3 -$$
$$4\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3 + \omega_{20}\omega_{11}^2\omega_8^2\omega_5\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^3 -$$
$$2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2\omega_{19}\omega_7^3 - 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^3 - 2\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_6v_3^2\omega_{19}\omega_7^3 + 4\omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}^2cs^2\omega_{19}\omega_7^3 - 6\omega_{20}\omega_{11}\omega_8^2\omega_5\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^3 +$$
$$4\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}^3\omega_8^2\omega_5\omega_{18}cs^2\omega_{19}\omega_7^3 + 2\omega_{11}^3\omega_8^2\omega_5\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7$$

$$C_{52} = -2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19} - 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + 3\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 -$$
$$\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7 - \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7 +$$
$$3\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_7^2 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7 - 3\omega_{11}^3\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 -$$
$$\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2\omega_6^2\omega_{19} + 3\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 +$$
$$3\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_8\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7 + 3\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2 -$$
$$3\omega_{20}\omega_{11}^3\omega_8\omega_6v_3^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - 3\omega_{11}^3\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_7 -$$
$$\omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + \omega_{11}^3\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19} - \omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 -$$
$$\omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_7 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7^2 - \omega_{11}^3\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - 9\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 -$$
$$2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}\omega_7^2 + \omega_{11}^3\omega_{18}^2cs^2\omega_6\omega_{19}^2\omega_7^2 + 3\omega_{11}^3\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^2 +$$
$$6\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2v_3^2\omega_7^2 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2 +$$
$$\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7 - 3\omega_{11}^3\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7 - \omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 +$$
$$3\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2v_3^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_6^2\omega_{19}\omega_7^2 + 6\omega_{20}\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 +$$
$$\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6\omega_{19}\omega_7 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2cs^2\omega_6\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^2\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}\omega_7^2 +$$
$$6\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 +$$
$$3\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6\omega_{19} + \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_7^2 +$$
$$3\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}\omega_8\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^2\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 +$$
$$\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_7^2 + 6\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7 +$$
$$2\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 + \omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 +$$
$$\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + 3\omega_{11}^3\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8cs^2\omega_6^2\omega_{19}\omega_7^2 -$$
$$\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_7 + \omega_{20}\omega_{11}\omega_8\omega_6\omega_{19}^2\omega_7^2 - 3\omega_{11}^3\omega_8\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^2\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7 -$$
$$3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19} - \omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8cs^2\omega_6\omega_{19}\omega_7^2 + 3\omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 +$$
$$\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_8\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6\omega_{19}\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_7^2 -$$
$$\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_{19}\omega_7^2 + 3\omega_{11}^3\omega_8\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}^2\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 +$$
$$\omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^2\omega_8\omega_{18}cs^2\omega_6^2\omega_{19} - \omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 + 2\omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7 -$$
$$3\omega_{11}^3\omega_8\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2 + \omega_{11}^3\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7 - 3\omega_{20}\omega_{11}^2\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 - 2\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2 -$$
$$6\omega_{20}\omega_{11}^2\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 - 3\omega_{20}\omega_{11}\omega_8\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{20}\omega_{11}\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_{18}\omega_6\omega_{19}^2\omega_7^2 + \omega_{11}^3\omega_8\omega_{18}\omega_6^2\omega_{19}\omega_7^2 -$$
$$3\omega_{20}\omega_{11}^3\omega_8\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 + \omega_{20}\omega_{11}^3\omega_8\omega_{18}cs^2\omega_{19}\omega_7^2 - 3\omega_{11}^3\omega_8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7^2 - \omega_{11}^3\omega_8\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2$$

$$C_{53} = 12\omega_{11}^3v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 5\omega_{11}^3cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 6\omega_{11}^2v_3^2v_2^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^2v_3^2v_2\omega_{16}\omega_7^3\omega_{23} -$$
$$84\omega_{11}^2cs^4\omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{11}^2v_3^2v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2v_2\omega_{19}\omega_7^3\omega_{23} - 12\omega_{11}v_2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11}^2cs^2v_3\omega_{16}\omega_7^3\omega_{23} +$$
$$6\omega_{11}^3cs^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3 - \omega_{11}^3cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 18\omega_{11}^3cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 36\omega_{11}^3cs^2v_2\omega_{19}\omega_{16}\omega_7^2 + 36\omega_{11}^3cs^4\omega_{19}\omega_7^2 - 36\omega_{11}^2cs^4\omega_{19}\omega_7^2\omega_{23} +$$

$$36\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^2 + 12\omega_{11}^2 cs^2\omega_{19}^2\omega_{16}\omega_7\omega_{23} + 18\omega_{11}^2 cs^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23} + 18\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36\omega_{11} cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$18\omega_{11}^2 cs^4\omega_{19}^2\omega_{16}\omega_7^3 + 12\omega_{11}^2 cs^4\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7\omega_{23} + 12\omega_{11}^3 cs^2\omega_{16}\omega_7^2\omega_{23} - 72\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 42\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$6\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 36\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^3 - 18\omega_{11}^3 cs^4\omega_{19}^2\omega_7^3 - 18\omega_{11} v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$18\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 72\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{11}^2 v_3^2 v_2^2\omega_{19}^2\omega_7^2\omega_{23} - 12\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2 - 12\omega_{11}^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$18\omega_{11}^2 cs^2 v_2^2\omega_{19}^2\omega_{16}\omega_7^3 - 36\omega_{11}^2 cs^2 v_2^2\omega_{16}\omega_7^3\omega_{23} + 24\omega_{11}^2 v_3^2 v_2^2\omega_{19}^2\omega_{16}\omega_7\omega_{23} + 18\omega_{11}^2 cs^4\omega_{19}^2\omega_7^3\omega_{23} - 12\omega_{11}^3 cs^2 v_3^2\omega_{16}\omega_7^2\omega_{23} +$$
$$12\omega_{11} cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 18\omega_{11} v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 36\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$12\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7 - 12\omega_{11} v_2^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11}^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23} + 12 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 88\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$12\omega_{11}^3 cs^2\omega_{19}^2\omega_7^3 + 12\omega_{11} cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11} cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 36 cs^4\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3 + 24\omega_{11}^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$6\omega_{11}^2 v_3^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23} + 12\omega_{11} cs^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} + 12\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11} v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 6\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11} v_2^2\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{11} cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{11} cs^2\omega_{19}^2\omega_7^3 + 18\omega_{11} cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^3 cs^2\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^2\omega_{19}^2\omega_{16}\omega_7^3 + 24\omega_{11} v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} -$$
$$12 cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^3 - 36\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_7^2\omega_{23} - 12\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_7^3 - 36\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$48\omega_{11} cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 36\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 6\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 6\omega_{11}^3 v_3^2 v_2^2\omega_{19}^2\omega_7^3 + 12\omega_{11}^2 cs^2\omega_{19}^2\omega_7^2\omega_{23} +$$
$$12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^2 - 24\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} + 6\omega_{11}^3 v_2^2\omega_{19}\omega_7^3 + 12\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 30\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 -$$
$$12\omega_{11}^2 cs^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23} + 36\omega_{11}^3 cs^2 v_2^2\omega_{19}^2\omega_7^3 - 12\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 2\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11}^3 cs^4\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$6\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 - 24\omega_{11}^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^2 cs^2\omega_{16}\omega_7^3\omega_{23} + 6\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 36\omega_{11}^3 cs^2 v_2^2\omega_{16}\omega_7^2\omega_{23} -$$
$$12\omega_{11} v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11}^3 v_3^2 v_2^2\omega_{16}\omega_7^3\omega_{23} - 18\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_7^3 - 36\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 6\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$12\omega_{11}^3 v_2^2\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 24\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 24\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 96\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_{23} -$$
$$2\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 54\omega_{11} cs^4 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11} v_3^2 v_2^2\omega_{19}^2\omega_7^3 + 24\omega_{11} v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{11} v_2^2\omega_{19}^2\omega_7^2 + 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^3 +$$
$$180\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 42\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 6\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11} cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^2\omega_{19}\omega_7^3\omega_{23} +$$
$$12\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 72\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 36\omega_{11} cs^4\omega_{19}\omega_{16}\omega_{23} + 12\omega_{11} cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 -$$
$$36\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^2 - 18\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 36 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 108\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$12\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 18\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 36\omega_{11} cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{11} cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 72\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{11}^3 v_3^2 v_2^2\omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_7^2 + 150\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^3 v_2^2\omega_{16}\omega_7^2\omega_{23} + 36\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7^3 -$$
$$12\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} + 12\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2 + 18\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 36\omega_{11}^3 cs^2 v_2^2\omega_{16}\omega_7^3\omega_{23} - 18\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$18\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^3 cs^4\omega_{16}\omega_7^3\omega_{23} - 12 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 6\omega_{11}^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}$$

$C_{54} = -4\omega_{11}^3 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 2\omega_{11}^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3 + 8\omega_{11}^3 cs^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}^3 cs^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23} - 24\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$12 cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{11}^3\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 2\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + \omega_{11}^3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 2\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 -$
$7\omega_{11}^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 4\omega_{11}^3 v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{11}^3\omega_{16}\omega_{10}\omega_7^2\omega_{23} - \omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$
$9\omega_{11}^3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 4\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{11}^2 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + \omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 + 9\omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$
$4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{11} cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 4\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{11}^3\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{11}^3 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$4\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 2\omega_{11}^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 2\omega_{11}^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 4\omega_{11}^3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{11}^3 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} +$
$4\omega_{11}^3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 4\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 8\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 - 8\omega_{11}^3 cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$
$2\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 8\omega_{11} cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 4\omega_{11}^3\omega_{19}\omega_{16}\omega_{10}\omega_7^2 -$
$15\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{11}^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + 4\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 3\omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 26\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} -$
$3\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 + 3\omega_{11}^3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{11}^3 cs^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} -$
$2\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{11}^3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 2\omega_{11}^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 8\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 13\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 4\omega_{11}^3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 5\omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 2\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + 4\omega_{11}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$11\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 3\omega_{11}^3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 3\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 -$
$8\omega_{11}^2 cs^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{11}^2 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 2\omega_{11} v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + 6\omega_{11}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 2\omega_{11}\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$
$6\omega_{11}^3 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 7\omega_{11}^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 4\omega_{11}\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{11}^3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$2\omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3 + \omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 2\omega_{11}^3 cs^2\omega_{19}^2\omega_7^3 - 16\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{23} - 5\omega_{11} v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{11}^3 cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 2\omega_{11}^3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 4\omega_{11}^3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{11}^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 4\omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2 -$
$4\omega_{11}^3 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 2\omega_{11}^3 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - \omega_{11}^3\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 5\omega_{11}^3 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - \omega_{11}^3 cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}$

$C_{55} = 12\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{11}^3 cs^4\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 84\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 18\omega_{11}^2 v_3^2 v_2^2\omega_{19}^2\omega_{16}\omega_7 - 36\omega_{11}^2 v_3^2 v_2^2\omega_{16}\omega_7^3\omega_{23} -$
$12\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7\omega_{23} - 36\omega_{11}^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23} - 12\omega_{11} v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 24\omega_{11}^3 cs^2 v_3^2\omega_{16}\omega_7^3\omega_{23} +$
$18\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 - 132\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 12\omega_{11}^3 cs^4\omega_{19}^2\omega_7^2 - 12\omega_{11}^2 cs^4\omega_{19}^2\omega_7^2\omega_{23} + 12\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^2 +$
$12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23} + 6\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 144\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{11} cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7^3 +$
$12\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7\omega_{23} - 108\omega_{11} cs^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 24\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 6\omega_{11}^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} -$
$12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^3 - 6\omega_{11}^3 cs^4\omega_{19}^2\omega_7^3 - 54\omega_{11} v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$24\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} - 36\omega_{11}^2 v_3^2 v_2^2\omega_{19}^2\omega_7^2\omega_{23} - 36\omega_{11}^3 cs^2 v_3^2\omega_{19}^2\omega_{16}\omega_7^2 - 36\omega_{11}^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 6\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 -$
$12\omega_{11}^2 cs^2 v_2^2\omega_{16}\omega_7^3\omega_{23} + 72\omega_{11}^2 v_3^2 v_2^2\omega_{19}^2\omega_{16}\omega_7\omega_{23} + 6\omega_{11}^2 cs^4\omega_{19}\omega_7^3\omega_{23} + 24\omega_{11}^3 cs^2 v_3^2\omega_{16}\omega_7^2\omega_{23} + 18\omega_{11} v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} +$
$78\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 108\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 48\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{23} + 36\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 - 12\omega_{11} v_2^2\omega_{19}\omega_{16}\omega_7^3 +$
$12\omega_{11}^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23} + 36 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 36\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{11}^3 cs^2\omega_{19}^2\omega_7^3 + 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^3 -$
$12\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^3 + 72\omega_{11}^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 18\omega_{11}^2 v_3^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23} + 84\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23} +$
$36\omega_{11}^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 36\omega_{11} v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 6\omega_{11}^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 + 12\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 18\omega_{11} cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 6\omega_{11}^2 cs^2\omega_{19}^2\omega_7^3 +$
$6\omega_{11}^2 cs^2 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^2\omega_{19}^2\omega_{16}\omega_7^3 + 24\omega_{11}^2 v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} + 12\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 60\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$12\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_7^2\omega_{23} - 36\omega_{11}^3 v_3^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11} cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$12\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 42\omega_{11}^3 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 18\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_7^3 + 12\omega_{11}^3 cs^2\omega_{19}^2\omega_7^2\omega_{23} - 12\omega_{11}^3 cs^2\omega_{19}\omega_{16}\omega_7^2 -$
$24\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23} + 6\omega_{11}^3 v_2^2\omega_{19}\omega_7^3 + 12\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 12\omega_{11}^3 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2 + 12\omega_{11} cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} -$
$36\omega_{11}^2 cs^2 v_3^2\omega_{19}^2\omega_7^2\omega_{23} + 12\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_7^3 - 12\omega_{11}^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 + 6\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{11}^2 cs^2 v_3^2\omega_{16}\omega_7^3\omega_{23} - 18\omega_{11}^2 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3 -$
$72\omega_{11}^2 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 6\omega_{11}^2 cs^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^3 cs^2 v_2^2\omega_{16}\omega_7^2\omega_{23} - 36\omega_{11} v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 18\omega_{11}^3 v_3^2 v_2^2\omega_{19}\omega_{16}\omega_7^3 +$
$36\omega_{11}^3 v_3^2 v_2^2\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^3 cs^2 v_2^2\omega_{19}\omega_7^3 - 12\omega_{11}^2 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^3 v_2^2\omega_{19}\omega_{16}\omega_7^3 - 12\omega_{11}^3 v_2^2\omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$

$$72\omega_{11}^3 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7\omega_{23} - 24\omega_{11}^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^3 cs^4 \omega_{19}^2 \omega_{16}\omega_{23} - 18\omega_{11}^2 cs^2 v_3^2 \omega_{19}^2 \omega_{16}\omega_7^3\omega_{23} - 18\omega_{11} cs^2 v_2^2 \omega_{19}^2 \omega_{16}\omega_7^3\omega_{23} +$$
$$36\omega_{11}^3 v_3^2 v_2^2 \omega_{19}^2 \omega_{16}\omega_7^2 + 24\omega_{11}^3 v_2^2 \omega_{19}\omega_{16}\omega_7\omega_{23} - 12\omega_{11}^3 v_2^2 \omega_{19}^2 \omega_7^2 + 12\omega_{11} cs^2 \omega_{19}\omega_{16}\omega_7^3 + 18\omega_{11} cs^4 \omega_{19}^2 \omega_{16}\omega_7\omega_{23} - 24\omega_{11}^3 cs^4 \omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$18\omega_{11}^3 cs^2 v_2^2 \omega_{19}\omega_7^3 + 18\omega_{11}^2 cs^2 v_3^2 \omega_{19}^2 \omega_7^3\omega_{23} - 6\omega_{11} cs^2 \omega_{19}^2 \omega_{16}\omega_7^3\omega_{23} - 6\omega_{11}^2 cs^2 \omega_{19}^2 \omega_{16}\omega_7^3\omega_{23} + 36\omega_{11}^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3 + 24\omega_{11}^2 cs^2 v_2^2 \omega_{19}\omega_{16}\omega_7\omega_{23} +$$
$$6\omega_{11} cs^4 \omega_{19}^2 \omega_{16}\omega_7^2\omega_{23} + 12\omega_{11} v_2^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{11}^3 cs^4 \omega_{19}\omega_{16}\omega_7^2 + 24\omega_{11}^3 cs^2 \omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12 cs^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23} -$$
$$12\omega_{11}^3 cs^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2 + 36\omega_{11}^3 cs^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2\omega_{23} - 36\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3 + 180\omega_{11}^2 cs^2 v_3^2 \omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{11} cs^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23} +$$
$$72\omega_{11} cs^2 v_3^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23} + 24\omega_{11}^2 cs^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36\omega_{11}^3 v_3^2 \omega_{19}^2 \omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^2 v_2^2 \omega_{19}\omega_{16}\omega_7^2\omega_{23} + 36\omega_{11}^3 cs^2 v_3^2 \omega_{19}^2 \omega_7^2 +$$
$$24\omega_{11}^2 cs^4 \omega_{19}^2 \omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^3 v_2^2 \omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{11}^2 cs^4 \omega_{19}\omega_{16}\omega_7^3 + 60\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_{16}\omega_7\omega_{23} + 36\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_{16}\omega_7^2 +$$
$$6\omega_{11}^3 cs^2 v_2^2 \omega_{19}^2 \omega_{16}\omega_7^3 + 12\omega_{11}^3 cs^2 v_2^2 \omega_{16}\omega_7^3\omega_{23} - 24\omega_{11}^2 cs^2 \omega_{19}^2 \omega_{16}\omega_7^2\omega_{23} + 6\omega_{11}^3 cs^4 \omega_{19}^2 \omega_{16}\omega_7^3 - 12 v_2^2 \omega_{19}^2 \omega_{16}\omega_7^3\omega_{23} + 18\omega_{11}^2 v_3^2 v_2^2 \omega_{19}\omega_{16}\omega_7^3\omega_{23}$$

$C_{56} = 4\omega_{11}^3 cs^4 \omega_6^2 + 8\omega_{11}^2 \omega_{18} cs^2 \omega_6 + 8\omega_{11}^3 \omega_{18} cs^4 \omega_6 + 36\omega_{11}\omega_{18}^2 cs^2 \omega_6 v_3^2 - 4\omega_{11}^3 \omega_{18} cs^4 + 20\omega_{11}^3 \omega_{18}\omega_6 v_3^4 + 36\omega_{11}^2 \omega_{18} cs^2 v_3^2 + 4\omega_{11}^2 cs^2 \omega_6^2 -$
$20\omega_{11}\omega_{18}\omega_6 v_3^4 - 84\omega_{11}^2 \omega_{18} cs^2 \omega_6 v_3^2 + 8\omega_{11}^2 \omega_{18} cs^4 \omega_6^2 - 8\omega_{11}^2 \omega_{18} v_3^2 + 4\omega_{11}\omega_{18} cs^2 \omega_6^2 - 24\omega_{18}^2 \omega_6^2 v_3^2 + 72\omega_{11}\omega_{18}^2 cs^2 \omega_6 v_3^2 - 4\omega_{11}^2 \omega_6^2 v_3^2 -$
$24\omega_{11}^2 cs^2 \omega_6^2 v_3^2 + 20\omega_{11}\omega_{18}\omega_6 v_3^4 + 4\omega_{11}^3 \omega_{18} cs^4 \omega_6 + 13\omega_{11}^3 \omega_{18}\omega_6^2 v_3^2 - 12\omega_{11}\omega_{18}^2 cs^4 \omega_6^2 + 13\omega_{11}^2 \omega_{18}\omega_6^2 v_3^4 - 4\omega_{11}^3 \omega_6^2 v_3^2 - 32\omega_{11}^2 \omega_{18}\omega_6^2 v_3^2 +$
$4\omega_{11}^2 \omega_{18}^2 cs^4 - 72\omega_{11}\omega_{18} cs^2 \omega_6^2 v_3^2 + 84\omega_{11}^3 \omega_{18} cs^2 \omega_6 v_3^2 + 24\omega_{18}^3 cs^2 \omega_6^2 v_3^2 + 120\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 v_3^2 + 8\omega_{18}^3 cs^4 \omega_6^2 - 16\omega_{11}^3 \omega_{18}\omega_6 v_3^4 + 8\omega_{11}^3 \omega_{18} v_3^2 -$
$4\omega_{11}^3 \omega_{18} cs^4 \omega_6^2 - 4\omega_{11}^2 \omega_{18} cs^2 \omega_6^2 - 4\omega_{11}^3 cs^4 \omega_6 - 4\omega_{11}^3 \omega_6 v_3^2 + 20\omega_{11}^2 \omega_{18}\omega_6 v_3^2 + 32\omega_{11}^2 \omega_{18}\omega_6^2 v_3^2 - 48\omega_{11}^2 \omega_{18} cs^2 \omega_6 v_3^2 - 4\omega_{11}^2 \omega_{18}^2 cs^2 -$
$4\omega_{11}\omega_{18} cs^4 \omega_6^2 + 96\omega_{18}^2 cs^2 \omega_6^2 v_3^2 - 4\omega_{11}\omega_{18}^2 cs^2 \omega_6 + 4\omega_{11}^3 \omega_6 v_3^2 - 13\omega_{11}^2 \omega_{18}\omega_6^2 v_3^2 - 8\omega_{11}^3 \omega_{18} cs^2 \omega_6 - 8\omega_{11}^3 \omega_{18} v_3^4 - 4\omega_{11}^3 cs^2 \omega_6^2 - 8\omega_{11}^2 \omega_{18} cs^4 \omega_6 -$
$20\omega_{11}^2 \omega_{18}\omega_6 v_3^4 + 4\omega_{11}^3 \omega_6 v_3^4 - 36\omega_{11}^3 \omega_{18} cs^2 v_3^2 - 4\omega_{11}^2 cs^4 \omega_6^2 + 16\omega_{11}^2 \omega_{18}\omega_6 v_3^2 - 24\omega_{11}^3 cs^2 \omega_6 v_3^2 - 8\omega_{11}^2 \omega_{18} cs^2 \omega_6^2 - 51\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 v_3^2 -$
$8\omega_{18}^2 cs^2 \omega_6^2 + 20\omega_{11}\omega_{18}\omega_6^2 v_3^2 - 144\omega_{11}\omega_{18}^2 cs^2 \omega_6^2 v_3^2 + 4\omega_{11}^2 \omega_{18} cs^4 \omega_6^2 + 4\omega_{11}^3 cs^2 \omega_6 + 4\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 + 4\omega_{11}^3 \omega_{18} cs^2 - 36\omega_{11}\omega_{18}^2 \omega_6^2 v_3^4 -$
$20\omega_{11}^2 \omega_{18}\omega_6 v_3^2 - 20\omega_{11}\omega_{18}^2 \omega_6 v_3^2 + 12\omega_{11}\omega_{18}^2 cs^2 \omega_6 - 13\omega_{11}^3 \omega_{18}\omega_6^2 v_3^2 + 8\omega_{11}^2 \omega_{18}^2 v_3^2 + 24\omega_{18}^2 \omega_6^2 v_3^2 + 4\omega_{11}^2 \omega_6^2 v_3^4 + 51\omega_{11}^2 \omega_{18}^2 cs^2 \omega_6^2 v_3^2$

$C_{57} = 12\omega_{11}^3 \omega_{18} cs^4 \omega_6 + 12\omega_{11}^3 cs^2 \omega_6^3 v_3^2 - 60\omega_{11}\omega_{18}\omega_6^3 v_3^2 - 24\omega_{11}^3 \omega_{18}\omega_6 v_3^4 - 36\omega_{11}\omega_{18} cs^2 \omega_6^3 v_3^2 - 12\omega_{11}^3 \omega_6^3 v_3^2 - 12\omega_{11}^3 \omega_{18}\omega_6 v_3^2 +$
$19\omega_{11}^2 \omega_{18}\omega_6^3 v_3^4 - 48\omega_{11}^2 \omega_{18}^2 cs^2 \omega_6 v_3^2 + 12\omega_{11}^2 \omega_{18} cs^4 \omega_6^2 - 5\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 - 18\omega_{11}^3 \omega_{18}\omega_6^2 v_3^4 - 81\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 v_3^2 - 6\omega_{11}^3 \omega_{18} cs^4 \omega_6^3 -$
$48\omega_{11}^3 \omega_{18}\omega_6^2 v_3^2 + 54\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 v_3^2 - 36\omega_{11}\omega_{18}\omega_6^3 v_3^4 + 12\omega_{18}^3 cs^4 \omega_6^2 - 12\omega_{11}\omega_{18}^2 cs^4 \omega_6^2 + 12\omega_{11}^2 \omega_{18}^2 \omega_6^2 v_3^4 + 12\omega_{11}^3 \omega_6^2 v_3^2 + 24\omega_{11}^2 \omega_{18}\omega_6 v_3^2 -$
$12\omega_{11}^3 \omega_{18} cs^2 \omega_6 v_3^2 + 6\omega_{11}^3 \omega_{18} cs^4 \omega_6^2 - 12\omega_{11}^3 cs^2 \omega_6^2 v_3^2 - \omega_{11}^2 \omega_{18} cs^2 \omega_6^3 + 90\omega_{11}\omega_{18}^2 \omega_6^3 v_3^2 - 12\omega_{11}^2 cs^2 \omega_6^2 v_3^2 - 12\omega_{11}\omega_{18} cs^4 \omega_6^2 + 27\omega_{11}^3 \omega_{18}\omega_6^3 v_3^2 -$
$12\omega_{11}^3 cs^2 \omega_6^3 v_3^2 + 6\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 - 18\omega_{11}^3 \omega_{18} cs^4 \omega_6^2 - 12\omega_{11}^3 \omega_6^3 v_3^4 - 6\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 - 72\omega_{18}^3 \omega_6^3 v_3^2 + 4\omega_{11}^3 \omega_{18}\omega_6^3 v_3^4 + 12\omega_{11}^3 cs^2 \omega_6^3 v_3^2 -$
$48\omega_{11}^2 \omega_{18}^2 cs^2 v_3^2 - 24\omega_{11}^3 \omega_{18}\omega_6^3 v_3^4 - 90\omega_{11}\omega_{18}^2 \omega_6^3 v_3^4 - \omega_{11}^3 \omega_{18} cs^4 \omega_6^3 + 36\omega_{11}\omega_{18}\omega_6^3 v_3^3 + 6\omega_{11}^3 \omega_{18} cs^2 \omega_6^3 - 306\omega_{11}\omega_{18}^2 cs^2 \omega_6^3 v_3^2 - 12\omega_{11}^3 \omega_6^2 v_3^4 -$
$12\omega_{11}^2 \omega_{18}\omega_6^2 v_3^2 + 12\omega_{11}^3 \omega_6^3 v_3^2 - 12\omega_{11}^3 \omega_{18} cs^2 \omega_6 + 72\omega_{18}^3 \omega_6^3 v_3^4 + 60\omega_{11}^2 \omega_{18} cs^2 \omega_6^3 v_3^2 - 4\omega_{11}^3 \omega_{18}\omega_6^3 v_3^2 - 27\omega_{11}^3 \omega_{18}\omega_6^3 v_3^4 + 13\omega_{11}^3 \omega_{18} cs^4 \omega_6^2 -$
$12\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 + 30\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 v_3^2 + 102\omega_{11}^3 \omega_{18} cs^2 \omega_6 v_3^2 - 19\omega_{11}^2 \omega_{18}\omega_6^3 v_3^2 + 12\omega_{11}\omega_{18} cs^2 \omega_6^3 + 12\omega_{11}^3 \omega_6^3 v_3^4 + 12\omega_{11}^3 \omega_{18}\omega_6 v_3^4 +$
$252\omega_{18}^3 cs^2 \omega_6^3 v_3^2 - 24\omega_{11}^3 \omega_{18} cs^4 \omega_6 - 108\omega_{11}\omega_{18}^2 cs^2 \omega_6^2 v_3^2 + 6\omega_{11}^3 \omega_{18} cs^4 \omega_6^2 + 18\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 + 24\omega_{11}^3 \omega_{18}\omega_6 v_3^2 + 60\omega_{11}^3 \omega_{18}\omega_6^3 v_3^4 + 12\omega_{11}^3 \omega_{18} cs^4 -$
$21\omega_{11}^3 \omega_{18} cs^2 \omega_6^3 v_3^2 - 12\omega_{18}^3 cs^2 \omega_6^3 + 12\omega_{11}\omega_{18} cs^2 \omega_6^2 + 48\omega_{11}^3 \omega_{18}\omega_6^3 v_3^4 + 18\omega_{11}^3 \omega_{18}\omega_6^2 v_3^2 + 162\omega_{11}^2 \omega_{18} cs^2 \omega_6^2 v_3^2 + \omega_{11}^3 \omega_{18} cs^4 \omega_6^3 - 6\omega_{11}^3 \omega_{18} cs^2 \omega_6^3$

$C_{58} = -44\omega_{11}^2 \omega_{18} cs^2 \omega_6 - 120\omega_{11}\omega_{18}^2 \omega_6^2 v_3^2 + 17\omega_{11}^3 \omega_{18}\omega_6 - 16\omega_{11}^2 cs^2 \omega_6^2 + 28\omega_{11}^3 \omega_{18}^2 v_3^2 - 32\omega_{11}\omega_{18} cs^2 \omega_6^2 + 80\omega_{18}^3 \omega_6^2 v_3^2 - 8\omega_{11}^3 \omega_6^2 +$
$28\omega_{11}^3 \omega_{18}\omega_6 - 43\omega_{11}^3 \omega_{18}\omega_6^2 v_3^2 - 17\omega_{11}^2 \omega_{18}^2 \omega_6^2 + 16\omega_{11}^3 \omega_6^2 v_3^2 + 104\omega_{11}^2 \omega_{18} cs^2 v_3^2 + 8\omega_{11}^3 \omega_6 - 28\omega_{11}^3 \omega_{18}\omega_6 + 24\omega_{11}\omega_{18}\omega_6^2 - 28\omega_{11}^3 \omega_{18}\omega_6 v_3^2 + 8\omega_{11}^3 \omega_6^2 +$
$25\omega_{11}^3 cs^2 \omega_6 - 68\omega_{11}^2 \omega_{18}\omega_6 v_3^2 + 20\omega_{11}^2 \omega_{18} cs^2 + 48\omega_{11}^3 \omega_{18}\omega_6^2 - 32\omega_{18}^3 \omega_6^2 + 32\omega_{11}^3 \omega_{18} cs^2 \omega_6 - 12\omega_{11}^3 \omega_{18}^2 + 43\omega_{11}^2 \omega_{18}\omega_6^2 v_3^2 + 44\omega_{11}^3 \omega_{18} cs^2 \omega_6 +$
$16\omega_{11}^3 cs^2 \omega_6^2 - 40\omega_{11}\omega_{18}\omega_6^2 - 16\omega_{11}^3 \omega_6 v_3^2 + 12\omega_{11}^3 \omega_{18} - 48\omega_{11}^2 \omega_{18}\omega_6 v_3^2 + 56\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 + 48\omega_{18}^3 cs^2 \omega_6^2 - 64\omega_{11}\omega_{18}\omega_6^2 v_3^2 - 16\omega_{11}^3 \omega_{18} cs^2 \omega_6 -$
$16\omega_{11}^3 cs^2 \omega_6 - 25\omega_{11}^3 \omega_{18} cs^2 \omega_6^2 - 20\omega_{11}^3 \omega_{18} cs^2 + 16\omega_{11}^3 \omega_{18}\omega_6 + 68\omega_{11}^3 \omega_{18}\omega_6 v_3^2 + 64\omega_{11}^2 \omega_{18}\omega_6 v_3^2 - 72\omega_{11}\omega_{18}^2 cs^2 \omega_6^2 - 16\omega_{11}^2 \omega_6^2 v_3^2 - 24\omega_{11}\omega_{18}^2 \omega_6$

$C_{59} = 32\omega_{11}^2 v_3^4 \omega_{19}\omega_7^2 - 144\omega_{11} cs^2 v_3^2 \omega_{19}^2 \omega_7^2 - 8\omega_{11}^2 cs^4 \omega_{19}^2 \omega_7 - 4\omega_{11} cs^4 \omega_{19}^2 \omega_7 - 51\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7 - 4\omega_{11}^3 v_3^2 \omega_7^2 + 20\omega_{11} v_3^2 \omega_7^2 \omega_{19}\omega_7 -$
$24 v_3^2 \omega_{19}^2 \omega_7^2 - 4\omega_{11}^3 v_3^2 \omega_7^2 + 20\omega_{11}^3 v_3^2 \omega_{19}\omega_7 + 24\omega_{11}^3 cs^2 v_3^2 \omega_7^2 - 8\omega_{11}^2 v_3^2 \omega_{19} + 13\omega_{11}^3 v_3^2 \omega_{19}\omega_7^2 - 4\omega_{11}^2 cs^2 \omega_{19}^2 \omega_7^2 - 4\omega_{11}^3 cs^4 \omega_{19} + 16\omega_{11}^2 v_3^2 \omega_{19}\omega_7 +$
$51\omega_{11}^2 cs^2 v_3^2 \omega_{19}\omega_7 + 4\omega_{11}^3 cs^2 \omega_7^2 + 36\omega_{11} v_3^2 \omega_{19}\omega_7^2 + 8\omega_{11}^2 cs^2 \omega_{19}^2 \omega_7 - 4\omega_{11}^3 cs^2 \omega_7^2 - 84\omega_{11}^2 cs^2 v_3^2 \omega_{19}^2 \omega_7 - 32\omega_{11}^2 v_3^2 \omega_{19}^2 \omega_7 - 20\omega_{11} v_3^2 \omega_{19}^2 \omega_7 +$
$4\omega_{11}^2 cs^2 \omega_{19}\omega_7^2 - 4\omega_{11}^3 cs^4 \omega_7^2 + 24 v_3^4 \omega_{19}\omega_7^2 - 4\omega_{11}^3 cs^2 \omega_{19} - 20\omega_{11}^3 v_3^2 \omega_{19}\omega_7 + 96 cs^2 v_3^2 \omega_{19}^2 \omega_7 - 13\omega_{11}^3 v_3^4 \omega_{19}\omega_7 - 24\omega_{11}^2 cs^2 v_3^2 \omega_7 -$
$24\omega_{11}^2 cs^2 v_3^2 \omega_7^2 - 16\omega_{11}^2 v_3^4 \omega_{19}\omega_7 + 4\omega_{11}^2 cs^4 \omega_{19}^2 \omega_7^2 + 72\omega_{11} cs^2 v_3^2 \omega_{19}^2 \omega_7 + 84\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7 - 8\omega_{11}^3 v_3^4 \omega_{19} - 36\omega_{11} v_3^4 \omega_{19}^2 \omega_7^2 + 4\omega_{11}^3 v_3^2 \omega_7^2 -$
$8 cs^2 \omega_{19}^2 \omega_7^2 + 8\omega_{11}^3 cs^4 \omega_{19}\omega_7^2 + 8\omega_{11}^2 cs^4 \omega_{19}\omega_7^2 + 4\omega_{11}^3 cs^2 \omega_{19} - 4\omega_{11}^3 cs^4 \omega_7 - 20\omega_{11}^2 v_3^4 \omega_{19}^2 \omega_7^2 - 20\omega_{11} v_3^4 \omega_{19}\omega_7^2 + 4\omega_{11} cs^4 \omega_{19}^2 \omega_7^2 -$
$13\omega_{11}^2 v_3^2 \omega_{19}^2 \omega_7^2 - 48\omega_{11}^2 cs^2 v_3^2 \omega_{19}\omega_7 + 12\omega_{11} cs^2 \omega_{19}^2 \omega_7^2 + 4\omega_{11}^3 v_3^2 \omega_7^2 + 4\omega_{11}^2 v_3^2 \omega_7^2 + 4\omega_{11}^3 cs^2 \omega_{19}^2 \omega_7 + 8\omega_{11}^2 v_3^4 \omega_{19} + 8 cs^4 \omega_{19}^2 \omega_7^2 - 8\omega_{11}^3 cs^2 \omega_{19}\omega_7 -$
$36\omega_{11}^3 cs^2 v_3^2 \omega_{19} + 120\omega_{11}^2 cs^2 v_3^2 \omega_{19}\omega_7 + 20\omega_{11}^2 v_3^2 \omega_{19}^2 \omega_7 + 36\omega_{11}^2 cs^2 v_3^2 \omega_{19} - 8\omega_{11}^3 cs^2 \omega_{19}\omega_7 - 4\omega_{11} cs^2 \omega_{19}^2 \omega_7 + 8\omega_{11}^3 v_3^2 \omega_{19} - 4\omega_{11}^3 v_3^4 \omega_7 +$
$20\omega_{11} v_3^2 \omega_{19}\omega_7^2 - 72\omega_{11} cs^2 v_3^2 \omega_{19}\omega_7^2 + 13\omega_{11}^2 v_3^4 \omega_{19}^2 \omega_7^2 + 4\omega_{11}^3 cs^4 \omega_7^2 - 12\omega_{11} cs^4 \omega_{19}^2 \omega_7^2 + 4\omega_{11}^2 cs^2 \omega_7^2 + 4\omega_{11}^2 cs^4 \omega_{19} - 4\omega_{11}^3 cs^4 \omega_{19}\omega_7^2$

$C_{60} = -24\omega_{11}^2 v_3^4 \omega_{19}^2 \omega_7 - 108\omega_{11} cs^2 v_3^2 \omega_{19}^2 \omega_7^3 + 27\omega_{11}^3 v_3^2 \omega_{19}\omega_7^3 + 30\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7^3 + 12\omega_{11}^3 v_3^2 \omega_7^3 + 90\omega_{11} v_3^2 \omega_{19}^2 \omega_7^3 + 13\omega_{11}^3 cs^4 \omega_{19}\omega_7^2 +$
$60\omega_{11}^3 cs^2 v_3^2 \omega_{19}^2 \omega_7^3 - 24\omega_{11}^3 v_3^4 \omega_{19}\omega_7 - 12\omega_{11}^3 cs^2 v_3^2 \omega_7^2 - \omega_{11}^3 cs^2 \omega_{19}^2 \omega_7^3 - 12\omega_{11}^3 v_3^2 \omega_7^3 - 21\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7^3 - 306\omega_{11} cs^2 v_3^2 \omega_{19}^2 \omega_7^3 - 48\omega_{11}^3 v_3^2 \omega_{19}\omega_7^2 +$
$6\omega_{11}^3 cs^2 \omega_{19}^2 \omega_7 + 60\omega_{11}^3 v_3^4 \omega_{19}\omega_7^3 - 6\omega_{11}^2 cs^2 \omega_{19}^2 \omega_7^3 + 12\omega_{11}^3 cs^2 v_3^3 \omega_7^3 - \omega_{11}^3 cs^4 \omega_{19}^2 \omega_7^3 - 12\omega_{11}^2 v_3^4 \omega_7^3 + 162\omega_{11}^2 cs^2 v_3^2 \omega_{19}^2 \omega_7^2 - 72 v_3^2 \omega_{19}^2 \omega_7^3 +$
$12\omega_{11}^3 cs^4 \omega_{19} - 27\omega_{11}^3 v_3^2 \omega_{19}\omega_7^2 - 48\omega_{11}^2 cs^2 v_3^2 \omega_{19}^2 \omega_7 + 24\omega_{11}^3 v_3^2 \omega_{19}\omega_7 - 90\omega_{11} v_3^2 \omega_{19}\omega_7^3 + \omega_{11}^3 cs^4 \omega_{19}^2 \omega_7^3 + 24\omega_{11}^3 v_3^2 \omega_{19}\omega_7 - 12\omega_{11}^3 cs^2 v_3^2 \omega_7^3 -$
$5\omega_{11}^3 cs^2 \omega_{19}^2 \omega_7 - 60\omega_{11}^3 v_3^2 \omega_{19}\omega_7 - 24\omega_{11}^3 cs^4 \omega_{19}\omega_7 + 48\omega_{11}^3 v_3^4 \omega_{19}\omega_7 + 252 cs^2 v_3^2 \omega_{19}^2 \omega_7^3 + 6\omega_{11}^2 cs^4 \omega_{19}\omega_7^3 - 12\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7 + 72 v_3^4 \omega_{19}\omega_7^3 +$
$12\omega_{11}^3 v_3^4 \omega_7^3 + 12\omega_{11} cs^2 \omega_{19}^2 \omega_7^3 - 18\omega_{11}^3 v_3^4 \omega_{19}\omega_7^2 - 19\omega_{11}^2 v_3^2 \omega_{19}^2 \omega_7^3 + 12\omega_{11}^3 cs^4 \omega_{19}\omega_7 + 12\omega_{11}^2 cs^4 \omega_{19}\omega_7^2 - 6\omega_{11}^3 cs^2 \omega_{19}\omega_7^3 + 12\omega_{11}^3 v_3^2 \omega_7^3 +$
$102\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7^2 - 12\omega_{11}^3 v_3^2 \omega_{19}^2 \omega_7^2 + 4\omega_{11}^3 v_3^4 \omega_{19}\omega_7^3 - 12 cs^2 \omega_{19}^2 \omega_7^3 + 12\omega_{11} cs^2 \omega_{19}^2 \omega_7^2 - 12\omega_{11}^3 v_3^4 \omega_7^2 - 36\omega_{11} v_3^4 \omega_{19}\omega_7^3 - 48\omega_{11}^3 cs^2 v_3^2 \omega_{19} +$
$18\omega_{11}^3 cs^2 \omega_{19}\omega_7^2 - 6\omega_{11}^2 cs^4 \omega_{19}\omega_7^3 - 12\omega_{11}^3 v_3^2 \omega_{19}\omega_7^3 + 12\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7^3 - 12\omega_{11} cs^4 \omega_{19}^2 \omega_7^3 - 12\omega_{11}^3 cs^2 \omega_{19}\omega_7^3 + 19\omega_{11}^3 v_3^4 \omega_{19}\omega_7^2 +$
$18\omega_{11}^3 v_3^2 \omega_{19}^2 \omega_7^2 - 36\omega_{11} cs^2 v_3^2 \omega_{19}\omega_7^3 - 12\omega_{11}^2 cs^2 v_3^2 \omega_{19}\omega_7^3 + 6\omega_{11}^3 cs^4 \omega_{19}\omega_7^3 - 12\omega_{11}^2 cs^2 \omega_{19}\omega_7^2 - 4\omega_{11}^3 v_3^2 \omega_{19}\omega_7^3 + 12\omega_{11}^3 v_3^4 \omega_{19}\omega_7^2 -$
$12\omega_{11}^3 cs^4 \omega_{19}\omega_7^2 - 81\omega_{11}^3 cs^2 v_3^2 \omega_{19}^2 \omega_7^2 + 12 cs^4 \omega_{19}^2 \omega_7^3 + 36\omega_{11} v_3^2 \omega_{19}\omega_7^3 + 12\omega_{11}^3 v_3^2 \omega_{19}^2 \omega_7^3 + 6\omega_{11}^3 cs^2 \omega_{19}\omega_7^3 + 54\omega_{11}^3 cs^2 v_3^2 \omega_{19}\omega_7^3 - 18\omega_{11}^3 cs^4 \omega_{19}\omega_7^2$

$C_{61} = 16\omega_{11}^3 v_3^2 \omega_7^2 + 80 v_3^2 \omega_{19}^2 \omega_7^2 + 12\omega_{11}^3 \omega_{19} - 40\omega_{11}^2 \omega_{19}\omega_7^2 + 28\omega_{11}^3 v_3^2 \omega_{19} - 32\omega_{19}^2 \omega_7^2 - 43\omega_{11}^3 v_3^2 \omega_{19}\omega_7^2 + 25\omega_{11}^2 cs^2 \omega_{19}\omega_7^2 - 12\omega_{11}^3 \omega_{19} -$
$48\omega_{11}^2 v_3^2 \omega_{19}\omega_7^2 + 48\omega_{11}\omega_{19}^2 \omega_7^2 - 16\omega_{11}^3 cs^2 \omega_7^2 - 120\omega_{11} v_3^2 \omega_{19}^2 \omega_7^2 - 44\omega_{11}^2 cs^2 \omega_{19}^2 \omega_7 - 24\omega_{11}\omega_{19}^2 \omega_7 + 16\omega_{11}^3 cs^2 \omega_7^2 + 104\omega_{11}^2 v_3^2 \omega_{19}\omega_7^2 +$
$64\omega_{11} v_3^2 \omega_{19}^2 \omega_7^2 - 32\omega_{11} cs^2 \omega_{19}^2 \omega_7 + 20\omega_{11}^2 cs^2 \omega_{19} + 68\omega_{11}^3 v_3^2 \omega_{19}\omega_7^2 + 16\omega_{11}^2 \omega_{19}\omega_7 - 16\omega_{11}^3 v_3^2 \omega_7^2 + 48 cs^2 \omega_{19}^2 \omega_7^2 + 28\omega_{11}^2 \omega_{19}\omega_7^2 - 20\omega_{11}^3 cs^2 \omega_{19} +$
$8\omega_{11}^3 \omega_7^2 + 43\omega_{11}^3 v_3^2 \omega_{19}^2 \omega_7^2 - 16\omega_{11}^2 cs^2 \omega_{19}\omega_7 - 72\omega_{11} cs^2 \omega_{19}^2 \omega_7^2 + 17\omega_{11}^3 \omega_{19}\omega_7^2 - 16\omega_{11}^2 v_3^2 \omega_7^2 - 25\omega_{11}^3 cs^2 \omega_{19}\omega_7^2 + 8\omega_{11}^3 \omega_7^2 + 44\omega_{11}^3 cs^2 \omega_{19}\omega_7^2 - 8\omega_{11}^3 \omega_7^2 +$
$24\omega_{11}\omega_{19}\omega_7^2 - 68\omega_{11}^3 v_3^2 \omega_{19}\omega_7^2 + 56\omega_{11}^2 cs^2 \omega_{19}\omega_7^2 - 28\omega_{11}^3 \omega_{19}\omega_7^2 + 32\omega_{11} cs^2 \omega_{19}^2 \omega_7^2 - 28\omega_{11}^3 v_3^2 \omega_{19} - 64\omega_{11} v_3^2 \omega_{19}\omega_7^2 - 16\omega_{11}^2 cs^2 \omega_7^2 - 17\omega_{11}^2 \omega_{19}\omega_7^2$

$C_{62} = 12 + 8\omega_{11}^2 + 144 cs^4 - 98\omega_{11}^2 v_3^2 - 18\omega_{11} - 216\omega_{11} v_3^4 - \omega_{11}^3 - 5\omega_{11}^3 cs^4 + 10\omega_{11}^3 v_3^2 + 198\omega_{11} cs^2 + 82\omega_{11}^2 cs^4 + 404\omega_{11}^2 cs^2 v_3^2 - 156 v_3^2 -$

$$216\omega_{11}cs^4 - 9\omega_{11}^3 v_3^4 + 144v_3^4 + 672cs^2 v_3^2 - 78\omega_{11}^2 cs^2 - 1008\omega_{11}cs^2 v_3^2 - 34\omega_{11}^3 cs^2 v_3^2 + 90\omega_{11}^2 v_3^4 - 132cs^2 + 6\omega_{11}^3 cs^2 + 234\omega_{11}v_3^2$$

$$C_{63} = 12 + 8\omega_{11}^2 + 24cs^4 - 154\omega_{11}^2 v_3^2 - 18\omega_{11} - 756\omega_{11}v_3^4 - \omega_{11}^3 - \omega_{11}^3 cs^4 + 14\omega_{11}^3 v_3^2 + 54\omega_{11}cs^2 + 14\omega_{11}^2 cs^4 + 252\omega_{11}^2 cs^2 v_3^2 - 252v_3^2 - 36\omega_{11}cs^4 - 29\omega_{11}^3 v_3^4 + 504v_3^4 + 432cs^2 v_3^2 - 22\omega_{11}^2 cs^2 - 648\omega_{11}cs^2 v_3^2 - 18\omega_{11}^3 cs^2 v_3^2 + 310\omega_{11}^2 v_3^4 - 36cs^2 + 2\omega_{11}^3 cs^2 + 378\omega_{11}v_3^2$$

2.4 CLBM1

2.4.1 Definitions

Collision operator $\boldsymbol{C}$:

$$\boldsymbol{C}\left(\boldsymbol{f}\right) = \mathbf{K}^{-1}\mathbf{S}\left(\boldsymbol{\kappa}^{(eq)} - \mathbf{K}\boldsymbol{f}\right),$$

where

$$\mathbf{S} = \mathrm{diag}(\omega_1, \omega_2, \cdots, \omega_{27}),$$

$\omega_1, \omega_2, \cdots, \omega_{27} \in (0, 2)$.

Matrix $\mathbf{K}$ corresponds to the transformation matrix to the central moment basis defined by

$$\boldsymbol{\kappa} = \Big(k_{(0,0,0)}, k_{(1,0,0)}, k_{(0,1,0)}, k_{(0,0,1)}, k_{(1,1,0)}, k_{(1,0,1)}, k_{(0,1,1)}, k_{(1,1,1)}, k_{(2,0,0)},$$
$$k_{(0,2,0)}, k_{(0,0,2)}, k_{(2,1,0)}, k_{(2,0,1)}, k_{(2,1,1)}, k_{(1,2,0)}, k_{(0,2,1)}, k_{(1,2,1)}, k_{(1,0,2)},$$
$$k_{(0,1,2)}, k_{(1,1,2)}, k_{(2,2,0)}, k_{(2,0,2)}, k_{(0,2,2)}, k_{(2,2,1)}, k_{(2,1,2)}, k_{(1,2,2)}, k_{(2,2,2)} \Big)^T,$$

and is given by

$$\mathbf{K}_{1,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,0,0)}, \qquad \mathbf{K}_{2,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,0,0)}, \qquad \mathbf{K}_{3,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,1,0)},$$
$$\mathbf{K}_{4,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,0,1)}, \qquad \mathbf{K}_{5,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,1,0)}, \qquad \mathbf{K}_{6,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,0,1)},$$
$$\mathbf{K}_{7,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,1,1)}, \qquad \mathbf{K}_{8,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,1,1)}, \qquad \mathbf{K}_{9,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,0)},$$
$$\mathbf{K}_{10,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,0)}, \qquad \mathbf{K}_{11,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,0,2)}, \qquad \mathbf{K}_{12,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,1,0)},$$
$$\mathbf{K}_{13,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,1)}, \qquad \mathbf{K}_{14,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,1,1)}, \qquad \mathbf{K}_{15,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,0)},$$
$$\mathbf{K}_{16,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,1)}, \qquad \mathbf{K}_{17,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,1)}, \qquad \mathbf{K}_{18,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,0,2)},$$
$$\mathbf{K}_{19,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,1,2)}, \qquad \mathbf{K}_{20,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,1,2)}, \qquad \mathbf{K}_{21,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,0)},$$
$$\mathbf{K}_{22,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,2)}, \qquad \mathbf{K}_{23,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,2)}, \qquad \mathbf{K}_{24,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,1)},$$
$$\mathbf{K}_{25,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,1,2)}, \qquad \mathbf{K}_{26,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,2)}, \qquad \mathbf{K}_{27,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,2)},$$

$\forall i \in \{1, 2, \cdots, 27\}$.

The equilibrium central moments are defined as

$$\boldsymbol{\kappa}^{(eq)} = \mathbf{K}\mathbf{M}^{-1}\boldsymbol{\mu}^{(eq)},$$

i.e.,

$$\boldsymbol{\kappa}^{(eq)} = \Big(\rho, 0, 0, 0, 0, 0, 0, 0, \rho c_s^2, \rho c_s^2, \rho c_s^2, 0, 0, 0, 0, 0, 0, 0, 0, 0, \rho c_s^4, \rho c_s^4, \rho c_s^4, 0, 0, 0, \rho c_s^6 \Big)^T.$$

2.4.2 Conservation of mass: ρ

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$$\frac{\partial \rho}{\partial t} + \frac{v_1 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_1} + \frac{\rho \delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_2 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_2} + \frac{\rho \delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_3}{\delta_t}\frac{\partial \rho}{\partial x_3} + \frac{\rho \delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-1 + 3cs^2 + v_1^2)\frac{v_1 \delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_1^3} +$$

$$(-1 + cs^2 + 3v_1^2)\frac{\rho \delta_l^3}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + 3cs^2 + v_2^2)\frac{v_2 \delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} +$$

$$(-1 + cs^2 + 3v_2^2)\frac{\rho \delta_l^3}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2 \partial x_3^2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$$

$$(-1 + 3cs^2 + v_3^2)\frac{\delta_l^3 v_3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2)\frac{\rho \delta_l^3}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$(-2cs^2 - 12o_9 cs^2 v_1^2 - o_9 cs^4 + 6v_1^4 + 3o_9 v_1^2 - 6v_1^2 - 3o_9 v_1^4 + 2cs^4 + o_9 cs^2 + 24cs^2 v_1^2)\frac{\delta_l^4}{24o_9 \delta_t}\frac{\partial^4 \rho}{\partial x_1^4} +$$

$$(-4 + 2o_9 + 6cs^2 - 5o_9 v_1^2 + 10v_1^2 - 3o_9 cs^2)\frac{\rho v_1 \delta_l^4}{12o_9 \delta_t}\frac{\partial^4 v_1}{\partial x_1^4} +$$

$$(3o_9 + 3o_12cs^2 - o_9o_12 + o_9o_12v_1^2 - o_12 - 3o_9 v_1^2 + o_12v_1^2 - 9o_9 cs^2 + 3o_9o_12cs^2)\frac{\rho v_1 \delta_l^4}{12o_9 \delta_t o_12}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} +$$

$$(-2 + o_5)\frac{cs^4 \delta_l^4}{6\delta_t o_5}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$$

$$(3o_10cs^2 o_15 + 3o_10 + o_15v_2^2 - 9o_10cs^2 - o_10o_15 + o_10o_15v_2^2 - 3o_10v_2^2 + 3cs^2 o_15 - o_15)\frac{\rho v_2 \delta_l^4}{12o_10 \delta_t o_15}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$$

$$(-2cs^2 + 6v_2^4 - 12o_10cs^2 v_2^2 + o_10cs^2 - 3o_10v_2^4 - o_10cs^4 + 24cs^2 v_2^2 + 3o_10v_2^2 + 2cs^4 - 6v_2^2)\frac{\delta_l^4}{24o_10 \delta_t}\frac{\partial^4 \rho}{\partial x_2^4} +$$

$$(-4 + 6cs^2 + 2o_10 - 3o_10cs^2 - 5o_10v_2^2 + 10v_2^2)\frac{\rho v_2 \delta_l^4}{12o_10 \delta_t}\frac{\partial^4 v_2}{\partial x_2^4} +$$

$$(3o_9 + 3cs^2 o_13 + o_9o_13v_1^2 - 3o_9 v_1^2 + 3o_9 cs^2 o_13 + o_13v_1^2 - o_13 - o_9o_13 - 9o_9 cs^2)\frac{\rho v_1 \delta_l^4}{12o_9 \delta_t o_13}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$$

$$(3o_10 + 3o_10cs^2 o_16 - 9o_10cs^2 + o_16v_2^2 + 3cs^2 o_16 - 3o_10v_2^2 - o_10o_16 - o_16 + o_10o_16v_2^2)\frac{\rho v_2 \delta_l^4}{12o_10 \delta_t o_16}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$$

$$(-2 + o_6)\frac{cs^4 \delta_l^4}{6o_6 \delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + (-2 + o_7)\frac{cs^4 \delta_l^4}{6\delta_t o_7}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$$

$$(3o_18cs^2 - o_18 - o_18o_11 - 3o_11v_3^2 + o_18o_11v_3^2 + o_18v_3^2 + 3o_18cs^2 o_11 + 3o_11 - 9cs^2 o_11)\frac{\rho \delta_l^4 v_3}{12\delta_t o_18 o_11}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} +$$

$$(3o_19cs^2 - o_19 + o_19o_11v_3^2 - 3o_11v_3^2 - o_19o_11 + o_19v_3^2 + 3o_11 - 9cs^2 o_11 + 3o_19cs^2 o_11)\frac{\rho \delta_l^4 v_3}{12o_19 \delta_t o_11}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$$

$$(-2cs^2 + 6v_3^4 - 12cs^2 o_11v_3^2 - cs^4 o_11 - 3o_11v_3^4 + 3o_11v_3^2 + 24cs^2 v_3^2 - 6v_3^2 + 2cs^4 + cs^2 o_11)\frac{\delta_l^4}{24\delta_t o_11}\frac{\partial^4 \rho}{\partial x_3^4} +$$

$$(-4 + 6cs^2 - 5o_11v_3^2 + 10v_3^2 + 2o_11 - 3cs^2 o_11)\frac{\rho \delta_l^4 v_3}{12\delta_t o_11}\frac{\partial^4 v_3}{\partial x_3^4} = 0.$$

2.4.3   Conservation of momentum: ρv_1

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$$v_1 \frac{\partial \rho}{\partial t} + \rho \frac{\partial v_1}{\partial t} + (cs^2 + v_1^2)\frac{\delta_l}{\delta_t}\frac{\partial \rho}{\partial x_1} + \frac{2\rho v_1 \delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_1 v_2 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_2} + \frac{\rho v_2 \delta_l}{\delta_t}\frac{\partial v_1}{\partial x_2} + \frac{\rho v_1 \delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{v_1 \delta_l v_3}{\delta_t}\frac{\partial \rho}{\partial x_3} + \frac{\rho \delta_l v_3}{\delta_t}\frac{\partial v_1}{\partial x_3} +$$

$$\frac{\rho v_1 \delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 - 3o_9 v_1^2 + o_9 + 4cs^2 + 6v_1^2 - 2o_9 cs^2)\frac{\delta_l^2}{o_9 \delta_t}\frac{\partial \rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} + (2 - o_9)\frac{3\rho v_1 \delta_l^2}{o_9 \delta_t}\left(\frac{\partial v_1}{\partial x_1}\right)^2 +$$

$$(-2 + o_5)\frac{cs^2 \delta_l^2}{2\delta_t o_5}\frac{\partial \rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} + (-2 + o_5)\frac{cs^2 \delta_l^2}{2\delta_t o_5}\frac{\partial \rho}{\partial x_2}\frac{\partial v_1}{\partial x_2} + (-2 + o_6)\frac{cs^2 \delta_l^2}{2\delta_t o_6}\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_1} + (-2 + o_6)\frac{cs^2 \delta_l^2}{2\delta_t o_6}\frac{\partial \rho}{\partial x_3}\frac{\partial v_1}{\partial x_3} +$$

$$(-2 - o_9 v_1^2 + o_9 + 6cs^2 + 2v_1^2 - 3o_9 cs^2)\frac{v_1 \delta_l^2}{2o_9 \delta_t}\frac{\partial^2 \rho}{\partial x_1^2} + (-2 - 3o_9 v_1^2 + o_9 + 2cs^2 + 6v_1^2 - o_9 cs^2)\frac{\rho \delta_l^2}{2o_9 \delta_t}\frac{\partial^2 v_1}{\partial x_1^2} +$$

$$(-2 + o_5)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_5}\frac{\partial^2 v_2}{\partial x_1 \partial x_2} + (-2 + o_5)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_5}\frac{\partial^2 v_1}{\partial x_2^2} + (-2 + o_6)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_6}\frac{\partial^2 v_3}{\partial x_1 \partial x_3} + (-2 + o_6)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_6}\frac{\partial^2 v_1}{\partial x_3^2} + C_1 \frac{\delta_l^3}{12o_9^2 \delta_t}\frac{\partial^3 \rho}{\partial x_1^3}$$

$$+ (-24 - 4o_9^2 - 60o_9 v_1^2 + 24o_9 + 5o_9^2 cs^2 + 36cs^2 + 60v_1^2 - 36o_9 cs^2 + 11o_9^2 v_1^2)\frac{\rho v_1 \delta_l^3}{6o_9^2 \delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_2 \frac{\rho v_1 \delta_l^3}{12o_9^2 \delta_t o_1 2o_5}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} +$$

$$(-12 - o_5^2 + 12o_5)\frac{cs^4 \delta_l^3}{6\delta_t o_5^2}\frac{\partial^3 \rho}{\partial x_1 \partial x_2^2} - \frac{cs^2 \rho v_1 \delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + 3cs^2 + v_2^2)\frac{v_1 v_2 \delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} + C_3 \frac{\rho v_2 \delta_l^3}{6\delta_t o_1 5o_5}\frac{\partial^3 v_1}{\partial x_2^3} +$$

$$(-1 + cs^2 + 3v_2^2)\frac{\rho v_1 \delta_l^3}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_4 \frac{\rho v_1 \delta_l^3}{12o_1 3o_9^2 \delta_t o_6}\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} - \frac{cs^2 \rho v_1 \delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} + (-12 - o_6^2 + 12o_6)\frac{cs^4 \delta_l^3}{6\delta_t o_6^2}\frac{\partial^3 \rho}{\partial x_1 \partial x_3^2} -$$

$$\frac{cs^2 \rho v_1 \delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2 \rho v_1 \delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} + (-1 + 3cs^2 + v_3^2)\frac{v_1 \delta_l^3 v_3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + C_5 \frac{\rho \delta_l^3 v_3}{6\delta_t o_1 8o_6}\frac{\partial^3 v_1}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2)\frac{\rho v_1 \delta_l^3}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3}$$

$$+ C_6 \frac{v_1 \delta_l^4}{12o_9^3 \delta_t}\frac{\partial^4 \rho}{\partial x_1^4} + C_7 \frac{\rho \delta_l^4}{12o_9^3 \delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_8 \frac{\rho \delta_l^4}{12o_9^3 \delta_t o_1 2^2 o_5^2}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + C_9 \frac{cs^2 v_1 \delta_l^4}{12o_9^3 o_2 1\delta_t o_1 2^2 o_1 5o_5^2}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$$

$$C_{10}\frac{cs^2 \rho \delta_l^4}{12o_9^2 o_2 1\delta_t o_1 2o_1 5o_5^3}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + C_{11}\frac{cs^2 v_2 \delta_l^4}{12o_9 o_2 1\delta_t o_1 2o_1 0o_1 5^2 o_5^2}\frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} +$$

$$(-3o_1 0v_2^2 + o_1 0o_1 5v_2^2 + 3cs^2 o_1 0o_1 5 + 3o_1 0 - 9cs^2 o_1 0 - o_1 5 - o_1 0o_1 5 + 3cs^2 o_1 5 + o_1 5v_2^2)\frac{\rho v_1 v_2 \delta_t^4}{12\delta_t o_1 0o_1 5}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$$

$$C_{12}\frac{cs^2 \rho \delta_t^4}{12o_9 o_2 1\delta_t o_1 2o_1 0o_1 5o_5^3}\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} +$$

$$(3o_1 0v_2^2 + 6v_2^4 + 24cs^2 v_2^2 - cs^4 o_1 0 - 2cs^2 + 2cs^4 + cs^2 o_1 0 - 12cs^2 o_1 0v_2^2 - 3o_1 0v_2^4 - 6v_2^2)\frac{v_1 \delta_t^4}{24\delta_t o_1 0}\frac{\partial^4 \rho}{\partial x_2^4} +$$

$$C_{13}\frac{\rho \delta_t^4}{24\delta_t o_1 5^2 o_5^3}\frac{\partial^4 v_1}{\partial x_2^4} + (-4 - 5o_1 0v_2^2 + 6cs^2 + 2o_1 0 - 3cs^2 o_1 0 + 10v_2^2)\frac{\rho v_1 v_2 \delta_t^4}{12\delta_t o_1 0}\frac{\partial^4 v_2}{\partial x_2^4} + C_{14}\frac{\rho \delta_t^4}{12o_1 3^2 o_9^3 \delta_t o_6^3}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$$

$$C_{15}\frac{cs^4 \rho \delta_t^4}{12o_1 3o_9 o_7 \delta_t o_1 2o_6^2 o_8 o_1 5o_5^3 o_1 4o_1 7}\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$(3cs^2 o_1 6o_1 0 + 3cs^2 o_1 6 - 3o_1 0v_2^2 + o_1 6v_2^2 - o_1 6 + 3o_1 0 - 9cs^2 o_1 0 - o_1 6o_1 0 + o_1 6o_1 0v_2^2)\frac{\rho v_1 v_2 \delta_t^4}{12o_1 6\delta_t o_1 0}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$$

$$C_{16}\frac{cs^2 v_1 \delta_t^4}{12o_1 3^2 o_9^3 \delta_t o_1 8o_6^2 o_2 2}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + C_{17}\frac{cs^2 \rho \delta_t^4}{12o_1 3o_9^2 \delta_t o_1 8o_6^3 o_2 2}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} + C_{18}\frac{\delta_t^4}{2o_1 3o_9 o_2 0\delta_t o_1 2o_1 8o_6 o_2 2o_8 o_5 o_1 4}\frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C_{19}\frac{\rho \delta_t^4}{2o_1 3o_9 o_2 0\delta_t o_1 2o_1 8o_6 o_2 2o_8 o_5 o_1 4}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + C_{20}\frac{\rho \delta_t^4}{12o_1 3o_9 o_7 o_2 0\delta_t o_1 2o_1 8o_6^3 o_2 2o_8 o_5^2 o_1 4}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C_{21}\frac{\rho \delta_t^4 v_3}{o_1 3o_9 o_2 0\delta_t o_1 2o_1 8o_6 o_2 2o_8 o_5 o_1 4}\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} + C_{22}\frac{\delta_t^4}{12o_7 o_2 0\delta_t o_1 8o_6 o_8 o_1 5o_5 o_1 7}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} + C_{23}\frac{\rho \delta_t^4}{4o_2 0\delta_t o_1 8o_6^2 o_8 o_1 5o_5^2 o_1 7}\frac{\partial^4 v_1}{\partial x_2^2 \partial x_3^2} +$$

$$C_{24}\frac{\rho v_2 \delta_t^4}{2o_2 0\delta_t o_1 8o_6 o_8 o_1 5o_5 o_1 7}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + C_{25}\frac{\rho \delta_t^4}{4o_2 0\delta_t o_1 8o_6 o_8 o_1 5o_5 o_1 7}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} + C_{26}\frac{cs^2 \delta_t^4 v_3}{12o_1 3o_9 \delta_t o_1 8^2 o_6^2 o_2 2o_1 1}\frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} +$$

$$(o_1 8o_1 1v_3^2 + 3cs^2 o_1 8 - o_1 8o_1 1 - o_1 8 + o_1 8v_3^2 - 3o_1 1v_3^2 + 3o_1 1 - 9cs^2 o_1 1 + 3cs^2 o_1 8o_1 1)\frac{\rho v_1 \delta_t^4 v_3}{12\delta_t o_1 8o_1 1}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} +$$

$$C_{27}\frac{cs^2 \rho \delta_t^4}{12o_1 3o_9 \delta_t o_1 8o_6^3 o_2 2o_1 1}\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} +$$

$$(3cs^2 o_1 1o_1 9 + o_1 1o_1 9v_3^2 + 3cs^2 o_1 9 - 3o_1 1v_3^2 + 3o_1 1 - 9cs^2 o_1 1 + o_1 9v_3^2 - o_1 1o_1 9 - o_1 9)\frac{\rho v_1 \delta_t^4 v_3}{12\delta_t o_1 1o_1 9}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$$

$$(24cs^2 v_3^2 + 6v_3^4 - 12cs^2 o_1 1v_3^2 - 3o_1 1v_3^4 - 2cs^2 - cs^4 o_1 1 + 2cs^4 + 3o_1 1v_3^2 + cs^2 o_1 1 - 6v_3^2)\frac{v_1 \delta_t^4}{24\delta_t o_1 1}\frac{\partial^4 \rho}{\partial x_3^4} +$$

$$C_{28}\frac{\rho \delta_t^4}{24\delta_t o_1 8^2 o_6^3}\frac{\partial^4 v_1}{\partial x_3^4} + (-4 + 6cs^2 - 5o_1 1v_3^2 + 2o_1 1 - 3cs^2 o_1 1 + 10v_3^2)\frac{\rho v_1 \delta_t^4 v_3}{12\delta_t o_1 1}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = -12o_9 cs^4 + 36o_9 v_1^2 + 7o_9^2 v_1^4 - o_9^2 cs^2 + 36v_1^4 + 144cs^2 v_1^2 - 12cs^2 - 144o_9 cs^2 v_1^2 + 12cs^4 - 36v_1^2 + 24o_9^2 cs^2 v_1^2 - 36o_9 v_1^4 + 12o_9 cs^2 + o_9^2 cs^4 - 7o_9^2 v_1^2$

$C_2 = 12o_9^2 - 36o_9 cs^2 o_5 - 36o_9^2 cs^2 - 11o_9^2 cs^2 o_1 2o_5 - 12o_9 o_5 v_1^2 - 12o_1 2o_5 - 6o_9 o_1 2o_5 v_1^2 + 6o_9 o_1 2o_5 + 12o_9 o_5 + 12o_1 2o_5 v_1^2 + 12o_9^2 o_5 v_1^2 - 6o_9^2 o_1 2 + 3o_9^2 o_1 2o_5 - 12o_9^2 o_5 - 3o_9^2 o_1 2o_5 v_1^2 + 6o_9^2 o_1 2v_1^2 - 18o_9 cs^2 o_1 2o_5 + 36o_9^2 cs^2 o_5 + 36cs^2 o_1 2o_5 - 12o_9^2 v_1^2 + 18o_9^2 cs^2 o_1 2$

$C_3 = 6 + 9cs^2 o_5 + 3o_5 v_2^2 - o_1 5o_5 v_2^2 - 18cs^2 - 3cs^2 o_1 5o_5 - 3o_1 5 - 3o_5 + o_1 5o_5 + 9cs^2 o_1 5 - 6v_2^2 + 3o_1 5v_2^2$

$C_4 = 12o_9^2 - 6o_1 3o_9 o_6 v_1^2 - 12o_9^2 o_6 + 36o_1 3cs^2 o_6 - 11o_1 3o_9^2 cs^2 o_6 - 36o_9^2 cs^2 + 6o_1 3o_9^2 v_1^2 + 36o_9^2 cs^2 o_6 - 12o_9 o_6 v_1^2 + 6o_1 3o_9 o_6 + 18o_1 3o_9^2 cs^2 - 36o_9 cs^2 o_6 - 12o_1 3o_6 + 3o_1 3o_9^2 o_6 + 12o_9^2 o_6 v_1^2 + 12o_9 o_6 - 3o_1 3o_9^2 o_6 v_1^2 + 12o_1 3o_6 v_1^2 - 6o_1 3o_9^2 - 18o_1 3o_9 cs^2 o_6 - 12o_9^2 v_1^2$

$C_5 = 6 + o_1 8o_6 + 3o_6 v_3^2 + 9cs^2 o_1 8 - 18cs^2 - 3o_1 8 - 3o_6 + 3o_1 8v_3^2 + 9cs^2 o_6 - 3cs^2 o_1 8o_6 - o_1 8o_6 v_3^2 - 6v_3^2$

$C_6 = 12 - 216o_9 cs^4 + 8o_9^2 + 234o_9 v_1^2 - 18o_9 - o_9^3 + 90o_9^3 v_1^4 - 34o_9^3 cs^2 v_1^2 - 78o_9^2 cs^2 + 144v_1^4 + 672cs^2 v_1^2 - 132cs^2 - 1008o_9 cs^2 v_1^2 + 6o_9^3 cs^2 - 9o_9^3 v_1^4 + 144cs^4 - 156v_1^2 + 404o_9^2 cs^2 v_1^2 + 10o_9^3 v_1^2 - 5o_9^3 cs^4 - 216o_9 v_1^4 + 198o_9 cs^2 + 82o_9^2 cs^4 - 98o_9^2 v_1^2$

$C_7 = 12 - 36o_9 cs^4 + 8o_9^2 + 378o_9 v_1^2 - 18o_9 - o_9^3 + 310o_9^2 v_1^4 - 18o_9^2 cs^2 v_1^2 - 22o_9^2 cs^2 + 504v_1^4 + 432cs^2 v_1^2 - 36cs^2 - 648o_9 cs^2 v_1^2 + 2o_9^3 cs^2 - 29o_9^3 v_1^4 + 24cs^4 - 252v_1^2 + 252o_9^2 cs^2 v_1^2 + 14o_9^3 v_1^2 - o_9^3 cs^4 - 756o_9 v_1^4 + 54o_9 cs^2 + 14o_9^2 cs^4 - 154o_9^2 v_1^2$

$C_8 = -36o_9^3 o_5^2 v_1^4 - 12o_9 cs^4 o_1 2^2 o_5^2 - 99o_9^3 cs^2 o_1 2o_5^2 v_1^2 + 4o_9^3 o_1 2^2 o_5^3 v_1^4 - 72o_1 2^2 o_5^3 v_1^2 + 60o_9^3 cs^2 o_1 2^2 o_5^3 v_1^2 + 6o_9^3 cs^2 o_1 2o_5^2 - 18o_9^3 cs^4 o_1 2o_5^2 + 39o_9^3 o_1 2o_5^3 v_1^2 + 12cs^4 o_1 2^2 o_5^3 - 12o_9^3 cs^2 o_1 2o_5^2 + 90o_9 o_1 2^2 o_5^3 v_1^2 - 306o_9 cs^2 o_1 2^2 o_5^3 v_1^2 - 12o_9 cs^4 o_1 2^2 o_5^3 + 6o_9^3 cs^4 o_1 2o_5^3 + 36o_9^3 o_5^3 v_1^2 - 36o_9 o_1 2o_5^3 v_1^4 - 12o_9^2 cs^2 o_1 2o_5^2 + 12o_9 cs^2 o_1 2^2 o_5^2 - 36o_9^3 o_1 2o_5^2 v_1^2 + 252cs^2 o_1 2^2 o_5^3 v_1^2 + 18o_9^2 cs^2 o_1 2^2 o_5^2 v_1^2 + 18o_9^3 cs^2 o_1 2o_5^2 - 6o_9^2 cs^4 o_1 2o_5^3 + 36o_9^3 o_5^3 v_1^4 + 54o_9^3 cs^2 o_1 2o_5^2 v_1^2 - 6o_9 o_1 2^2 o_5^3 v_1^4 - 12cs^2 o_1 2^2 o_5^3 + 12o_9^3 cs^4 o_1 2o_5 + 19o_9^2 o_1 2^2 o_5^3 v_1^4 + 12o_9 cs^2 o_1 2^2 o_5^3 - 72o_9^3 o_1 2o_5^3 v_1^2 - 18o_9^3 cs^2 o_1 2^2 o_5^3 v_1^2 - 36o_9 cs^2 o_1 2^2 o_5^2 v_1^2 + 12o_9^3 cs^4 o_1 2o_5^2 - 6o_9^3 cs^2 o_1 2o_5^3 - 24o_9^3 cs^4 o_1 2^2 o_5 + 108o_9^3 cs^2 o_5^3 v_1^2 + 36o_9^2 cs^2 o_1 2o_5^3 v_1^2 - 36o_9^3 o_5^3 v_1^4 + 6o_9^3 o_1 2^2 o_5^2 v_1^2 + 36o_9^3 o_1 2o_5^3 v_1^4 - 3o_9^3 cs^2 o_1 2^2 o_5^3 v_1^2 + 12o_9^3 cs^4 o_1 2^2 + 6o_9^2 cs^4 o_1 2^2 o_5^2 + 72o_9 o_1 2o_5^3 v_1^4 + o_9^2 cs^4 o_1 2^2 o_5^3 - 5o_9^3 cs^2 o_1 2^2 o_5^2 - 19o_9^2 o_1 2^2 o_5^3 v_1^2 + 36o_9^3 cs^2 o_1 2o_5 v_1^2 + 72o_1 2^2 o_5^3 v_1^4 + 6o_9^3 cs^2 o_1 2^2 o_5 - 39o_9^3 o_1 2o_5^3 v_1^4 + 12o_9^3 cs^2 o_1 2^2 o_5^3 v_1^2 + 36o_9^3 o_5^3 v_1^2 - 4o_9^3 o_1 2^2 o_5^3 v_1^2 - 6o_9^2 cs^2 o_1 2^2 o_5^2 - o_9^3 cs^4 o_1 2^2 o_5^3 + 198o_9^2 cs^2 o_1 2o_5^3 v_1^2 - 108o_9^3 cs^2 o_5^2 v_1^2 - 108o_9^2 cs^2 o_5^3 v_1^2 - 36o_9^2 o_5^3 v_1^4 - 108o_9 cs^2 o_1 2o_5^3 v_1^2 + 36o_9 o_1 2o_5^3 v_1^2 + 13o_9^3 cs^4 o_1 2^2 o_5^2 - 90o_9 o_1 2^2 o_5^3 v_1^4 - o_9^2 cs^2 o_1 2^2 o_5^3$

$C_9 = 36cs^2 o_2 1o_1 2^2 o_1 5o_5^2 - 2o_9^2 o_2 1o_1 2^2 o_1 5o_5^2 v_1^2 + 36o_9^3 cs^2 o_2 1o_1 5o_5 - 36o_9 cs^2 o_2 1o_1 2o_1 5o_5 + 12o_9 o_2 1o_1 2o_1 5o_5 - 36o_9^3 cs^2 o_2 1o_1 2o_1 5 - 12o_9^2 o_2 1o_1 2^2 o_5 v_1^2 - 6o_9 o_2 1o_1 2^2 o_5^2 + 12o_9^3 o_2 1o_1 2o_1 5 - 12o_9^2 o_2 1o_1 5o_5^2 v_1^2 + 5o_9^3 cs^2 o_2 1o_1 2^2 o_1 5o_5^2 - 6o_9 o_1 2^2 o_1 5o_5^2 v_1^2 + 12o_9^3 o_2 1o_1 2^2 o_1 5v_1^2 - 12o_9^3 o_2 1o_1 5o_5^2 - 12o_9^3 o_2 1o_1 2o_1 5o_5 - 12o_9^3 o_1 2^2 o_1 5o_5 v_1^2 - 12o_9^3 o_2 1o_1 5o_5 v_1^2 - o_9^3 o_2 1o_1 2^2 o_1 5o_5^2 - 6o_9^3 o_2 1o_1 2o_1 5o_5^2 v_1^2 - 18o_6^2 o_2 1o_1 2o_1 5o_5^2 - 36o_9^2 cs^2 o_2 1o_1 2^2 o_1 5 + 36o_9^3 cs^2 o_2 1o_1 2o_1 5o_5 - 12o_9^2 o_2 1o_1 2o_1 5o_5^2 - 36o_9^3 cs^2 o_2 1o_1 2o_1 5o_5 - 12o_9^3 o_2 1o_1 2^2 o_1 5o_5 v_1^2 + 12o_9^3 o_2 1o_1 2o_1 5o_5 + 12o_9^3 o_2 1o_1 2^2 o_1 5o_5 - 18o_9^2 cs^2 o_1 2^2 o_1 5o_5^2 - 12o_9^3 o_1 2o_1 5o_5^2 v_1^2 + 54o_9^2 cs^2 o_2 1o_1 2o_1 5o_5^2 - 12o_9 o_2 1o_1 2^2 o_1 5o_5^2 v_1^2 + 12o_9^3 o_1 2^2 o_5 v_1^2 + 12o_9^3 o_2 1o_1 5o_5 -$

$$40o_9^3cs^2o_21o_12^2o_15o_5 - 36o_9^3cs^2o_21o_15o_5 + 12o_9^2o_21o_15o_5^2 + 12o_9^2o_21o_12^2o_5 + 18o_9^3cs^2o_12^2o_15o_5^2 + 12o_9^2o_12o_15o_5^2v_1^2 - 6o_9^3o_12^2o_5^2v_1^2 -$$
$$18o_9^2o_21o_12^2o_15o_5 + 36o_9^2cs^2o_21o_15o_5^2 - 18o_9^3o_21o_12o_15o_5v_1^2 + 18o_9^2o_21o_12o_15o_5^2v_1^2 + 12o_9^2o_21o_12^2o_15 - 6o_9^3o_12^2o_15o_5^2 + 18o_9^2cs^2o_21o_12^2o_5^2 +$$
$$54o_9^3cs^2o_21o_12o_15o_5 - 12o_21o_12^2o_15o_5^2 + 12o_21o_12^2o_15o_5^2v_1^2 - 6o_9^2cs^2o_21o_12^2o_15o_5^2 - 18o_9^3cs^2o_12^2o_5^2 + o_9^3o_21o_12^2o_15o_5^2v_1^2 +$$
$$12o_9^3o_12o_15o_5v_1^2 + 6o_9^3o_12^2o_5^2 - 12o_9^2o_21o_12^2o_15v_1^2 + 6o_9^3o_12^2o_15o_5v_1^2 + 36o_9^3cs^2o_12^2o_15 + 12o_9^3o_21o_15o_5^2v_1^2 - 12o_9^3o_12^2o_5 +$$
$$18o_9^3o_21o_12o_15o_5v_1^2 - 36o_9cs^2o_21o_12^2o_15o_5^2 + 12o_9o_21o_12^2o_15o_5^2 - 18o_9^3cs^2o_21o_12o_15o_5 - 12o_9^3o_21o_12o_15v_1^2 - 36o_9^2cs^2o_21o_12^2o_5 +$$
$$54o_9^2cs^2o_21o_12^2o_15o_5 - 36o_9^3cs^2o_21o_15o_5 + 18o_9^2o_21o_12^2o_15o_5v_1^2 + 6o_9^3o_21o_12o_15o_5^2 + 12o_9^3o_12^2o_15o_5 + 36o_9^3cs^2o_21o_12^2o_15 +$$
$$6o_9^2o_21o_12^2o_5^2v_1^2 - 36o_9^3cs^2o_12^2o_15o_5 + 6o_9^2o_12^2o_15o_5^2 - 12o_9^3o_21o_12^2o_15 + 2o_9^2o_21o_12^2o_15o_5^2 - 12o_9o_21o_12o_15o_5^2v_1^2$$

$C_{10} = -12o_9^2o_21o_15o_5 + 24o_9cs^2o_21o_12o_15o_5^2 - 24o_9o_21o_12o_15o_5^2 - 36o_9o_21o_12o_5^2v_1^2 - 6o_9^2cs^2o_12o_5^3 + 36o_9^2o_15o_5^3v_1^2 - 6o_9^2o_12o_15o_5^3 + 18o_9^2cs^2o_21o_12o_15o_5 + 12o_9cs^2o_15o_5^3 - 36o_9o_21o_12o_15o_5v_1^2 - 72o_9^2o_21o_15o_5^2v_1^2 + 6o_9^2o_12o_5^2v_1^2 + 36o_9o_21o_15o_5^2v_1^2 + 6o_9o_21o_12o_15o_5^3 - 6o_9cs^2o_21o_12o_15o_5^3 - 36o_21o_12o_15o_5^2v_1^2 + 12o_9^2o_12o_15o_5^2 + 12o_9cs^2o_12o_5^3 + 36o_9^2o_21o_15o_5^3v_1^2 - 36o_9o_15o_5^3v_1^2 - 6o_21o_12o_15o_5^3 - o_9^2cs^2o_21o_12o_15o_5^3 + 18o_9o_21o_12o_5^3v_1^2 + 12o_9o_15o_5^3 + 6o_9cs^2o_21o_12o_5^3 - 6o_9o_21o_12o_5^3 - 12o_9^2o_21o_15o_5^3 + 12o_21o_12o_15o_5^2 - 4o_9^2cs^2o_21o_12o_15o_5^2 + 18o_21o_12o_15o_5^3v_1^2 + 12o_9o_21o_12o_15o_5 - 12o_9cs^2o_21o_12o_15o_5 + 24o_9^2o_21o_15o_5^2 + 12o_9o_21o_12o_5^2 - 12o_9cs^2o_21o_12o_5^2 - 12o_9^2o_15o_5^2 - 36o_9o_21o_15o_5^3v_1^2 - 18o_9o_12o_5^3v_1^2 - 36o_9o_12o_15o_5^2v_1^2 - 6o_9cs^2o_12o_15o_5^3 + 6o_9o_12o_15o_5^3 - 12o_9^2cs^2o_15o_5^3 - 12o_9o_15o_5^3 - 12o_9^2cs^2o_12o_15o_5^2 + 12o_9cs^2o_12o_15o_5^2 - 18o_9o_21o_12o_15o_5^3v_1^2 + 12o_9cs^2o_21o_15o_5 + 6o_9cs^2o_21o_12o_15o_5^3 - 12o_9cs^2o_21o_12o_15o_5^3 + 12o_9o_21o_15o_5^3 + 6o_9o_12o_5^3 - 12cs^2o_21o_12o_15o_5^2 + 36o_9o_15o_5^3v_1^2 - 12o_9^2cs^2o_21o_12o_15 - 24o_9cs^2o_21o_12o_15o_5^2 + 18o_9o_12o_15o_5^3v_1^2 + 6cs^2o_21o_12o_15o_5^3 - 12o_9^2o_12o_5^2 - 12o_9o_21o_12o_15o_5^2 + 12o_9cs^2o_21o_12o_15o_5^2 - 18o_9o_12o_15o_5^3v_1^2 + 12o_9cs^2o_21o_15o_5^2 + 36o_9o_21o_15o_5v_1^2 + 72o_9o_21o_12o_15o_5^2v_1^2$

$C_{11} = 12o_9o_10o_15^2o_5v_2^2 + 36o_9cs^2o_21o_12o_10o_15^2 - 12o_9o_21o_12o_10o_15^2 + o_9o_21o_12o_10o_15^2o_5v_2^2 - 12o_9o_21o_15^2o_5^2 + 36o_9cs^2o_21o_15^2o_5^2 - 12o_9o_21o_10o_15o_5 + 36o_9cs^2o_12o_10o_15o_5 + 18o_9o_21o_12o_10o_15o_5v_2^2 + 18cs^2o_21o_12o_15^2o_5^2 + 3o_9o_21o_12o_10o_15o_5^2 - 9o_9cs^2o_21o_12o_10o_10o_15o_5^2 + 12o_21o_15^2o_5^2 - 18cs^2o_21o_10o_15^2o_5^2 - 6o_9o_21o_10o_15o_5^2v_2^2 - 5o_9o_21o_12o_15^2o_5^2v_2^2 - 6o_12o_10o_15^2o_5^2v_2^2 + 6o_9o_21o_12o_10o_5^2v_2^2 + 54o_9cs^2o_21o_12o_10o_15o_5 - 18o_9o_21o_12o_10o_15o_5 - 18o_9cs^2o_12o_10o_15o_5 + 6o_9o_12o_10o_15o_5 - 12o_9o_21o_15^2o_5v_2^2 - 36cs^2o_21o_15^2o_5^2 - 12o_9o_21o_12o_10o_15v_2^2 + 12o_9o_21o_12o_10o_15 - 36o_9cs^2o_21o_12o_10o_15 - 12o_9o_12o_10o_15^2o_5v_2^2 + 12o_9o_21o_15^2o_5 - 36o_9cs^2o_21o_15^2o_5 + 12o_9o_21o_15^2o_5^2v_2^2 - 6o_21o_12o_15^2o_5^2 + 12o_10o_15^2o_5^2v_2^2 + 18o_9cs^2o_21o_10o_15^2o_5^2 - 6o_9o_21o_10o_15^2o_5^2 - 12o_10o_15^2o_5^2 + 12o_9o_21o_12o_10o_5 + 12o_9o_21o_12o_10o_15^2v_2^2 - 36o_9cs^2o_21o_12o_10o_15^2 + 12o_9o_21o_12o_15^2o_5 + 54o_9cs^2o_21o_12o_15^2o_5 + 6o_9o_21o_10o_15^2o_5^2v_2^2 + 6o_21o_12o_15^2o_5^2v_2^2 + 18o_9o_21o_15^2o_5^2v_2^2 + 12o_9o_21o_10o_15o_5v_2^2 + 12o_9o_21o_12o_10o_15^2 - 12o_9o_21o_12o_10o_5v_2^2 - 36o_9cs^2o_21o_12o_10o_15^2o_5 - 12o_9o_21o_12o_15^2v_2^2 + 12o_9o_10o_15^2o_5^2 - 36cs^2o_10o_15^2o_5^2 - 3o_9o_21o_12o_10o_15o_5^2v_2^2 + 3o_9cs^2o_21o_12o_10o_15^2o_5^2 - o_9o_21o_12o_10o_15^2o_5^2 - 12o_9o_10o_15^2o_5 + 36cs^2o_10o_15^2o_5 + 36cs^2o_10o_15^2o_5^2 + 18o_9cs^2o_21o_12o_10o_5^2 - 6o_9o_21o_12o_10o_5^2 + 6o_12o_10o_15^2o_5^2 - 15o_9cs^2o_21o_12o_15^2o_5^2 + 5o_9o_21o_12o_15^2o_5^2 - 12o_9o_10o_15^2o_5^2v_2^2 - 12o_21o_15^2o_5^2v_2^2 - 12o_9o_21o_12o_10o_15^2o_5v_2^2 + 12o_9o_21o_12o_10o_15^2o_5 - 36o_9cs^2o_12o_10o_15^2o_5$

$C_{12} = 18o_9cs^2o_21o_12o_15o_5^2 - 18o_9o_21o_12o_15o_5^2 - o_9cs^2o_21o_12o_10o_15o_5^3 + 18o_9o_21o_12o_10o_5^3v_2^2 + 18o_21o_12o_15o_5^3v_2^2 + 18o_9o_12o_10o_15o_5^3v_2^2 + 12cs^2o_10o_15o_5^3 + 36o_9o_12o_10o_5^3v_2^2 + 36o_10o_15o_5^3v_2^2 + 36o_9o_21o_15o_5^3v_2^2 + 36o_9o_10o_15o_5^3v_2^2 + o_9o_21o_12o_10o_15o_5 + 5o_9o_21o_12o_15o_5^3 - 5o_9cs^2o_21o_12o_10o_15o_5^2 - 5o_9cs^2o_21o_12o_15o_5^3 + 6o_12o_10o_15o_5^3 - 12o_10o_15o_5^3 - 12o_9o_21o_10o_5^2 + 12o_9cs^2o_21o_10o_5^2 - 6o_9o_21o_10o_15o_5^3 + 6o_9cs^2o_21o_10o_15o_5^3 - 6o_21o_12o_15o_5^3 - 36o_9o_21o_15o_5^2v_2^2 - 18o_9o_21o_10o_5^3v_2^2 - 36o_9o_21o_10o_15o_5^2v_2^2 - 12o_9o_10o_15o_5^3 + 12o_9cs^2o_10o_15o_5^2 - 54o_9o_21o_12o_10o_5^2v_2^2 + 18o_9cs^2o_21o_12o_10o_15o_5 - 12o_9cs^2o_21o_12o_10o_15o_5 + 12o_9o_21o_12o_10o_5 - 6o_9cs^2o_21o_10o_5^3 + 6o_9o_21o_10o_5^3 + 12o_9o_21o_12o_15o_5 - 36o_21o_15o_5^3v_2^2 - 12o_9cs^2o_21o_12o_15o_5 - 36o_9o_10o_15o_5^3v_2^2 - 12o_9cs^2o_10o_15o_5^3 + 12o_9o_10o_15o_5^3 - 12o_9cs^2o_21o_12o_10o_15 - 36o_9o_21o_12o_15o_5v_2^2 - 6cs^2o_21o_10o_15o_5^3 - 12o_9o_21o_12o_10o_5 + 12o_9cs^2o_21o_12o_10o_5 + 54o_9o_21o_12o_15o_5^2v_2^2 - 12cs^2o_21o_15o_5^3 + 36o_9o_21o_12o_10o_5v_2^2 - 3o_9o_21o_12o_10o_15o_5^2v_2^2 - 18o_12o_10o_15o_5^3v_2^2 - 15o_9o_21o_12o_15o_5^3v_2^2 + 12o_9cs^2o_21o_15o_5^3 - 12o_9o_9o_21o_15o_5^3 - 6o_9o_21o_12o_10o_5^3 + 6o_9cs^2o_21o_12o_15o_5^3 + 6cs^2o_21o_12o_15o_5^3 - 18o_9cs^2o_21o_12o_10o_5^3 + 18o_9o_21o_12o_10o_5^3 + 12o_9o_21o_15o_5^3 - 12o_9cs^2o_21o_15o_5^3 + 12o_21o_15o_5^3$

$C_{13} = -72o_5^2v_2^4 + 24cs^2o_15o_5^2 + 72o_15o_5^2v_2^4 + 12o_15^2o_5^2v_2^2 + 6cs^2o_15^2o_5^3v_2^2 + 108cs^2o_5^3v_2^2 - 6cs^2o_15o_5^3 + 24cs^4o_15^2 + 24cs^4o_15o_5 - 12cs^2o_15^2o_5^2v_2^2 - 3o_15^2o_5^3v_2^2 - 24cs^4o_15o_5^2 - 30o_15o_5^3v_2^2 + 36o_5^3v_2^2 + 6cs^4o_15o_5^3 + 72cs^2o_15o_5o_5v_2^2 - 24cs^2o_15o_5 - 216cs^2o_5^2v_2^2 + 30o_15o_5^3v_2^2 - 3cs^4o_15^2o_5^3 - 36o_5^3v_2^2 + 144cs^2o_15o_5^2v_2^2 + 3o_15^2o_5^3v_2^4 + 12cs^2o_15^2o_5 - 36cs^2o_15^2o_5^2v_2^2 + 24cs^4o_15^2o_5^2 + cs^2o_15^2o_5^2 - 12o_15^2o_5^2v_2^4 + 72o_5^2v_2^2 - 72cs^2o_15o_5^2v_2^2 - 48cs^4o_15^2o_5 - 72o_15o_5^2v_2^2 - 8cs^2o_15^2o_5^2$

$C_{14} = 6o_13^2o_9^3cs^2o_6 + 36o_9^2o_9^3v_1^2 - 39o_13o_9^3o_6^3v_1^4 + 12o_13^2o_9cs^2o_6^2 + 6o_13^2o_9^3o_6^2v_1^2 + 198o_13o_9^2cs^2o_6^3v_1^2 - 3o_13^2o_9^3cs^2o_6^2v_1^2 + 12o_13^2cs^4o_6^3 + 12o_13^2o_9cs^2o_6^3 + 60o_13^2o_9^2cs^2o_6^3v_1^2 + 19o_13^2o_9^3o_6^3v_1^4 + 54o_13o_9^3cs^2o_6^2v_1^2 + 90o_13^2o_9o_9^3v_1^2 + 12o_13o_9^3cs^4o_6 - 36o_9^2o_6^3v_1^4 + 36o_13o_9^3cs^2o_6^2v_1^2 + 12o_13^2o_9^3cs^2o_6^2v_1^2 - 18o_13o_9^3cs^4o_6^3 + o_13^2o_9cs^4o_6^3 - 4o_13^2o_9^3o_6^3v_1^2 + 36o_13o_9^3o_6^3v_1^4 - 12o_13o_9cs^2o_6^2 - 72o_13o_9^3o_6^3v_1^2 + 36o_9^3o_6^3v_1^4 + 6o_13o_9^3cs^4o_6^3 + 6o_13^2o_9cs^4o_6^2 + 6o_13o_9cs^2o_6^3 - 5o_13^2o_9cs^2o_6^2 + 18o_13^2o_9cs^2o_6^2v_1^2 - 99o_13o_9^3cs^2o_6^3v_1^2 + 72o_13^2o_9^3v_1^4 - 36o_13o_9o_6^3v_1^4 + 252o_13^2cs^2o_6^3v_1^2 - 108o_13o_9cs^2o_6^3v_1^2 - 12o_13^2o_9cs^4o_6^3 - 36o_13o_9^3o_6^2v_1^2 - 12o_13o_9cs^2o_6 + 4o_13^2o_9^3o_6^3v_1^4 - 24o_13^2o_9cs^4o_6 - 72o_13^2o_6^3v_1^2 + 36o_13o_9o_6^3v_1^2 - 12o_13^2o_9cs^4o_6^3 - 306o_13^2o_9cs^2o_6^3v_1^2 - 36o_9^3o_6^3v_1^2 + 72o_13o_9o_6^3v_1^4 + 108o_9cs^2o_6^3v_1^2 - 12o_13^2cs^2o_6^3 - 6o_13^2o_9^3o_6^2v_1^4 - 6o_13^2o_9cs^2o_6^2 + 12o_13^2o_9cs^4 - 6o_13o_9^3cs^2o_6^3 + 36o_13o_9^3cs^2o_6v_1^2 + 13o_13^2o_9^3cs^4o_6^2 + 39o_13o_9^3o_9^3v_1^2 - 36o_9^3o_6^3v_1^4 - 6o_13o_9cs^4o_6^3 - 108o_9cs^2o_6^3v_1^2 - 90o_13^2o_9o_9^3v_1^4 - 108o_9^3cs^2o_6^3v_1^2 - o_13^2o_9cs^2o_6^3 - 36o_13^2o_9cs^2o_6^2v_1^2 + 18o_13o_9^3cs^2o_6^2 + 36o_9^3o_6^3v_1^2 - 18o_13^2o_9cs^2o_6v_1^2 - o_13^2o_9cs^4o_6^3 - 19o_13^2o_9^3o_6^3v_1^2 + 12o_13o_9cs^4o_6^3$

$C_{15} = 12o_13o_9o_6^2o_8o_15o_5^2o_14o_17 + 12o_12o_6^3o_8o_15o_5o_5^3o_14o_17 + 12o_13o_7o_12o_6^2o_8o_15o_5^3o_17 - 12o_13o_9o_7o_12o_6o_15o_5^3o_14 + 12o_13o_9o_12o_8o_15o_5o_5^3o_14o_17 - 12o_13o_9o_7o_12o_6o_15o_5^3o_17 - 6o_13o_9o_7o_12o_8o_15o_5o_5^3o_14o_17 + 12o_13o_9o_7o_6^2o_8o_15o_5o_5^3o_17 - 18o_13o_9o_7o_12o_6o_8o_15o_5^2o_5^3o_14o_17 - 12o_9o_12o_6^2o_8o_15o_5o_5^3o_14o_17 - 18o_13o_9o_12o_6^2o_8o_15o_5o_5^4o_14o_17 - 2o_13o_9o_7o_12o_6^2o_8o_15o_5^2o_14o_17 + 12o_9o_7o_12o_6^2o_8o_15o_5^3o_17 - 6o_13o_9o_7o_12o_6o_8o_15o_5^3o_14o_17 + 12o_9o_12o_6o_8o_15o_5o_5^3o_14o_17 - 12o_9o_7o_12o_6o_8o_15o_5^3o_17 + 12o_13o_9o_7o_12o_6^2o_15o_5^2o_14o_17 - 12o_7o_12o_6^2o_8o_15o_5^3o_17 - 12o_13o_12o_6^2o_8o_15o_5o_5^4o_14o_17 + 12o_13o_6^2o_8o_15o_5o_5^3o_14o_17 - 12o_13o_9o_7o_6^2o_8o_15o_5^3o_17 - 6o_13o_9o_7o_12o_6^2o_8o_15o_5^3o_14 - 18o_13o_9o_12o_6o_8o_15o_5o_5^3o_14o_17 + 6o_13o_9o_7o_12o_6o_8o_15o_5o_5^3o_14o_17 - 12o_13o_9o_7o_12o_6o_15o_5^3o_17 + 6o_13o_9o_7o_12o_6^2o_15o_5^3o_14 + 12o_13o_9o_7o_12o_6^2o_8o_15o_5o_5o_14o_17 + 12o_13o_9o_12o_8o_15o_5o_5o_14o_17 + 12o_13o_9o_7o_12o_6^2o_15o_5^3o_14 + 6o_13o_9o_7o_12o_6o_8o_15o_5^3o_14 - 12o_13o_9o_6^2o_8o_15o_5o_5^3o_14o_17 + 12o_13o_9o_12o_6o_8o_15o_5^3o_17 + 6o_13o_9o_7o_12o_6^2o_8o_5^3o_14 - 12o_13o_9o_7o_12o_6^2o_15o_5^2o_14 - 12o_13o_9o_7o_12o_6^2o_15o_5^2o_17 + 12o_13o_9o_7o_12o_6^2o_8o_15o_5^2o_17 + 12o_13o_9o_7o_12o_6^2o_8o_15o_5o_5^2o_14 -$

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$$12o_13o_9o_7o_12o_6^2o_15o_5^3o_14o_17 - o_13o_9o_7o_12o_6^2o_8o_15o_5^3o_14o_17 + 12o_13o_9o_7o_12o_6o_8o_5^2o_14o_17 - 12o_13o_7o_6^2o_8o_15o_5^3o_17 +$$
$$10o_13o_9o_12o_6^2o_8o_15o_5^3o_14o_17 + 12o_13o_9o_7o_12o_6o_5^3o_14o_17 + 12o_13o_9o_7o_12o_6o_8o_15o_5o_4o_17$$

$C_{16} = 36o_13^2o_9^3cs^2o_6 - 12o_13^2o_9^3o_6 - 12o_13o_9^3o_18o_6^2v_1^2 + 12o_13^2o_9^2o_18o_22 - 12o_13o_9^3o_18o_6 - 6o_13o_9^3o_18o_6^2o_22v_1^2 - 6o_13^2o_9^2cs^2o_18o_6^2o_22 - 12o_13^2o_18o_6^2o_22 + 12o_13o_9o_18o_6^2o_22 - 6o_13^2o_9^3o_6v_1^2 - 18o_13o_9^3o_18o_6o_22 + 12o_13o_9^3o_18o_22 + 36o_9^3cs^2o_18o_6^2o_22 + 12o_13^2o_9^3o_18o_6o_22 - 40o_13^2o_9^3cs^2o_18o_6o_22 + 6o_13^2o_9^3o_18o_6^2v_1^2 - 12o_9^3o_18o_6^2o_22 - 36o_13^2o_9cs^2o_18o_6^2o_22 + 12o_13^2o_9o_18o_6^2o_22 - 18o_13^2o_9^2o_18o_6o_22 + 6o_13^2o_9^2o_6^2o_22v_1^2 - 12o_9^2o_18o_6^2o_22v_1^2 + 6o_13^2o_9o_18o_6 + 54o_13o_9^3cs^2o_18o_6o_22 - 6o_13^2o_9o_18o_6v_1^2 - 12o_9^3o_18o_6o_22v_1^2 - 36o_13o_9cs^2o_18o_6^2o_22 - 6o_13^2o_9^2o_6^2o_22 + 36o_13^2cs^2o_18o_6^2o_22 + 12o_9o_18o_6o_22 - 36o_13^2o_9^2cs^2o_6o_22 + 12o_13o_9o_18o_6^2v_1^2 + o_13^2o_9^3o_18o_6^2o_22v_1^2 + 54o_13o_9^3cs^2o_18o_6^2o_22 - 18o_13^2o_9^3cs^2o_6^2 + 6o_13^2o_9^3o_6^2 + 18o_13^2o_9o_18o_6o_22v_1^2 + 12o_13o_9^3o_18o_6 - 12o_9^3o_6o_22v_1^2 - 36o_13o_9cs^2o_18o_22 - 12o_13^2o_9o_18o_6^2o_22v_1^2 + 12o_13^2o_9o_18o_22v_1^2 - 18o_13^2o_9^2cs^2o_6^2o_22 + 12o_13^2o_9o_18o_6 + 12o_9^3o_18o_6^2o_22v_1^2 - 18o_13o_9^3o_18o_6^2o_22 - 36o_13^2o_9^3cs^2o_18o_6 + 2o_13^2o_9^2o_18o_6^2o_22 - 12o_13^2o_9^3o_18o_6o_22v_1^2 + 36o_13o_9^3cs^2o_18o_6 - 2o_13^2o_9^2o_18o_6^2o_22v_1^2 - 18o_13o_9^3cs^2o_18o_6^2o_22 - 12o_13o_9^3o_18o_22v_1^2 + 36o_13^2o_9^3cs^2o_18o_22 + 36o_13o_9cs^2o_18o_6^2 + 12o_13^2o_9^2o_6o_22 - 12o_13^2o_9^3o_18o_22 + 18o_13o_9^3o_18o_6o_22v_1^2 - 12o_13o_9o_18o_6 - o_13^2o_9^3o_18o_6^2o_22 - 36o_9^3cs^2o_18o_6o_22 + 12o_9^3o_18o_6o_22 - 12o_13^2o_9o_18o_6v_1^2 + 18o_13o_9^2o_18o_6^2o_22v_1^2 + 50o_13^2o_9^3cs^2o_18o_6^2o_22 - 36o_13o_9^3cs^2o_18o_6^2 - 36o_13^2o_9cs^2o_18o_22 + 12o_13o_9^3o_18o_6v_1^2 + 12o_13^2o_18o_6^2o_22v_1^2 - 6o_13^2o_9o_18o_6 - 12o_13o_9o_18o_6^2o_22v_1^2 + 54o_13^2o_9^2cs^2o_18o_6o_22 + 18o_13^2o_9^3cs^2o_18o_6 - 12o_13^2o_9o_18o_22v_1^2 - 36o_9^3cs^2o_18o_6^2o_22 + 12o_13^2o_9^3o_6v_1^2 + 6o_13o_9^3o_18o_6^2o_22$

$C_{17} = -12o_9^2o_18o_6^3o_22 - 6o_13o_9cs^2o_18o_6^3o_22 - 6o_13o_9cs^2o_18o_6^3 + 12o_13o_9o_6^2o_22 - 24o_13o_9o_18o_6^2o_22 + 12o_9^2cs^2o_18o_6o_22 - 12o_13o_9cs^2o_6^2o_22 + 6o_13o_9o_18o_6^3 - 36o_13o_9o_18o_6o_22v_1^2 - o_13o_9^2cs^2o_18o_6^3o_22 + 18o_13o_9^2o_18o_6v_1^2 + 6o_13cs^2o_18o_6^3o_22 + 36o_13o_9^2o_6^2v_1^2 - 72o_9^2o_18o_6^2o_22v_1^2 - 12o_9o_18o_6^3 + 18o_13o_9o_6^3o_22v_1^2 - 18o_13o_9o_18o_6^3o_22v_1^2 + 6o_13o_9o_18o_6^3o_22 - 6o_13o_9o_6^3o_22 - 12o_9^2cs^2o_18o_6^3 + 24o_13o_9cs^2o_18o_6^2o_22 + 24o_9^2o_18o_6^2o_22 + 12o_13o_9cs^2o_6^2 + 18o_13o_18o_6^3o_22v_1^2 - 18o_13o_9^2o_6^3v_1^2 + 36o_9o_18o_6^3v_1^2 - 12o_13cs^2o_18o_6^2o_22 - 36o_13o_9o_18o_6^3v_1^2 - 4o_13o_9^2cs^2o_18o_6^2o_22 - 6o_13o_9^2cs^2o_6^3 + 12o_9^2cs^2o_18o_6^3 + 36o_9o_18o_6^2o_22v_1^2 + 6o_13o_9cs^2o_6^3o_22 + 12o_9^2o_18o_6^3 + 36o_9^2o_18o_6o_22v_1^2 + 18o_13o_9^2cs^2o_18o_6o_22 + 12o_13o_9o_18o_6^2o_22 + 12o_9o_18o_6^3o_22 - 12o_9cs^2o_18o_6^3o_22 + 6o_13o_9^2cs^2o_18o_6^3 + 36o_9o_18o_6^3v_1^2 - 18o_13o_9o_18o_6^3v_1^2 + 12o_9^2cs^2o_18o_6^3o_22 - 12o_9o_18o_6^3 - 12o_13o_9cs^2o_18o_6^3 - 12o_9o_18o_6o_22 - 12o_13o_9cs^2o_18o_6o_22 - 12o_9o_18o_6^2o_22 + 12o_9cs^2o_18o_6^2o_22 + 12o_13o_9o_18o_6^3 - 36o_9o_18o_6^3o_22v_1^2 - 6o_13o_18o_6^3o_22 + 6o_13o_9o_6^3 + 12o_9cs^2o_18o_6^3 - 36o_13o_18o_6^2o_22v_1^2 - 12o_13o_9o_6^3 - 6o_13o_9o_18o_6^3 + 72o_13o_9o_18o_6^2o_22v_1^2 - 36o_13o_9o_6^2o_22v_1^2 + 12o_13o_9o_18o_6o_22 - 12o_13o_9cs^2o_18o_22 - 24o_9^2cs^2o_18o_6^2o_22 + 36o_9o_18o_6^3o_22v_1^2 - 36o_9^3o_18o_6^3v_1^2$

$C_{18} = -o_13o_9o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2o_14v_3^2 + 2o_13o_9o_12o_18o_6o_22o_5v_1v_2^2o_14v_3^2 - o_13o_9o_2o_0o_18o_6o_22o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_9cs^2o_12o_22o_8o_5v_1o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22v_1v_2^2 + o_13o_9o_2o_0o_12o_18o_6o_22o_8v_1^2v_2o_14v_3^2 - 2cs^2o_2o_0o_12o_18o_6o_8o_5v_1v_2^2o_14 - 2o_13o_9o_12o_18o_22o_5v_1v_2^2o_14v_3^2 - 2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2v_3^2 + o_13o_9cs^2o_12o_6o_22o_8o_5v_1v_2^2o_14 + 2o_13o_9cs^2o_2o_0o_12o_18o_22o_5v_1^2v_2 + o_13o_9o_2o_0o_12o_6o_22o_8o_5v_1^2v_2o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8v_1^2v_2 + 2o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_1^2v_2 + o_13o_9cs^2o_12o_18o_6o_22o_8o_5v_1v_2^2o_14 - 2o_9o_2o_0o_12o_18o_6o_8o_5v_1v_2^2o_14v_3^2 - 2o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2 + 2o_13cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2 - o_13o_2o_0o_18o_6o_22o_8o_5v_1^2v_2o_14v_3^2 + 2o_13cs^2o_2o_0o_18o_6o_22o_8o_5v_2v_3^2 + o_13o_9o_12o_6o_22o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_2v_3^2 - o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_2o_14v_3^2 - o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2o_14 - 2o_13o_9cs^2o_12o_18o_22o_5v_1o_14v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_2o_14v_3^2 - o_13cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1o_14v_3^2 + 2o_13o_9o_2o_0o_12o_18o_6o_22o_5v_1^2v_2o_14v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_1^2v_2o_14 - 2o_13o_9o_2o_0o_12o_18o_6o_22o_8v_1^2v_2v_3^2 + o_13o_9o_12o_18o_6o_22o_8o_5v_1v_2^2o_14v_3^2 + 2o_13o_9o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2v_3^2 - o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_2o_14v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_8o_5v_1o_14v_3^2 - o_13cs^2o_2o_0o_18o_6o_22o_8o_5v_1^2v_2o_14 + o_13o_9cs^2o_2o_0o_12o_18o_6o_8o_5v_1^2v_2o_14 - o_13o_9cs^2o_12o_6o_22o_8o_5v_1^2v_2o_14 + 2cs^2o_2o_0o_12o_18o_6o_8o_5v_2o_14v_3^2 - o_13o_9cs^2o_12o_18o_6o_22o_8v_1^2v_2o_14 - o_13o_9cs^2o_12o_6o_22o_8o_5v_2o_14v_3^2 - 2o_13o_9cs^2o_12o_18o_6o_22v_1o_14v_3^2 + 2cs^2o_2o_0o_12o_18o_6o_8o_5v_1^2v_2o_14 + 2o_13o_9cs^2o_12o_18o_6o_22o_5v_1o_14v_3^2 + 2o_13o_9o_12o_18o_6o_22v_1^2v_2o_14v_3^2 - o_13o_9cs^2o_12o_18o_6o_22o_8v_2o_14v_3^2 + 2o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2v_3^2 + 2o_13cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2o_14 - 2o_13o_9o_12o_22o_8o_5v_1v_2^2o_14 + 2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_9o_2o_0o_12o_18o_8o_5v_1^2v_2o_14v_3^2 - 2o_13o_9o_2o_0o_12o_18o_6o_22o_8v_1v_2^2v_3^2 - o_13o_9cs^2o_2o_0o_12o_18o_6o_8o_5v_1v_2^2o_14 + o_13cs^2o_2o_0o_18o_6o_22o_8o_5v_1v_2^2o_14 - 2o_9o_2o_0o_12o_18o_22o_8o_5v_1^2v_2o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_18o_6o_22o_8o_5v_2v_3^2 + 2o_13o_9o_2o_0o_12o_18o_6o_22o_8v_1v_2^2v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_1v_2^2o_14 - o_13o_9cs^2o_12o_18o_6o_22o_8o_5v_1o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22v_1v_3^2 + o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2o_14 - o_13o_9o_12o_6o_22o_8o_5v_1^2v_2o_14v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22v_1o_14v_3^2 + 2o_9o_2o_0o_12o_18o_8o_5v_1^2v_2o_14v_3^2 + o_13o_2o_0o_18o_6o_22o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_18o_6o_22o_8v_1v_2^2 - o_13o_9o_12o_18o_6o_22o_8v_1^2v_2o_14v_3^2 - 2o_13o_9o_2o_0o_12o_18o_6o_22o_5v_1v_2^2o_14v_3^2 + 2o_13o_9cs^2o_12o_18o_22o_8o_5v_1o_14v_3^2 - 2o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1o_14v_3^2 - 2o_13o_9o_2o_0o_12o_18o_22o_5v_1v_2^2v_3^2 - o_13cs^2o_2o_0o_12o_18o_6o_8o_5v_2o_14v_3^2 + o_13o_9cs^2o_2o_0o_18o_6o_22o_8o_5v_2o_14v_3^2 + 2o_13o_9o_12o_18o_22o_5v_1^2v_2o_14v_3^2 - o_13o_9o_2o_0o_12o_18o_6o_22o_8v_1v_2^2o_14v_3^2 - o_13o_9cs^2o_2o_0o_18o_6o_22o_8v_1^2v_2o_14 - 2o_13o_9o_12o_18o_6o_22o_5v_1^2v_2o_14v_3^2 + o_13o_9o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_8o_5v_2v_3^2 + 2cs^2o_2o_0o_12o_18o_8o_5v_1^2v_2o_14 - 2cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2 - o_13o_9o_12o_6o_22o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_2o_0o_18o_6o_22o_8o_5v_1^2v_2v_3^2 + o_13o_9cs^2o_2o_0o_18o_6o_22o_8o_5v_1^2v_2o_14 - o_13cs^2o_2o_0o_12o_18o_6o_8o_5v_1^2v_2o_14 + 2o_13o_9o_2o_0o_12o_18o_6o_22v_1^2v_2v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_5v_1v_2^2 - o_13o_9cs^2o_2o_0o_18o_6o_22o_8v_2o_14v_3^2 + 2o_9o_2o_0o_12o_18o_22o_8o_5v_1v_2^2o_14v_3^2 + 2o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_2v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8v_2v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_5v_1v_3^2 + 2o_13o_9o_2o_0o_12o_18o_22o_5v_1^2v_2v_3^2 + 2o_9o_2o_0o_12o_18o_6o_8o_5v_1v_2^2o_14v_3^2 - 2cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2 + 2o_13o_9o_2o_0o_12o_18o_8o_5v_1v_2^2o_14v_3^2 - 2o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2o_14v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_22o_5v_2v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_8o_5v_1o_14v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_22o_8o_5v_1o_14v_3^2 - 2o_9cs^2o_2o_0o_12o_18o_8o_5v_1o_14v_3^2 + o_13o_9cs^2o_2o_0o_12o_6o_8o_5v_1o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2 + 2o_13o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2v_3^2 - 2o_13o_9o_2o_0o_12o_18o_6o_22v_1v_2^2v_3^2 + 2o_13cs^2o_2o_0o_12o_18o_6o_8o_5v_1v_2^2o_14 - o_13o_9cs^2o_2o_0o_12o_6o_22o_8o_5v_1v_2^2o_14 - 2cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2o_14 + 2o_9o_2o_0o_12o_18o_6o_6o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8v_1v_2^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_5v_2o_14v_3^2 - o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1o_14v_3^2 + 2o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_1o_14v_3^2 - 2cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_2o_14v_3^2 - 2o_13o_9o_12o_18o_6o_22v_1v_2^2o_14v_3^2 + 2o_13cs^2o_2o_0o_18o_6o_22o_8o_5v_1^2v_2 + 2o_13o_9o_12o_22o_8o_5v_1^2v_2o_14v_3^2 - 2o_13o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_1^2v_2 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_5v_1^2v_2o_14 + 2o_13o_9cs^2o_2o_0o_12o_18o_22o_5v_1o_14v_3^2 + o_13o_9cs^2o_2o_0o_18o_6o_22o_8v_1v_2^2o_14 - 2o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_2v_3^2 + 2o_13o_9cs^2o_12o_18o_6o_22o_5v_1v_2^2o_14 + 2o_9o_2o_0o_12o_18o_22o_8o_5v_1^2v_2v_3^2 + 2o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2 + 2o_13o_9cs^2o_12o_22o_8o_5v_1^2v_2o_14 - 2o_13o_9cs^2o_12o_18o_6o_22v_1v_2^2o_14 + 2o_13o_9o_2o_0o_12o_22o_8o_5v_1v_2^2o_14v_3^2 - 2o_9o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2o_14v_3^2 + o_13o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2o_14v_3^2 - 2o_13o_9o_2o_0o_12o_18o_6o_22v_1^2v_2o_14v_3^2 - o_13o_9o_2o_0o_12o_18o_6o_8o_5v_1v_2^2o_14v_3^2 + 2o_13o_9cs^2o_12o_22o_8o_5v_2o_14v_3^2 + o_13o_9o_2o_0o_12o_6o_8o_5v_1v_2^2o_14v_3^2 - 2o_13o_9o_2o_0o_12o_18o_22o_8o_5v_1v_2^2o_14v_3^2 + o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1o_14v_3^2 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_2v_3^2 -$

$2o_13o_9cs^2o_20o_12o_18o_80o_5v_2o_14v_3^2 - 2o_13o_90o_20o_12o_18o_60o_22o_5v_1^2v_2v_3^2 + 2o_13o_9cs^2o_12o_18o_22o_5v_1^2v_2o_14 - 2o_13o_90o_12o_18o_22o_80o_5v_1^2v_2o_14v_3^2 +$
$o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_2o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_1v_1^2v_2 - o_13o_9cs^2o_12o_18o_60o_22o_80o_5v_1^2v_2o_14 + 2o_13o_20o_18o_60o_22o_80o_5v_1^2v_3^2 +$
$2o_13o_9cs^2o_12o_18o_22o_5v_2o_14v_3^2 - 2o_9cs^2o_20o_12o_18o_22o_80o_5v_1v_2^2 - 2o_13o_9cs^2o_20o_12o_18o_20o_5v_1o_14v_3^2 + 2o_5o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2^2 +$
$o_13o_90o_12o_18o_60o_22o_80o_5v_1^2v_2o_14v_3^2 - o_13o_20o_12o_18o_60o_80o_5v_1^2v_2o_14v_3^2 - o_13o_9cs^2o_20o_12o_18o_60o_80o_5v_1o_14v_3^2 + o_13cs^2o_20o_18o_60o_22o_80o_5v_1o_14v_3^2 -$
$2o_13o_9cs^2o_20o_12o_18o_80o_5v_1^2v_2o_14 - 2o_13o_9cs^2o_20o_12o_18o_22o_5v_1v_3^2 + o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_1^2v_2o_14 + 2o_13o_90o_20o_18o_60o_22o_80o_5v_1v_2^2v_3^2 -$
$2o_13o_9cs^2o_20o_12o_18o_22o_5v_1v_3^2 + 2o_13o_90o_20o_12o_18o_22o_5v_1v_2o_14v_3^2 + 2cs^2o_20o_12o_18o_60o_22o_80o_5v_2v_3^2 - 2o_13o_9cs^2o_12o_18o_60o_22o_5v_2o_14v_3^2 +$
$o_13o_9cs^2o_12o_18o_60o_22o_80o_5v_1o_14v_3^2 - 2o_9cs^2o_20o_12o_18o_22o_80o_5v_1v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_80v_1o_14v_3^2 - 2o_13o_9cs^2o_20o_12o_18o_60o_22o_5v_2v_3^2 +$
$o_13o_9cs^2o_12o_60o_22o_80o_5v_1o_14v_3^2 + 2o_13o_9cs^2o_12o_18o_60o_22v_2o_14v_3^2 - 2o_13o_9cs^2o_12o_18o_60o_22o_5v_1^2v_2o_14 - 2cs^2o_20o_12o_18o_60o_80o_5v_1o_14v_3^2 -$
$2o_13o_9cs^2o_12o_22o_80o_5v_1v_2^2o_14 + 2o_13o_9cs^2o_12o_18o_60o_22v_1^2v_2o_14 - o_13o_90o_20o_18o_60o_22o_80v_1^2v_2o_14v_3^2 - 2o_9o_20o_12o_18o_22o_80o_5v_1v_2^2v_3^2 +$
$2o_13o_90o_12o_20o_5v_1^2v_2o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_80o_5v_2v_3^2 - 2o_13o_90o_20o_18o_60o_22o_80o_5v_1^2v_2v_3^2 -$
$o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2^2o_14 + o_13o_9cs^2o_12o_18o_60o_22o_80o_5v_2o_14v_3^2 + 2o_9cs^2o_20o_12o_18o_80o_5v_1v_3^2 -$
$2o_20o_12o_18o_60o_80o_5v_1v_2^2o_14v_3^2 - 2o_13o_9cs^2o_12o_18o_22o_5v_1v_2^2o_14 + 2o_13o_90o_20o_12o_18o_60o_22o_5v_1v_2^2v_3^2 - 2o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_1^2v_2 -$
$2o_13o_20o_18o_60o_22o_80o_5v_1v_2^2v_3^2 + o_13o_9cs^2o_12o_18o_60o_22o_80o_5v_1^2v_2o_14 - 2o_13o_9cs^2o_12o_18o_22o_80o_5v_2o_14v_3^2 + 2o_13o_90o_12o_18o_22o_80o_5v_1v_2^2o_14v_3^2 +$
$2o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_2o_14v_3^2 + o_13o_9cs^2o_20o_12o_60o_80o_5v_1v_2^2o_14 + 2o_13o_9cs^2o_20o_12o_20o_80o_5v_1v_2^2o_14 - 2o_9cs^2o_20o_12o_18o_80o_5v_1v_2o_14 -$
$2o_13o_9cs^2o_20o_12o_18o_60o_22v_1^2v_2o_14 + 2o_13o_90o_20o_18o_60o_22o_80v_1^2v_2v_3^2 + 2o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_1^2v_2o_14 - 2o_13o_9cs^2o_12o_18o_22o_80o_5v_1^2v_2o_14 -$
$2o_13o_9cs^2o_20o_12o_80o_5v_1v_2^2o_14 - 2o_13o_9cs^2o_20o_12o_18o_60o_22o_5v_1^2v_2 + 2cs^2o_20o_12o_18o_60o_22o_80o_5v_1^2v_2 + 2o_13o_9cs^2o_20o_18o_60o_22o_80o_5v_1v_2^2 -$
$2o_13o_9cs^2o_20o_12o_18o_60o_22v_2o_14v_3^2 + o_13o_20o_12o_18o_60o_80o_5v_1v_2^2o_14v_3^2 - o_13o_90o_12o_18o_60o_22o_80o_5v_1v_2o_14v_3^2 + o_13o_9cs^2o_20o_18o_60o_22o_80v_1o_14v_3^2 +$
$2o_13o_9cs^2o_20o_12o_18o_22o_80o_5v_1v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_22o_5v_1v_2^2o_14 - 2o_13cs^2o_20o_18o_60o_22o_80o_5v_1v_3^2 - 2o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_2v_3^2 -$
$o_13o_90o_20o_12o_60o_80o_5v_1^2v_2o_14v_3^2 - 2o_13o_9cs^2o_20o_12o_18o_22v_2o_14v_3^2 + 2o_13o_90o_20o_12o_18o_22o_80o_5v_1v_2^2v_3^2 + 2o_9cs^2o_20o_12o_18o_22o_80o_5v_1v_2^2o_14 +$
$2o_9o_20o_12o_18o_60o_22o_80o_5v_1v_2^2v_3^2 + 2o_13o_90o_20o_12o_18o_22o_80o_5v_1^2v_2o_14v_3^2 + 2o_9cs^2o_20o_12o_18o_60o_80o_5v_1v_2^2o_14 -$
$o_13o_9cs^2o_20o_12o_60o_22o_80o_5v_1v_2^2o_14 - o_13o_20o_12o_18o_60o_22o_80o_5v_1v_2^2o_14v_3^2 + 2o_9o_20o_12o_18o_60o_22o_80o_5v_1^2v_2o_14v_3^2 -$
$2o_13o_90o_20o_12o_22o_80o_5v_1^2v_2o_14v_3^2 + o_13o_90o_20o_12o_18o_60o_80o_5v_1^2v_2o_14v_3^2 + 2o_13o_9cs^2o_20o_18o_60o_22o_80v_1^2v_2 + o_13cs^2o_20o_12o_18o_60o_80o_5v_1o_14v_3^2 +$
$2o_13o_90o_20o_12o_18o_60o_22v_1v_2o_14v_3^2 - o_13o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_1o_14v_3^2 - 2o_13o_90o_20o_12o_18o_60o_22o_80v_1v_2^2v_3^2 + 2o_13o_9cs^2o_20o_12o_80o_5v_1^2v_2o_14 +$
$2o_13o_9cs^2o_12o_18o_22o_80o_5v_1v_2^2o_14 - 2o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2^2o_14 - o_13o_9cs^2o_20o_12o_60o_80o_5v_2o_14v_3^2 - 2o_13o_90o_20o_12o_80o_5v_1v_2^2o_14v_3^2 -$
$2o_13o_9cs^2o_20o_12o_22o_80o_5v_2o_14v_3^2 + 2o_9cs^2o_20o_12o_18o_80o_5v_2o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_80o_5v_2o_14v_3^2 + 2o_9cs^2o_20o_12o_18o_80o_5v_1^2v_2o_14 -$
$2o_13o_9cs^2o_20o_12o_22o_80o_5v_1^2v_2o_14 + 2o_20o_12o_18o_60o_80o_5v_1^2v_2o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_60o_22v_1v_2o_14 - o_13o_9cs^2o_20o_12o_60o_80o_5v_1^2v_2o_14 +$
$2o_13o_9cs^2o_20o_12o_18o_22o_80o_5v_1v_2^2 - 2o_9o_20o_12o_18o_60o_22o_80o_5v_1^2v_2v_3^2 - 2o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_3^2 -$
$2o_9cs^2o_20o_12o_18o_60o_80o_5v_1^2v_2o_14 - 2o_13o_9cs^2o_20o_12o_18o_22o_5v_2o_14v_3^2 - 2o_9cs^2o_20o_12o_18o_22o_80o_5v_1^2v_2o_14 - 2o_13o_90o_20o_12o_18o_22o_80o_5v_1^2v_2v_3^2 +$
$o_13o_9cs^2o_20o_12o_18o_60o_22o_80v_1^2v_2o_14 - 2o_13o_90o_20o_12o_18o_22o_5v_1^2v_2o_14v_3^2 + 2cs^2o_20o_12o_18o_60o_22o_80o_5v_1o_14v_3^2 +$
$o_13o_9cs^2o_20o_12o_60o_22o_80o_5v_1^2v_2o_14 + 2o_13o_9cs^2o_20o_12o_18o_60o_22v_2v_3^2 - 2o_13o_9cs^2o_20o_12o_18o_22o_5v_1^2v_2o_14 + o_13o_90o_20o_18o_60o_22o_80v_1v_2^2o_14v_3^2 -$
$2o_13o_9cs^2o_20o_12o_18o_60o_22o_5v_1o_14v_3^2 + o_13o_9cs^2o_20o_12o_18o_60o_22o_80v_2o_14v_3^2 - 2o_9cs^2o_20o_12o_18o_22o_80o_5v_2o_14v_3^2 -$
$2o_9cs^2o_20o_12o_18o_60o_80o_5v_2o_14v_3^2 + o_13o_9cs^2o_20o_12o_60o_22o_80o_5v_2o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_1^2v_2$

$C_{19} = 2o_13o_90o_20o_18o_60o_22o_80o_5v_2^2v_3^2 + 2o_13o_90o_12o_18o_60o_22o_80o_5v_1v_2o_14v_3^2 - 2o_13o_90o_12o_18o_60o_22v_2^2o_14v_3^2 - 2o_13o_20o_12o_18o_60o_80o_5v_1v_2o_14v_3^2 +$
$4o_13o_90o_20o_18o_60o_22o_80v_1v_2v_3^2 + 4o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2o_14 - 4o_13o_9cs^2o_12o_18o_22o_80o_5v_1v_2o_14 + 2o_13o_9cs^2o_20o_18o_60o_22o_80o_5v_3^2 -$
$2cs^2o_20o_12o_18o_60o_80o_5o_14v_3^2 + 2cs^2o_20o_12o_18o_60o_22o_80o_5v_2^2o_14 - 4o_13o_9cs^2o_20o_12o_18o_60o_22v_1v_2o_14 + o_13o_9cs^2o_12o_18o_60o_22o_80o_14v_3^2 +$
$2o_9o_20o_12o_18o_60o_80o_5v_2^2o_14v_3^2 - 2o_13o_9cs^2o_20o_12o_18o_60o_22o_5v_2^2o_14 + 2o_9o_20o_12o_18o_22o_80o_5v_2^2o_14v_3^2 - 4o_13o_90o_12o_18o_22o_80o_5v_1v_2o_14v_3^2 +$
$o_13o_9cs^2o_12o_60o_22o_80o_5o_14v_3^2 + 2o_13o_20o_12o_18o_60o_22o_80o_5v_1v_2o_14v_3^2 - 2o_13o_9cs^2o_20o_12o_18o_22o_80o_5o_14v_3^2 - 2o_13o_20o_18o_60o_22o_80o_5v_2^2v_3^2 +$
$o_13cs^2o_20o_18o_60o_22o_80o_5o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_8v_2^2 - 4o_13o_90o_20o_12o_18o_60o_22v_1v_2o_14v_3^2 - 2o_13cs^2o_20o_18o_60o_22o_80o_5v_3^2 +$
$2o_13o_9cs^2o_20o_12o_18o_22o_80o_5v_3^2 - 2o_13o_90o_20o_12o_18o_60o_22o_5v_2^2o_14v_3^2 + 4o_13o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2 + o_13o_9cs^2o_20o_18o_60o_22o_80o_8v_2^2o_14 +$
$o_13o_20o_18o_60o_22o_80o_5v_2^2o_14v_3^2 + o_13cs^2o_20o_12o_18o_60o_80o_5v_2^2o_14 + 4o_9cs^2o_20o_12o_18o_80o_5v_1v_2o_14 - 4o_13o_9cs^2o_20o_12o_22o_80o_5v_1v_2o_14 +$
$2o_13o_90o_20o_12o_18o_22o_80o_5v_2^2v_3^2 - 2o_13o_9cs^2o_20o_12o_60o_80o_5v_2^2o_14 + 4o_13o_90o_20o_12o_80o_5v_1v_2o_14v_3^2 +$
$2o_13o_9cs^2o_20o_12o_18o_22o_80o_5v_2^2 + 4cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2 - 2o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_2^2 - 4o_13o_9cs^2o_20o_12o_18o_22o_5v_1v_2 +$
$2o_13o_9cs^2o_20o_12o_18o_60o_22o_8v_3^2 + 4o_13o_9cs^2o_20o_12o_80o_5v_1v_2o_14 + o_13o_90o_12o_18o_60o_22o_80v_2^2o_14v_3^2 - o_13o_9cs^2o_20o_18o_60o_22o_80o_5o_14v_3^2 -$
$2o_13o_90o_20o_18o_60o_22o_80v_1v_2o_14v_3^2 - 4o_13o_9cs^2o_20o_12o_18o_22o_5v_1v_2o_14 + o_13o_90o_12o_60o_22o_80o_5v_2^2o_14v_3^2 - 2o_9o_20o_12o_18o_80o_5v_2^2o_14v_3^2 +$
$4o_13o_9cs^2o_20o_18o_60o_22o_80v_1v_2 + o_13o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_2o_14 + 2o_13o_9cs^2o_20o_12o_60o_22o_80o_5v_1v_2o_14 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_2^2 -$
$4o_9o_20o_12o_18o_60o_22o_80o_5v_1v_2v_3^2 - 2o_13o_90o_12o_18o_22o_5v_2^2o_14v_3^2 - 4o_9cs^2o_20o_12o_18o_60o_80o_5v_1v_2o_14 - o_13o_90o_20o_18o_60o_22o_80o_5v_2^2o_14v_3^2 +$
$2o_13o_9cs^2o_20o_12o_18o_60o_22o_8v_1v_2o_14 - o_13o_9cs^2o_20o_12o_18o_60o_80o_5v_2^2o_14 - 2o_13o_90o_20o_12o_18o_60o_22o_8v_2^2v_3^2 - 4o_9cs^2o_20o_12o_18o_22o_80o_5v_1v_2o_14 -$
$4o_13o_90o_20o_12o_18o_22o_80o_5v_1v_2v_3^2 - o_13o_9cs^2o_12o_18o_60o_22o_80o_5o_14v_3^2 - 2o_13o_90o_20o_12o_60o_80o_5v_1v_2o_14v_3^2 + 4o_13o_90o_20o_12o_18o_22o_80o_5v_1v_2o_14v_3^2 +$
$o_13o_90o_20o_18o_60o_22o_8v_2^2o_14v_3^2 - 4o_13o_90o_20o_12o_22o_80o_5v_1v_2o_14v_3^2 + 4o_9o_20o_12o_18o_60o_22o_80o_5v_1v_2o_14v_3^2 - 2o_9cs^2o_20o_12o_18o_80o_5v_2^2o_14 +$
$2o_13o_90o_20o_18o_60o_22o_80v_1v_2o_14v_3^2 + o_13o_9cs^2o_20o_12o_60o_22o_80o_5v_2^2o_14 + 2o_9cs^2o_20o_12o_18o_60o_22o_80o_5v_2^2o_14 + 4o_9o_20o_12o_18o_22o_80o_5v_1v_2v_3^2 +$
$4o_13o_9cs^2o_12o_22o_80o_5v_1v_2o_14 - 2cs^2o_20o_12o_18o_60o_22o_80o_5v_3^2 - 2o_20o_12o_18o_60o_22o_80o_5v_2^2v_3^2 - 2o_13o_90o_20o_12o_80o_5v_2^2o_14v_3^2 +$
$2o_13o_9cs^2o_20o_12o_18o_60o_22o_5v_3^2 + 2o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2o_14 + 2o_13o_9cs^2o_20o_12o_18o_80o_5o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_18o_60o_22v_2^2o_14 +$
$2o_13o_90o_20o_12o_18o_60o_22o_8v_2^2v_3^2 - 4o_13o_9cs^2o_20o_12o_18o_80o_5v_1v_2o_14 - 2o_13o_9cs^2o_12o_18o_22o_5o_14v_3^2 + o_13o_20o_12o_18o_60o_80o_5v_2^2o_14v_3^2 +$
$4o_13o_20o_18o_60o_22o_80o_5v_1v_2v_3^2 - 2o_13o_9cs^2o_20o_12o_18o_60o_22v_2^2 - 4o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_1v_2 - 2o_13o_9cs^2o_12o_22o_80o_5o_14v_3^2 -$
$4o_13o_90o_20o_12o_18o_60o_22o_5v_1v_2v_3^2 + 4o_13o_9cs^2o_12o_18o_22o_5v_1v_2o_14 - 2o_13o_9cs^2o_20o_12o_18o_60o_22v_3^2 + 4o_13o_9cs^2o_12o_18o_60o_22v_1v_2o_14 +$
$2o_13o_9cs^2o_20o_12o_18o_22o_5o_14v_3^2 - 4o_13o_9cs^2o_12o_18o_60o_22o_5v_1v_2o_14 + 2o_13o_9cs^2o_12o_18o_60o_22o_5v_2^2o_14 - o_13o_9cs^2o_20o_12o_60o_22o_80o_5o_14v_3^2 -$
$2o_13o_9cs^2o_12o_18o_60o_22v_2^2o_14 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_80o_5o_14v_3^2 + 2o_13o_9cs^2o_20o_12o_22o_80o_5o_14v_3^2 -$
$4o_13o_90o_20o_18o_60o_22o_80o_5v_1v_2o_14 - 2o_13o_9cs^2o_20o_12o_80o_5o_14v_3^2 + 4o_13o_9cs^2o_20o_12o_18o_60o_22v_1v_2o_14 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_5v_1v_2o_14 -$
$2cs^2o_20o_12o_18o_60o_22o_80o_5v_2^2 + 2o_13o_9cs^2o_20o_12o_18o_60o_22o_5v_2^2 + 4o_20o_12o_18o_60o_80o_5v_1v_2o_14v_3^2 - 2o_13o_90o_20o_12o_18o_60o_22v_2^2v_3^2 -$
$2o_13o_90o_20o_12o_18o_22o_80o_5v_2^2o_14v_3^2 - 4o_13o_90o_20o_18o_60o_22o_80o_5v_1v_2v_3^2 + 2o_13o_9cs^2o_12o_18o_22o_5o_14v_3^2 - 2o_9cs^2o_20o_12o_18o_22o_80o_5o_14v_3^2 -$
$o_13o_90o_20o_12o_18o_60o_80o_5v_2^2o_14v_3^2 - 2o_9o_20o_12o_18o_60o_22o_80o_5v_2^2o_14v_3^2 - o_13cs^2o_20o_12o_18o_60o_22o_80o_5v_2^2o_14 +$
$4o_13o_90o_20o_12o_18o_60o_22o_5v_1v_2o_14v_3^2 - 2o_13o_20o_18o_60o_22o_80o_5v_1v_2o_14v_3^2 + 2o_13o_90o_20o_18o_80o_5v_2^2o_14v_3^2 - o_13o_9cs^2o_20o_12o_18o_60o_80o_5o_14v_3^2 -$
$2o_9cs^2o_20o_12o_18o_22o_80o_5v_2^2 + 2o_13o_90o_20o_12o_18o_60o_22o_5v_2^2v_3^2 - 2o_13o_9cs^2o_20o_12o_18o_22o_5v_2^2 - o_13o_90o_20o_12o_60o_22o_80o_5v_2^2o_14v_3^2 +$

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\begin{aligned}
&o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5o_{14}v_3^2 + 2o_{13}o_9o_{20}o_{12}o_6o_{22}o_8o_5v_1v_2o_{14}v_3^2 + o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2o_{14}v_3^2 -\\
&4o_{13}o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_1v_2v_3^2 - o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}o_8v_2^2o_{14}v_3^2 + 4o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}v_1v_2v_3^2 + 2o_{13}o_9cs^2o_{20}o_{18}o_6o_{22}o_8o_5v_1v_2o_{14} -\\
&2o_{13}cs^2o_{20}o_{12}o_{18}o_6o_8o_5v_1v_2o_{14} - 2o_{13}o_9cs^2o_{20}o_{12}o_6o_{22}o_8v_1v_2o_{14} - 2o_9o_{20}o_{12}o_{18}o_{22}o_8o_5v_2^2v_3^2 - 2o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_1v_2o_{14}v_3^2 +\\
&4o_{13}cs^2o_{20}o_{18}o_6o_{22}o_8o_5v_1v_2 - o_{13}o_9cs^2o_{20}o_{18}o_6o_{22}o_8o_5v_2o_{14} - 4o_{13}o_9cs^2o_{20}o_{12}o_{18}o_{22}o_8o_5v_1v_2 + 2o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2 +\\
&2o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}o_8v_1v_2o_{14}v_3^2 - 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_5o_{14}v_3^2 + o_{13}o_9cs^2o_{12}o_6o_{22}o_8o_5v_2^2o_{14} + o_{13}o_9cs^2o_{12}o_{18}o_6o_{22}o_8v_2^2o_{14} +\\
&2o_9o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2v_3^2 + 2o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_3^2 + 2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2o_{14}v_3^2 - 2cs^2o_{20}o_{12}o_{18}o_6o_8o_5v_2^2o_{14} +\\
&2cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5o_{14}v_3^2 + 4o_{13}o_9o_{20}o_{12}o_{18}o_{22}o_5v_1v_2v_3^2 - 4o_9o_{20}o_{12}o_{18}o_6o_8o_5v_1v_2o_{14}v_3^2 - 4o_{13}o_9o_{20}o_{12}o_{18}o_8o_5v_1v_2o_{14}v_3^2 -\\
&4o_9o_{20}o_{12}o_{18}o_{22}o_8o_5v_1v_2o_{14}v_3^2 - 2o_9cs^2o_{20}o_{12}o_{18}o_{22}o_8o_5v_3^2 - 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_{22}o_5v_3^2 + 4o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_5v_1v_2o_{14} +\\
&o_{13}cs^2o_{20}o_{12}o_{18}o_6o_8o_5o_{14}v_3^2 + o_{13}o_9cs^2o_{20}o_{18}o_6o_{22}o_8o_{14}v_3^2 + 4o_{13}o_9o_{12}o_{18}o_6o_{22}v_1v_2o_{14}v_3^2 - 4cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_1v_2o_{14} -\\
&2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_{22}o_8o_5v_2o_{14} - 4o_{13}o_9cs^2o_{20}o_{18}o_6o_{22}o_8o_5v_1v_2 + o_{13}cs^2o_{20}o_{18}o_6o_{22}o_8o_5v_2o_{14}v_3^2 + 2o_{13}o_9o_{12}o_{18}o_6o_{22}o_5v_2o_{14}v_3^2 -\\
&2o_{13}o_9cs^2o_{20}o_{12}o_8o_5v_2^2o_{14} - 2o_{13}o_9cs^2o_{20}o_{18}o_6o_{22}o_8v_3^2 + 2o_9cs^2o_{20}o_{12}o_{22}o_8o_5v_2^2o_{14} - 2o_{13}o_9cs^2o_{12}o_{18}o_6o_{22}o_8v_3^2 +\\
&2o_{13}cs^2o_{20}o_{12}o_8o_5v_2^2o_{14} + 2o_{13}o_9cs^2o_{12}o_{18}o_6o_{22}o_5o_{14}v_3^2 - o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8v_2^2o_{14} - o_{13}o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2o_{14}v_3^2 -\\
&4o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}o_8v_1v_2v_3^2 + 4o_{13}o_9cs^2o_{20}o_{12}o_{18}o_{22}o_8o_5v_1v_2o_{14} + 4o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_1v_2v_3^2 -\\
&2o_{13}o_9o_{12}o_{18}o_6o_{22}o_8v_1v_2o_{14}v_3^2 - 2o_{13}cs^2o_{20}o_{18}o_6o_{22}o_8o_5v_1v_2o_{14} + 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_8o_5v_1v_2o_{14} -\\
&2o_{13}o_9o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2o_{14}v_3^2 - 2o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2o_{14} + 2o_{13}o_9cs^2o_{12}o_{18}o_{22}o_8o_5v_2^2o_{14} - 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8v_3^2 -\\
&2o_{13}o_9o_{12}o_6o_{22}o_8o_5v_1v_2o_{14}v_3^2 - 2o_{13}o_9cs^2o_{20}o_{18}o_6o_{22}o_8o_5v_1v_2o_{14} + 4o_9o_{20}o_{12}o_{18}o_8o_5v_1v_2o_{14}v_3^2 +\\
&2o_{13}o_9o_{12}o_{18}o_{22}o_8o_5v_2^2o_{14}v_3^2 + 4cs^2o_{20}o_{12}o_{18}o_6o_8o_5v_1v_2o_{14} + 4o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_1v_2v_3^2 + 4o_9o_{12}o_{22}o_8o_5v_1v_2o_{14}v_3^2 -\\
&2o_{20}o_{12}o_{18}o_6o_8o_5v_2^2o_{14}v_3^2 + 2o_9cs^2o_{20}o_{12}o_{18}o_6o_8o_5o_{14}v_3^2 - 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8v_2^2 - 2o_9cs^2o_{20}o_{18}o_8o_5o_{14}v_3^2 -\\
&2o_{13}o_9o_{20}o_{12}o_{18}o_{22}o_5v_2^2v_3^2 + o_{13}o_9cs^2o_{20}o_{12}o_6o_8o_5o_{14}v_3^2 + 4o_9cs^2o_{20}o_{12}o_{18}o_{22}o_8o_5v_1v_2 - 4o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8v_1v_2 -\\
&2o_{13}o_9cs^2o_{12}o_{18}o_6o_{22}o_8v_1v_2o_{14} - o_{13}o_9cs^2o_{12}o_{18}o_6o_{22}o_8o_5v_2^2o_{14} - 2o_{13}o_9cs^2o_{12}o_6o_{22}o_8o_5v_1v_2o_{14} + 4o_{13}o_9cs^2o_{20}o_{12}o_{18}o_{22}o_5v_1v_2 +\\
&2o_{13}o_9o_{20}o_{12}o_{18}o_{22}o_5v_2^2o_{14}v_3^2 - 2o_{13}o_9cs^2o_{12}o_{22}o_8o_5v_2^2o_{14} + 2o_{13}o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2v_3^2 + 2o_{13}cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_3^2 -\\
&4o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_1v_2 - 2o_{13}o_9cs^2o_{20}o_{18}o_6o_{22}o_8v_2^2 + o_{13}o_9o_{20}o_{12}o_6o_8o_5v_2^2o_{14}v_3^2 - 2o_{13}o_9cs^2o_{12}o_{18}o_{22}o_5v_2^2o_{14} -\\
&2o_{13}o_9o_{20}o_{12}o_{22}o_8o_5v_2^2o_{14}v_3^2 + 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_8o_5v_2^2o_{14} + 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_2^2o_{14} + 2o_{13}o_9cs^2o_{20}o_{12}o_{18}o_6o_{22}o_{14}v_3^2 - 4o_{20}o_{12}o_{18}o_6o_{22}o_8o_5v_1v_2o_{14}v_3^2
\end{aligned}
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\begin{aligned}
C_{20} = &-24o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_2o_5^2v_1v_2o_{14} - 12o_{13}cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_2o_8o_5^2v_1v_2o_{14} + 12o_{13}o_7o_{20}o_{18}o_6^3o_{22}o_2o_8o_5^2v_1v_2o_{14}v_3^2 -\\
&24cs^2o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5^2v_1v_2o_{14} + 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_5v_3^2 + 6o_{13}o_9cs^2o_7o_{20}o_{12}o_6^3o_{22}o_8o_5o_{14}v_3^2 -\\
&24o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_8o_8o_5v_1v_2o_{14} + 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2 + 12o_{13}o_9cs^4o_7o_{20}o_{12}o_6^2o_{22}o_8o_5o_{14} +\\
&24o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_2o_5^2v_1v_2v_3^2 - 6o_{13}o_9o_7o_{20}o_{18}o_6^3o_{22}o_2o_8o_5v_1^2o_{14}v_3^2 + 24o_{13}o_9o_7o_{20}o_{12}o_6^2o_{22}o_8o_5^2v_1v_2o_{14}v_3^2 +\\
&24o_9o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_2o_8o_5^2v_1v_2v_3^2 + 12o_{13}o_9cs^2o_7o_{20}o_{18}o_6^3o_{22}o_2o_8o_5v_1^2 + 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_2o_5^2 + 12o_{13}o_9cs^4o_{20}o_{18}o_6^3o_{22}o_2o_8o_5o_{14} -\\
&24o_{13}o_9cs^2o_7o_{20}o_{18}o_6^3o_{22}o_2o_8o_5v_1v_2 - 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6o_8o_5o_{14}v_3^2 + 12o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2v_1^2v_3^2 +\\
&12o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2 + 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2v_1v_2o_{14} - 6o_{13}cs^2o_7o_{20}o_{18}o_6^3o_{22}o_8o_5^2o_{14}v_3^2 -\\
&18o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_5o_{14} + 12o_{13}o_9cs^2o_7o_{20}o_{12}o_6^2o_8o_8o_5^2v_1v_2o_{14} - 12cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2o_{14}v_3^2 -\\
&12o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^2o_8o_8o_5^2v_1^2o_{14}v_3^2 - 12o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2v_1^2 + 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5 -\\
&6o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5v_1^2o_{14} + 12o_{13}o_9cs^2o_7o_{12}o_6^2o_{22}o_8o_5^2o_{14}v_3^2 + 24o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_5v_1v_2o_{14}v_3^2 -\\
&12o_{13}o_9o_7o_{12}o_{18}o_6^2o_{22}o_8o_5^2v_1^2o_{14}v_3^2 - 12o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2o_{14}v_3^2 + 12o_{13}o_9o_7o_{20}o_{18}o_6^3o_{22}o_8o_5v_1^2v_3^2 +\\
&12o_{13}o_9cs^4o_{20}o_{12}o_{18}o_6o_{22}o_8o_5^2o_{14} - 6o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5v_1^2o_{14}v_3^2 - 6o_{13}o_9cs^2o_7o_{20}o_{12}o_6^3o_8o_5^2v_1^2o_{14} -\\
&18o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5o_{14} - 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5v_1^2 - 24o_{13}o_7o_{20}o_{18}o_6^3o_{22}o_8o_5^2v_1v_2v_3^2 +\\
&24o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2v_1v_2 - 24o_9o_7o_{20}o_{12}o_{18}o_6^2o_8o_8o_5^2v_1v_2o_{14}v_3^2 + 12o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2v_1^2v_3^2 -\\
&o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2o_{14} - 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_8o_8o_5^2v_1^2 - 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_5^2o_{14}v_3^2 +\\
&6o_{13}o_9cs^2o_7o_{12}o_{18}o_6^2o_{22}o_8o_5^2o_{14}v_3^2 - 12o_{13}o_9cs^4o_7o_{12}o_{18}o_6^3o_{22}o_8o_5o_{14} + 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5o_{14} -\\
&6o_{13}o_9cs^4o_7o_{12}o_{18}o_6^3o_{22}o_8o_5o_{14} - 12o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2o_{14}v_3^2 - 18o_{13}o_9cs^4o_{20}o_{12}o_{18}o_6^2o_8o_8o_5o_{14} -\\
&24o_{13}o_9o_7o_{12}o_{18}o_6^2o_{22}o_5^2v_1v_2o_{14}v_3^2 - 24o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_5^2v_1v_2o_{14}v_3^2 - 12o_{13}cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2 +\\
&12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_5o_{14} + 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6o_{22}o_8o_5o_{14} + 12o_{13}o_9cs^2o_7o_{12}o_{18}o_6^3o_{22}o_8o_5v_1v_2o_{14} +\\
&24o_9o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5v_1v_2o_{14}v_3^2 + 24o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5v_1v_2 - 6o_{13}o_9o_7o_{20}o_{12}o_6^3o_8o_8o_5v_1^2o_{14}v_3^2 -\\
&12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_5o_{14}v_3^2 - 12o_{13}o_9cs^2o_7o_{12}o_{18}o_6^3o_{22}o_5v_1^2o_{14} + 6o_{13}o_9cs^2o_7o_{20}o_{18}o_6^3o_{22}o_8o_5v_1^2o_{14} +\\
&12o_{13}o_9cs^4o_7o_{20}o_{18}o_6^3o_{22}o_8o_5^2 + 6o_{13}o_9o_7o_{20}o_{12}o_6^3o_{22}o_8o_5v_1^2o_{14}v_3^2 - 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5v_3^2 +\\
&24o_{13}o_9o_7o_{12}o_{18}o_6^2o_{22}o_5^2v_1v_2o_{14}v_3^2 + 24o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_5^2v_1v_2o_{14}v_3^2 - 24o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2v_1v_2o_{14}v_3^2 +\\
&12o_{13}cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5 - 12o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5v_1v_2o_{14}v_3^2 - 12o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5v_1v_2o_{14}v_3^2 +\\
&12o_{13}o_9cs^4o_7o_{12}o_{18}o_6^3o_{22}o_5o_{14} - 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5 - 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_5^2v_1^2o_{14} +\\
&12o_9o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2v_1^2v_3^2 + 6o_{13}o_9cs^2o_7o_{12}o_{18}o_6^3o_{22}o_8o_5v_1^2o_{14} + 24o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5v_1v_2v_3^2 +\\
&24o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2v_1v_2 - 12o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5v_1^2o_{14} - 6o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_{14} -\\
&12o_9o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5v_1^2o_{14}v_3^2 + 6o_{13}o_9cs^2o_7o_{20}o_{18}o_6^3o_{22}o_8o_5^2o_{14}v_3^2 + 12o_{13}o_9cs^2o_7o_{20}o_{18}o_6^3o_{22}o_8o_5v_3^2 -\\
&12o_{13}o_9cs^2o_7o_{20}o_{18}o_6^3o_{22}o_8o_5v_1v_2o_{14} - 12o_{13}o_9cs^2o_7o_{12}o_{18}o_6^3o_{22}o_2o_5^2o_{14}v_3^2 - 12o_{13}o_9o_7o_{20}o_{12}o_6^2o_{22}o_8o_5^2v_1^2o_{14}v_3^2 +\\
&24o_{13}o_9cs^2o_7o_{12}o_{18}o_6^3o_{22}o_2o_5^2v_1v_2o_{14} + 24o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2v_1v_2o_{14}v_3^2 - 12o_{13}o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2v_1^2v_3^2 +\\
&24o_{13}o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2v_1v_2v_3^2 - 12o_{13}o_9o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_5v_1^2o_{14}v_3^2 + 24o_{13}o_9o_7o_{20}o_{18}o_6^3o_{22}o_8o_5v_1v_2v_3^2 +\\
&12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_2o_5o_{14}^2 - 12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5v_1^2o_{14}v_3^2 +\\
&12o_9cs^4o_{20}o_{12}o_{18}o_6^2o_8o_8o_5o_{14} - 24o_9o_7o_{20}o_{12}o_{18}o_6^2o_8o_8o_5v_1v_2v_3^2 - 24o_{13}o_9o_7o_{12}o_6^2o_{22}o_8o_5v_1v_2o_{14}v_3^2 -\\
&12o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5v_1v_2o_{14} - 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_5 - 12o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5 +\\
&12o_{13}o_7o_{20}o_{12}o_{18}o_6^3o_8o_8o_5v_1v_2o_{14}v_3^2 - 24o_{13}o_9cs^4o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5o_{14} + 12cs^4o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2o_{14} -\\
&12o_{13}o_9cs^4o_7o_{12}o_6^2o_{22}o_8o_5^2o_{14} + 6o_{13}o_9cs^2o_7o_{20}o_{12}o_6^3o_{22}o_8o_5^2v_1^2o_{14} - 6o_{13}o_9cs^2o_7o_{20}o_{12}o_{18}o_6^3o_{22}o_8o_5^2o_{14}v_3^2 +\\
&12o_{13}o_9cs^2o_7o_{12}o_6^2o_{22}o_8o_5^2v_1^2o_{14} - 6o_{13}o_9cs^2o_7o_{20}o_{12}o_6^3o_8o_8o_5^2v_1^2o_{14} - 12o_9cs^2o_7o_{20}o_{12}o_{18}o_6^2o_{22}o_8o_5^2v_1^2o_{14} +\\
&6o_{13}o_9o_7o_{12}o_{18}o_6^3o_{22}o_8o_5^2v_1^2o_{14}v_3^2 - 12o_{13}o_9o_7o_{12}o_{18}o_6^3o_{22}o_5v_1^2o_{14}v_3^2 + 12o_{13}o_9o_7o_{12}o_{18}o_6^3o_{22}o_8o_5v_1v_2o_{14}v_3^2 +
\end{aligned}
$$

$$24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_5^2v_1v_2 + 12o_13o_9o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1^2o_14v_3^2 - 12o_13o_9o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_1^2o_14v_3^2 +$$
$$24o_13cs^2o_7o_2o_0o_12o_18o_6^3o_22o_5^2v_1v_2 - 24o_13o_9o_7o_1o_12o_18o_6^3o_22o_5v_1v_2o_14v_3^2 - 12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_5^2v_1^2o_14 -$$
$$12o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2o_14v_3^2 - 24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1v_2o_14 - 6o_13cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1^2o_14 -$$
$$12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_3^2 - 12o_9cs^4o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2 - 12cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2o_14 -$$
$$12o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_5^2v_1^2v_3^2 + 6o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_8o_5v_1^2o_14v_3^2 + 24o_13o_9o_7o_2o_0o_12o_18o_6^2o_8o_5^2v_1v_2o_14v_3^2 +$$
$$12o_13o_9o_7o_2o_0o_12o_6^2o_8o_5^2v_1^2o_14v_3^2 - 12o_9cs^4o_2o_0o_12o_18o_6^3o_22o_8o_5^2o_14 - 6o_13o_9cs^2o_7o_1o_2o_18o_6^2o_22o_8o_5v_1^2o_14 - 6o_13o_9o_7o_1o_2o_6^3o_22o_8o_5^2v_1^2o_14v_3^2 -$$
$$12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5v_1v_2o_14 + 12o_13o_9cs^2o_7o_1o_2o_18o_6^2o_22o_5^2o_14v_3^2 - 12o_13o_9o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1v_2o_14v_3^2 -$$
$$12o_13o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1v_2o_14v_3^2 - 24o_7o_2o_0o_12o_18o_6^3o_8o_5^2v_1v_2o_14v_3^2 - 6o_13cs^2o_7o_2o_0o_12o_18o_6^3o_8o_5o_14v_3^2 +$$
$$12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_3^2 + 6o_13cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2o_14 + 12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_1^2o_14 +$$
$$6o_13o_9o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1v_2v_3^2 + 12o_7o_2o_0o_12o_18o_6^3o_8o_5^2v_1^2o_14v_3^2 -$$
$$6o_13o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2o_14v_3^2 + 24o_13o_9cs^2o_7o_2o_0o_12o_6^2o_22o_8o_5^2v_1v_2o_14 + 12o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_3^2 +$$
$$12cs^2o_7o_2o_0o_12o_18o_6^3o_8o_5^2v_1^2o_14 - 12o_13o_9cs^2o_7o_1o_2o_18o_6^2o_22o_8o_5^2o_14v_3^2 + 12o_13cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_3^2 + 12o_9cs^2o_7o_2o_0o_12o_18o_6^2o_8o_5^2v_1^2o_14 +$$
$$12cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_3^2 - 24o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1v_2 + 12o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1v_2o_14v_3^2 +$$
$$24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_5v_1v_2o_14 - 24o_13cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1v_2 - 24cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1v_2 +$$
$$24o_13o_9o_7o_1o_2o_18o_6^2o_22o_8o_5^2v_1v_2o_14v_3^2 - 6o_13o_9cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5o_14v_3^2 + 12o_13o_9cs^2o_7o_1o_2o_18o_6^3o_22o_5o_14v_3^2 +$$
$$6o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_8o_5^2v_1^2o_14 + 6o_13o_9o_7o_2o_0o_12o_18o_6^3o_8o_5^2v_1^2o_14v_3^2 - 24o_13o_9cs^2o_7o_2o_0o_12o_6^2o_8o_5^2v_1v_2o_14 +$$
$$12o_13o_9o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_1^2v_3^2 - 12o_13o_9o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1^2v_3^2 - 12o_13o_9cs^4o_7o_2o_0o_12o_18o_6^2o_22o_5^2 +$$
$$12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_3^2 - 24o_13o_9o_7o_2o_0o_12o_6^2o_8o_5^2v_1v_2o_14 + 12o_13cs^4o_7o_2o_0o_12o_18o_6^2o_22o_5^2o_14 -$$
$$12o_9o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1^2o_14v_3^2 + 12o_13o_9cs^2o_7o_2o_0o_12o_6^2o_8o_5^2v_1^2o_14v_3^2 - 24o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1v_2o_14 -$$
$$12o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_8o_5v_1v_2o_14v_3^2 + 12o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2o_14v_3^2 - 24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_1v_2 +$$
$$12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1^2o_14 - 12o_13o_9cs^4o_7o_1o_2o_18o_6^3o_22o_5o_14 - 6o_13o_9cs^2o_7o_1o_2o_6^3o_22o_8o_5^2o_14v_3^2 +$$
$$12o_13o_9cs^2o_7o_1o_2o_6^3o_22o_8o_5v_1v_2o_14 - 12o_13o_9cs^2o_7o_2o_0o_12o_6^2o_22o_8o_5^2o_14v_3^2 + 12o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_5v_1^2v_3^2 -$$
$$24o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1v_2v_3^2 - 12o_13o_9cs^2o_7o_1o_2o_18o_6^3o_22o_8o_5^2v_1v_2o_14 + 6o_13o_9cs^4o_7o_1o_2o_6^3o_22o_8o_5^2o_14 -$$
$$12o_13o_9cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_3^2 + 24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_1v_2o_14 + 12o_13o_9o_7o_2o_0o_18o_6^3o_22o_8o_5v_1v_2o_14v_3^2 -$$
$$24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_5v_1v_2 - 24o_13o_9o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_1v_2v_3^2 + 24o_13o_9o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1v_2v_3^2 +$$
$$6o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5o_14v_3^2 - 12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_5o_5^2v_1^2 - 12o_13cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2 +$$
$$12o_13o_9o_7o_1o_2o_6^3o_22o_8o_5^2v_1v_2o_14v_3^2 + 24o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1v_2o_14 +$$
$$6o_13o_9cs^4o_7o_1o_2o_18o_6^3o_22o_8o_5o_14 - 24o_13o_9cs^2o_7o_1o_2o_6^2o_22o_8o_5^2v_1v_2o_14 + 12o_13o_9o_7o_1o_2o_18o_6^2o_22o_5^2v_1^2o_14v_3^2 -$$
$$24o_13o_9o_7o_2o_0o_18o_6^3o_22o_8o_5v_1v_2v_3^2 + 12o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_5^2v_1^2o_14v_3^2 + 6o_13o_9cs^4o_7o_2o_0o_12o_18o_6^3o_22o_8o_5o_14 +$$
$$24o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1v_2o_14 + 12o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2o_14 + 12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2o_14v_3^2 -$$
$$6o_13o_9cs^2o_7o_1o_2o_6^3o_22o_8o_5^2v_1^2o_14 + 12o_9o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2o_14v_3^2 + 12o_13o_9o_7o_2o_0o_12o_6^3o_8o_5^2v_1v_2o_14v_3^2 +$$
$$6o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_8o_5o_14v_3^2 + 12o_13o_9cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5v_1v_2o_14 + 12cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2 -$$
$$12o_13o_9cs^4o_7o_2o_0o_12o_18o_6^2o_22o_5^2o_14 + 24o_13o_9cs^4o_7o_2o_0o_12o_18o_6o_22o_8o_5^2o_14 - 24o_7o_1o_2o_0o_12o_18o_6^2o_22o_5v_1v_2o_14 +$$
$$12o_13cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1^2 + 12o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1^2 + 12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_5^2v_1^2 -$$
$$12o_13cs^4o_2o_0o_12o_18o_6^3o_22o_8o_5^2o_14 - 12o_13o_9o_7o_2o_0o_12o_6^2o_22o_8o_5^2v_1v_2o_14v_3^2 - 6o_13o_9cs^4o_7o_2o_0o_12o_6^3o_22o_8o_5^2o_14 + 6o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5v_1^2o_14 + 24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^2o_22o_8o_5v_1v_2o_14 -$$
$$6o_13o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1^2o_14v_3^2 - 12o_13o_9o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1^2v_3^2 - 12o_13o_9cs^2o_7o_2o_0o_12o_6^2o_22o_8o_5^2v_1^2o_14 +$$
$$24o_13o_9cs^2o_7o_1o_2o_18o_6^2o_22o_8o_5^2v_1v_2o_14 + 12o_13cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1v_2o_14 + 24o_13o_9cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1v_2 +$$
$$24cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1v_2o_14 - 12o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_8o_5v_1^2v_3^2 - 12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_5^2v_3^2 -$$
$$12o_13cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_3^2 + 12o_13o_9cs^2o_7o_1o_2o_18o_6^2o_22o_5^2v_1^2o_14 - 6o_13cs^2o_7o_2o_0o_12o_18o_6^3o_8o_5^2v_1^2o_14 -$$
$$24o_13o_9cs^2o_7o_1o_2o_18o_6^2o_22o_5^2v_1v_2o_14 - 6o_13o_7o_2o_0o_12o_18o_6^3o_8o_5^2v_1^2o_14v_3^2 + 12o_13cs^4o_2o_0o_18o_6^3o_22o_8o_5^2o_14 +$$
$$12o_13o_9o_7o_1o_2o_6^2o_22o_8o_5^2v_1^2o_14v_3^2 - 12o_13o_9cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1^2 + 12o_13cs^2o_7o_2o_0o_12o_18o_6^3o_8o_5v_1v_2o_14 +$$
$$12o_13o_9o_7o_1o_2o_18o_6^3o_22o_5v_1^2o_14v_3^2 - 12o_13o_9o_7o_2o_0o_12o_18o_6^3o_22o_8o_5v_1v_2o_14v_3^2 -$$
$$6o_13o_9cs^2o_7o_1o_2o_18o_6^3o_22o_8o_5o_14v_3^2 + 10o_13o_9cs^4o_2o_0o_12o_18o_6^3o_22o_8o_5^2o_14 + 12o_13o_9cs^2o_7o_1o_2o_18o_6^3o_22o_5v_1^2o_14 -$$
$$6o_13o_9cs^2o_7o_2o_0o_18o_6^3o_22o_8o_5v_1^2o_14 + 12o_13o_7o_2o_0o_18o_6^3o_22o_8o_5^2v_1^2v_3^2 - 12o_13o_9cs^4o_2o_0o_18o_6^3o_22o_8o_5^2o_14 + 12o_9o_7o_2o_0o_12o_18o_6o_8o_5^2v_1^2o_14v_3^2 +$$
$$6o_13cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5o_14v_3^2 + 12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_5^2o_14v_3^2 - 2o_13o_9cs^4o_7o_2o_0o_12o_18o_6^2o_22o_8o_5o_14 +$$
$$12o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2 + 12cs^2o_7o_2o_0o_12o_18o_6^3o_8o_5o_14v_3^2 + 12o_9cs^2o_7o_2o_0o_12o_18o_6o_8o_5^2o_14v_3^2 -$$
$$24o_13o_9cs^2o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1v_2 + 24o_9o_7o_2o_0o_12o_18o_6^2o_22o_8o_5^2v_1v_2o_14v_3^2 - 12o_13o_9cs^2o_7o_2o_0o_12o_6^3o_22o_8o_5^2v_1v_2o_14 +$$
$$12o_13o_9cs^4o_7o_1o_2o_18o_6^2o_22o_8o_5^2o_14 - 12o_9o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2v_1^2v_3^2 - 12o_13o_9cs^2o_7o_1o_2o_18o_6^2o_22o_8o_5^2v_1^2o_14 - 12cs^4o_7o_2o_0o_12o_18o_6^3o_22o_8o_5^2$$

$$C_{21} = -2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_5v_2 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8v_1 + 2cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_2 + 2o_13o_9o_2o_0o_12o_18o_22o_5v_1v_2^2o_14 +$$
$$o_13o_9cs^2o_12o_18o_6o_22o_8o_5v_2o_14 - 2o_13o_2o_0o_18o_6o_22o_8o_5v_1v_2^2 - 2o_2o_0o_12o_18o_6o_6o_8o_5v_1v_2^2o_14 + 2o_9o_2o_0o_12o_18o_22o_8o_5v_1^2v_2 +$$
$$o_13o_9o_2o_0o_12o_6o_8o_5v_1v_2^2o_14 + 2o_13o_9cs^2o_12o_22o_8o_5v_2o_14 - 2o_13o_9o_2o_0o_12o_18o_6o_22o_2v_1^2v_2o_14 + o_13o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2o_14 +$$
$$2o_13o_9o_2o_0o_12o_22o_8o_5v_1v_2^2o_14 - 2o_13o_9o_1o_2o_0o_12o_18o_22o_8o_5v_1^2v_2o_14 - 2o_13o_9o_2o_0o_12o_18o_6o_22o_5v_1^2v_2 - 2o_13o_9cs^2o_2o_0o_12o_18o_8o_5v_2o_14 +$$
$$o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1o_14 + 2o_13o_9o_2o_0o_18o_6o_22o_8o_5v_1v_2^2 - o_13o_9cs^2o_2o_0o_12o_18o_6o_8o_5v_1o_14 + o_13o_9o_1o_2o_0o_18o_6o_22o_8o_5v_1^2v_2o_14 +$$
$$2o_13o_9cs^2o_12o_18o_22o_5v_2o_14 - 2o_13o_9cs^2o_2o_0o_12o_22o_8o_5v_2o_14 - 2o_13o_9o_2o_0o_18o_6o_22o_8v_1v_2^2 + 2o_2o_0o_12o_18o_6o_8o_5v_1^2v_2o_14 +$$
$$2o_13o_9cs^2o_2o_0o_12o_8o_5v_2o_14 + 2cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1o_14 - 2o_13o_9o_2o_0o_12o_18o_22o_5v_1^2v_2o_14 - 2o_13o_9cs^2o_2o_0o_12o_18o_22o_5v_2o_14 +$$
$$2o_13o_9cs^2o_2o_0o_18o_6o_22o_8o_5v_1 - 2o_9o_2o_0o_12o_18o_6o_22o_8o_5v_1^2v_2 + o_13o_9cs^2o_2o_0o_12o_6o_22o_8o_5v_2o_14 - 2o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_2o_14 +$$
$$o_13o_9cs^2o_2o_0o_12o_18o_22o_8v_2o_14 - 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_1o_14 + 2o_13o_9cs^2o_2o_0o_12o_18o_6o_22o_2v_2 + 2o_13o_9o_1o_2o_18o_22o_8o_5v_1v_2^2o_14 +$$
$$2o_9cs^2o_2o_0o_12o_18o_6o_22o_8o_5v_2o_14 - 2o_13o_9cs^2o_12o_18o_22o_8o_5v_2o_14 - o_13o_9o_1o_2o_18o_6o_22o_8o_5v_1v_2^2o_14 - 2o_13cs^2o_2o_0o_18o_6o_22o_8o_5v_1 +$$
$$2o_13o_9cs^2o_2o_0o_12o_18o_22o_8o_5v_1 + o_13o_9cs^2o_2o_0o_18o_6o_22o_8v_1o_14 + o_13cs^2o_2o_0o_12o_18o_6o_6o_8o_5v_1o_14 + 2o_13o_9o_2o_0o_12o_18o_6o_22o_2v_1v_2^2o_14 -$$
$$2o_13o_9o_2o_0o_12o_22o_8o_5v_1^2v_2o_14 - o_13o_2o_0o_12o_18o_6o_22o_8o_5v_1v_2^2o_14 + 2o_13o_9o_2o_0o_12o_18o_22o_8o_5v_1v_2^2 - o_13o_9o_2o_0o_12o_6o_8o_5v_1^2v_2o_14 +$$
$$2cs^2o_2o_0o_12o_18o_6o_8o_5v_2o_14 - o_13o_9cs^2o_12o_18o_6o_22o_8v_2o_14 + 2o_13o_9cs^2o_12o_18o_6o_22o_5v_1o_14 - 2o_13o_9cs^2o_12o_18o_6o_22o_2v_1o_14 -$$
$$o_13o_9cs^2o_12o_6o_22o_8o_5v_2o_14 + 2o_13o_9o_2o_0o_12o_18o_6o_22o_8v_1v_2^2 - 2o_13o_9o_2o_0o_18o_6o_22o_8o_5v_2 - 2o_13o_9o_2o_0o_12o_18o_8o_5v_1^2v_2o_14 +$$

$$2o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 o_1 4 - 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2v_1 - 2o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 + o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 v_1^2 v_2 o_1 4 +$$
$$2o_1 3o_9 o_1 2o_1 8o_6 o_2 2o_5 v_1 v_2^2 o_1 4 - o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 + 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_2 o_1 4 -$$
$$o_1 3cs^2 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_2 o_1 4 - 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_2 + 2o_1 3cs^2 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_2 + 2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 -$$
$$o_1 3cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 o_1 4 - 2o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 + 2o_1 3o_9 o_2 0o_1 2o_1 8o_8 o_5 v_1 v_2^2 o_1 4 - 2cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 +$$
$$2o_1 3o_9 o_2 0o_1 2o_1 8o_2 2o_5 v_1^2 v_2 + 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_5 v_1 - 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 v_2 + o_1 3o_9 cs^2 o_2 0o_1 2o_6 o_8 o_5 v_1 o_1 4 -$$
$$2o_9 cs^2 o_2 0o_1 2o_1 8o_8 o_5 v_1 o_1 4 + 2o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_1 o_1 4 - 2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2v_1 v_2^2 + 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2v_1 o_1 4 +$$
$$o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 o_1 4 - 2o_1 3o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 - o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 v_1 v_2^2 o_1 4 + o_1 3o_9 cs^2 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_2 o_1 4 -$$
$$2o_1 3o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 - o_1 3o_9 o_2 0o_1 2o_6 o_2 2o_8 o_5 v_1 v_2^2 o_1 4 + 2o_1 3o_9 cs^2 o_1 2o_1 8o_6 o_2 2v_2 o_1 4 + o_1 3o_9 cs^2 o_1 2o_6 o_2 2o_8 o_5 v_1 o_1 4 -$$
$$2o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1 + o_1 3o_9 cs^2 o_1 2o_1 8o_6 o_2 2o_8 v_1 o_1 4 - 2o_1 3o_9 cs^2 o_1 2o_1 8o_6 o_2 2o_5 v_2 o_1 4 - 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_5 v_1 -$$
$$2o_9 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1 v_2^2 - o_1 3o_9 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 - 2cs^2 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_2 o_1 4 +$$
$$2o_1 3o_9 cs^2 o_2 0o_1 8o_6 o_2 2o_8 v_2 + 2o_1 3o_9 o_2 0o_1 2o_1 8o_5 o_5 v_1^2 v_2 o_1 4 + 2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_5 v_1 v_2^2 + 2o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 -$$
$$2o_1 3o_9 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1 v_2^2 o_1 4 - o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_1 v_2^2 o_1 4 - 2o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 o_1 4 + 2o_1 3o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 +$$
$$o_1 3cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_2 o_1 4 + 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_2 + o_1 3cs^2 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1 o_1 4 - o_1 3o_2 0o_1 2o_1 8o_6 o_8 o_5 v_1^2 v_2 o_1 4 -$$
$$2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1 o_1 4 + 2o_9 cs^2 o_2 0o_1 2o_1 8o_8 o_5 v_2 o_1 4 - 2o_1 3o_9 o_2 0o_1 2o_1 8o_5 o_5 v_1 v_2^2 o_1 4 - o_1 3o_9 cs^2 o_2 0o_1 2o_6 o_8 o_5 v_2 o_1 4 -$$
$$2o_1 3o_9 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1^2 v_2 - 2o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_2 o_1 4 + o_1 3o_9 o_2 0o_1 8o_6 o_2 2o_8 v_1 v_2^2 o_1 4 + o_1 3o_2 0o_1 2o_1 8o_6 o_8 o_5 v_1 v_2^2 o_1 4 -$$
$$2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2v_2 o_1 4 + 2o_1 3o_9 o_2 0o_1 8o_6 o_2 2o_8 v_1^2 v_2 - 2o_1 3cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_2 - o_1 3o_9 cs^2 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1 o_1 4 +$$
$$o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_1^2 v_2 o_1 4 + 2o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 + 2o_1 3o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1^2 v_2 o_1 4 + 2o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 -$$
$$2o_1 3o_9 o_1 2o_2 2o_8 o_5 v_1 v_2^2 o_1 4 + 2o_1 3o_9 o_1 2o_2 2o_8 o_5 v_1^2 v_2 o_1 4 - 2o_9 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1^2 v_2 o_1 4 -$$
$$2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 - 2o_9 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_1^2 v_2 o_1 4 - o_1 3o_9 cs^2 o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 o_1 4 - 2o_1 3o_9 o_1 2o_1 8o_2 2o_5 v_1 v_2^2 o_1 4 -$$
$$2o_1 3o_9 cs^2 o_1 2o_2 2o_8 o_5 v_1 o_1 4 - o_1 3o_9 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 o_1 4 - 2o_1 3o_9 cs^2 o_1 2o_1 8o_2 2o_5 v_1 o_1 4 + o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_2 o_1 4 +$$
$$o_1 3o_9 o_1 2o_6 o_2 2o_8 o_5 v_1 v_2^2 o_1 4 - o_1 3o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 + 2o_1 3cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 - 2o_9 o_2 0o_1 2o_1 8o_8 o_5 v_1 v_2^2 o_1 4 +$$
$$2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_8 o_5 v_1 o_1 4 - o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_2 o_1 4 + o_1 3o_9 o_1 2o_1 8o_6 o_2 2o_8 v_1 v_2^2 o_1 4 - 2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_8 v_1^2 v_2 +$$
$$2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_5 v_1^2 v_2 o_1 4 + 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_5 v_2 - 2o_1 3o_9 cs^2 o_2 0o_1 2o_8 o_5 v_1 o_1 4 + 2o_9 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_1 v_2^2 o_1 4 +$$
$$2o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_2 + 2o_9 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1 v_2^2 o_1 4 + 2o_1 3o_9 cs^2 o_2 0o_1 2o_2 2o_8 o_5 v_1 o_1 4 + 2o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_8 o_5 v_1 o_1 4 -$$
$$o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 v_1 o_1 4 - 2o_1 3o_9 cs^2 o_2 0o_1 8o_6 o_2 2o_8 v_1 - 2o_1 3o_9 cs^2 o_2 0o_1 2o_6 o_8 o_5 v_2 o_1 4 - 2o_1 3o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 o_1 4 +$$
$$2o_1 3o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 - 2o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_2 + 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_2 2o_5 v_1 o_1 4 + 2o_1 3o_9 o_1 2o_2 2o_5 v_1^2 v_2 o_1 4 -$$
$$2o_1 3o_9 o_1 2o_1 8o_6 o_2 2v_1 v_2^2 o_1 4 - 2cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_2 o_1 4 + o_1 3o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1 v_2^2 o_1 4 + 2o_9 o_2 0o_1 2o_1 8o_8 o_5 v_1^2 v_2 o_1 4 -$$
$$o_1 3o_9 o_1 2o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 - 2o_1 3o_9 o_2 0o_1 2o_1 8o_2 2o_5 v_1 v_2^2 - 2o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 o_1 4 + 2o_1 3o_9 cs^2 o_1 2o_1 8o_2 2o_8 o_5 v_1 o_1 4 -$$
$$2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2o_5 v_1 v_2^2 o_1 4 - o_1 3o_9 o_1 2o_1 8o_6 o_2 2o_8 v_1^2 v_2 o_1 4 + o_1 3o_9 o_2 0o_1 8o_6 o_2 2o_8 o_5 v_1^2 v_2 o_1 4 - 2o_1 3o_9 cs^2 o_2 0o_1 2o_1 8o_6 o_2 2o_8 o_5 v_1 +$$
$$2o_1 3o_9 o_1 2o_1 8o_2 2o_5 v_1^2 v_2 o_1 4 - o_1 3cs^2 o_2 0o_1 2o_1 8o_6 o_8 o_5 v_2 o_1 4 - o_1 3o_9 cs^2 o_2 0o_1 8o_6 o_2 2o_8 v_2 o_1 4 + 2o_1 3o_9 o_2 0o_1 2o_1 8o_6 o_2 2v_1^2 v_2$$

$C_{22} =$

$$6o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1 v_2^2 v_3^2 - 12cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1 v_2^2 + 6o_7 o_2 0o_1 8o_6 o_8 v_1^2 v_2^2 o_1 7v_3 + 12o_7 o_1 8o_6 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 - 12cs^2 o_7 o_8 o_1 5o_5 v_2^2 o_1 7v_3 +$$
$$6cs^2 o_7 o_2 0o_8 o_1 5o_5 v_2^2 o_1 7v_3 + 6cs^2 o_7 o_6 o_8 o_1 5o_5 v_2^2 o_1 7v_3 - 3cs^2 o_7 o_2 0o_6 o_8 o_1 5o_5 v_2^2 o_1 7v_3 + 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1 o_1 7v_3^2 -$$
$$12cs^2 o_7 o_1 8o_6 o_1 5o_5 v_1 o_1 7v_3^2 + 12o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1^2 v_2^2 v_3 + 12o_7 o_1 8o_6 o_1 5v_1 v_2^2 o_1 7v_3^2 + 6o_7 o_1 8o_6 o_8 o_1 5o_5 v_1 v_2^2 o_1 7v_3 - 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5v_1^2 v_3 -$$
$$12o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 + 3o_7 o_2 0o_1 8o_6 o_8 o_5 v_1 v_2^2 o_1 7v_3 + 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5v_2^2 o_1 7v_3 - 12cs^2 o_7 o_1 8o_6 o_1 5v_2^2 o_1 7v_3 -$$
$$12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1 v_3 - 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_2^2 o_1 7v_3 - 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1 v_2^2 - 6cs^2 o_7 o_2 0o_1 8o_6 o_8 v_1 v_2^2 o_1 7 +$$
$$12cs^2 o_7 o_1 8o_6 o_1 5o_5 v_2^2 o_1 7v_3 + 6o_7 o_2 0o_1 8o_6 o_8 o_5 v_1^2 v_2^2 v_3 - 3o_7 o_2 0o_1 8o_6 o_8 o_5 v_1^2 v_2^2 v_3^2 + 6o_7 o_1 8o_6 o_8 o_5 v_1^2 o_1 7v_3 +$$
$$12cs^2 o_7 o_1 8o_6 o_1 5v_1 o_1 7v_3^2 - 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_1 o_1 7v_3^2 + 6cs^2 o_7 o_2 0o_8 o_6 o_8 v_1^2 o_1 7v_3 + 12o_7 o_2 0o_1 8o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 +$$
$$6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_5 v_1^2 v_3 - 6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_2^2 v_3 + 12o_7 o_8 o_1 5o_5 v_1 v_2^2 o_1 7v_3^2 - 12cs^2 o_7 o_1 8o_1 5o_5 v_1^2 o_1 7v_3 + 12cs^2 o_7 o_2 0o_1 8o_1 5o_5 v_1^2 o_1 7v_3 -$$
$$6cs^2 o_7 o_2 0o_8 o_1 5o_5 v_1 o_1 7v_3^2 + 12cs^2 o_7 o_8 o_1 5o_5 v_1 o_1 7v_3^2 - 12cs^2 o_7 o_2 0o_1 8o_1 5o_5 v_1 v_2^2 o_1 7 + 12cs^2 o_7 o_1 8o_1 5o_5 v_1 v_2^2 o_1 7 - 6cs^2 o_7 o_6 o_8 o_1 5o_5 v_1 o_1 7v_3^2 -$$
$$12cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1 v_3^2 + 3cs^2 o_7 o_2 0o_6 o_8 o_1 5o_5 v_1 o_1 7v_3^2 - 12cs^2 o_7 o_2 0o_1 8o_1 5o_5 v_1^2 v_3 - 3o_7 o_2 0o_6 o_8 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 -$$
$$12o_7 o_2 0o_1 8o_1 5o_5 v_1^2 v_2^2 v_3 - 12cs^2 o_7 o_2 0o_1 8o_6 o_8 v_1^2 v_3 + 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_2^2 v_3 + 6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1 o_1 7v_3^2 +$$
$$6o_7 o_2 0o_8 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 + 6cs^2 o_7 o_1 8o_6 o_8 o_1 5o_5 v_1 v_2^2 o_1 7 - 6cs^2 o_7 o_1 8o_6 o_8 o_1 5v_1 o_1 7v_3^2 + 12o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1^2 v_2^2 v_3 -$$
$$3cs^2 o_7 o_2 0o_1 8o_6 o_8 o_5 v_2^2 o_1 7v_3 - 3cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1 v_2^2 o_1 7 + 12o_7 o_1 8o_1 5o_5 v_1 v_2^2 o_1 7v_3^2 + 3cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1^2 o_1 7v_3 +$$
$$6o_7 o_6 o_8 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 + 6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1 v_2^2 + 12o_7 o_2 0o_1 8o_6 o_1 5v_1 v_2^2 v_3^2 - 6cs^2 o_7 o_1 8o_6 o_8 o_1 5o_5 v_1^2 o_1 7v_3 - 12o_7 o_2 0o_1 8o_6 o_8 v_1^2 v_2^2 v_3 -$$
$$6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5v_2^2 o_1 7v_3 + 6cs^2 o_7 o_1 8o_6 o_8 o_1 5o_5 v_2^2 o_1 7v_3 - 12o_7 o_2 0o_1 8o_1 5o_5 v_1 v_2^2 o_1 7v_3^2 - 12cs^2 o_7 o_1 8o_6 o_1 5o_5 v_2^2 o_1 7 +$$
$$3cs^2 o_7 o_2 0o_1 8o_6 o_8 o_5 v_1 o_1 7v_3^2 + 6cs^2 o_7 o_2 0o_1 8o_8 o_1 5o_5 v_1 v_2^2 o_1 7 + 6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1 v_3^2 + 12cs^2 o_7 o_1 8o_8 o_1 5o_5 v_1^2 o_1 7v_3 +$$
$$6cs^2 o_7 o_2 0o_1 8o_8 o_1 5o_5 v_1^2 v_3 - 6cs^2 o_7 o_2 0o_1 8o_8 o_1 5o_5 v_1^2 o_1 7v_3 - 6o_7 o_1 8o_6 o_8 o_1 5v_1 v_2^2 o_1 7v_3 + 12cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5v_2^2 v_3 +$$
$$6o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1 v_2^2 o_1 7v_3 + 12o_7 o_2 0o_1 8o_6 o_1 5v_1^2 v_2^2 o_1 7v_3 + 6o_7 o_2 0o_1 8o_8 o_1 5o_5 v_1 v_2^2 o_1 7v_3 - 3cs^2 o_7 o_2 0o_6 o_8 o_1 5o_5 v_1^2 o_1 7v_3 +$$
$$12cs^2 o_7 o_2 0o_1 8o_6 o_1 5v_1 v_3^2 - 12cs^2 o_7 o_2 0o_1 8o_1 5o_5 v_2^2 v_3 + 6cs^2 o_7 o_6 o_8 o_1 5o_5 v_1^2 o_1 7v_3 + 6o_7 o_1 8o_6 o_8 o_1 5v_1^2 v_2^2 o_1 7v_3 - 12cs^2 o_7 o_8 o_1 5o_5 v_1^2 o_1 7v_3 +$$
$$6cs^2 o_7 o_2 0o_8 o_1 5o_5 v_1^2 o_1 7v_3 - 12cs^2 o_7 o_2 0o_1 8o_1 5o_5 v_1 o_1 7v_3^2 + 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1^2 v_3 + 12cs^2 o_7 o_1 8o_1 5o_5 v_1 o_1 7v_3^2 -$$
$$6cs^2 o_7 o_2 0o_8 o_1 5o_5 v_1 v_2^2 o_1 7 + 12cs^2 o_7 o_8 o_1 5o_5 v_1 v_2^2 o_1 7 + 3cs^2 o_7 o_2 0o_6 o_8 o_1 5o_5 v_1 v_2^2 o_1 7 - 6cs^2 o_7 o_6 o_8 o_1 5o_5 v_1 v_2^2 o_1 7 + 12o_7 o_1 8o_8 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 -$$
$$12cs^2 o_7 o_2 0o_1 8o_6 o_8 v_2^2 v_3 - 6cs^2 o_7 o_2 0o_1 8o_6 o_8 v_1 o_1 7v_3^2 - 6o_7 o_2 0o_1 8o_8 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 - 4cs^4 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1 o_1 7 +$$
$$12o_7 o_2 0o_1 8o_6 o_1 5v_1^2 v_2^2 o_1 7v_3 - 12cs^2 o_7 o_1 8o_6 o_1 5v_1^2 o_1 7v_3 + 6o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1^2 v_2^2 v_3 - 6o_7 o_2 0o_1 8o_6 o_8 o_5 v_1 v_2^2 v_3^2 + 12cs^2 o_7 o_1 8o_6 o_1 5v_1 v_2^2 o_1 7 -$$
$$12cs^2 o_7 o_2 0o_1 8o_6 o_1 5v_1 v_2^2 o_1 7 - 6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_5 v_1 v_2^2 - 6o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1^2 v_2^2 o_1 7v_3 - 12o_7 o_2 0o_1 8o_6 o_1 5v_1 v_2^2 o_1 7v_3^2 -$$
$$12cs^2 o_7 o_1 8o_6 o_1 5o_5 v_1 v_2^2 o_1 7 + 6cs^2 o_7 o_2 0o_1 8o_6 o_8 v_2^2 o_1 7v_3 + 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1 v_2^2 o_1 7 - 6cs^2 o_7 o_2 0o_1 8o_6 o_8 o_5 v_1 v_3^2 +$$
$$12cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1^2 v_3 + 6cs^2 o_7 o_2 0o_1 8o_8 o_1 5o_5 v_2^2 v_3 + 12o_7 o_1 8o_6 o_1 5o_5 v_1^2 o_1 7v_3 - 12o_7 o_2 0o_1 8o_6 o_8 o_1 5v_1 v_2^2 v_3^2 +$$
$$3o_7 o_2 0o_6 o_8 o_1 5o_5 v_1 v_2^2 o_1 7v_3^2 - 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5o_5 v_1^2 o_1 7v_3 - 6o_7 o_6 o_8 o_1 5o_5 v_1 v_2^2 o_1 7v_3^2 - 12cs^2 o_7 o_1 8o_1 5o_5 v_2^2 o_1 7v_3 +$$
$$12cs^2 o_7 o_2 0o_1 8o_1 5o_5 v_2^2 o_1 7v_3 - 6o_7 o_2 0o_8 o_1 5o_5 v_1 v_2^2 o_1 7v_3 + 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5v_1 v_2^2 - 6o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1^2 v_2^2 v_3 -$$
$$12o_7 o_1 8o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 + 3o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 - 6cs^2 o_7 o_2 0o_1 8o_8 o_1 5o_5 v_1 v_2^2 - 6cs^2 o_7 o_1 8o_6 o_8 o_1 5o_5 v_2^2 o_1 7v_3 +$$
$$12cs^2 o_7 o_2 0o_1 8o_1 5o_5 v_1 v_3^2 - 12cs^2 o_7 o_2 0o_1 8o_6 o_1 5v_2^2 v_3 + 6cs^2 o_7 o_2 0o_1 8o_8 o_1 5o_5 v_1 o_1 7v_3^2 + 3cs^2 o_7 o_2 0o_1 8o_6 o_8 o_1 5o_5 v_2^2 o_1 7v_3 -$$
$$12cs^2 o_7 o_1 8o_8 o_1 5o_5 v_1 o_1 7v_3^2 + 3cs^2 o_7 o_2 0o_1 8o_6 o_8 o_5 v_1 v_2^2 o_1 7 - 3cs^2 o_7 o_2 0o_1 8o_6 o_8 o_5 v_1^2 o_1 7v_3 - 12o_7 o_2 0o_1 8o_1 5o_5 v_1 v_2^2 o_1 7v_3^2 +$$
$$12o_7 o_2 0o_1 8o_6 o_8 v_1 v_3^2 - 12o_7 o_8 o_1 5o_5 v_1^2 v_2^2 o_1 7v_3 + 12cs^2 o_7 o_2 0o_1 8o_6 o_8 v_1 v_2^2 - 6cs^2 o_7 o_1 8o_6 o_8 o_1 5v_1 v_2^2 o_1 7 + 12o_7 o_2 0o_1 8o_6 o_8 v_1 v_2^2 v_3^2 +$$

$6cs^2o_7o_18o_6o_8o_15o_5v_1o_17v_3^2 + 6cs^2o_7o_2o_18o_6o_8o_15v_1v_2^2o_17 - 12o_7o_2o_18o_6o_15v_1^2v_2^2v_3 - 6cs^2o_7o_2o_18o_8o_15o_5v_2^2o_17v_3 +$
$12cs^2o_7o_18o_8o_15o_5v_2^2o_17v_3 - 3cs^2o_7o_2o_18o_6o_8o_15o_5v_1o_17v_3^2 - 6o_7o_2o_18o_6o_8v_1v_2^2o_17v_3^2 + 2cs^4o_7o_2o_18o_6o_8o_15o_5v_1o_17 +$
$6cs^2o_7o_18o_6o_8o_15v_1^2o_17v_3 - 12o_7o_2o_18o_6o_15o_5v_1v_2^2v_3^2 + 12cs^2o_7o_2o_18o_15o_5v_1v_2^2 - 12o_7o_18o_6o_15o_5v_1v_2^2o_17v_3^2 -$
$6cs^2o_7o_2o_18o_6o_8o_15v_1^2o_17v_3 - 3o_7o_2o_18o_6o_8o_5v_1^2v_2^2o_17v_3 + 12o_7o_2o_18o_6o_15o_5v_1v_2^2o_17v_3^2 - 6cs^2o_7o_2o_18o_6o_8o_15o_5v_1^2v_3 +$
$6cs^2o_7o_2o_18o_6o_8o_5v_2^2v_3 - 12o_7o_18o_6o_15v_1^2v_2^2o_17v_3 + 12o_7o_2o_18o_15o_5v_1v_2^2v_3 - 6o_7o_18o_6o_8o_15o_5v_1^2v_2^2o_17v_3 - 6cs^2o_7o_2o_18o_8o_15o_5v_1v_3^2$

$C_{23} = 2cs^2o_2o_18o_6^2o_8o_15o_5o_5o_17v_3^2 - 4o_2o_18o_6o_8o_15o_5^2v_1v_2^2o_17v_3 + 4cs^2o_2o_6o_8o_15o_5^2v_1o_17v_3 - 2cs^2o_6^2o_8o_15o_5^2o_17v_3^2 - 4o_18o_6^2o_15o_5o_5^2v_2^2o_17v_3^2 +$
$8o_2o_18o_6o_15o_5^2v_1v_2^2o_17v_3 - 4cs^4o_18o_6o_15o_5o_5^2o_17 - 8o_18o_6^2o_15o_5v_1v_2^2o_17v_3 + 8o_2o_18o_6^2o_8o_15o_5v_1v_2^2v_3 - 8cs^2o_2o_18o_6^2o_8o_5v_1v_3 +$
$4cs^2o_18o_6^2o_15o_5o_5o_17v_3^2 + 4cs^2o_2o_18o_6o_8o_15o_5^2v_1v_3 - 4cs^2o_18o_6^2o_8o_15o_5o_17v_3^2 - 2o_2o_18o_6^2o_8o_5v_2^2o_17v_3^2 - 2cs^4o_2o_18o_6^2o_8o_15o_17 -$
$8cs^2o_18o_6o_15o_5^2v_1o_17v_3 + 4o_2o_18o_6^2o_8o_5v_1v_2^2o_17v_3 - 4cs^2o_18o_6^2o_8o_15o_5^2v_1o_17v_3 - 2cs^2o_2o_18o_6^2o_8o_5v_2^2o_17 + 2cs^2o_2o_18o_6o_8o_15o_5^2v_2^2o_17 -$
$2cs^2o_2o_18o_6^2o_8o_5v_2^2 + 4o_2o_18o_6^2o_8o_5v_2^2v_3 + cs^2o_2o_6^2o_8o_15o_5o_5o_17v_3^2 - 2o_2o_18o_6^2o_8o_5^2v_1v_2o_17v_3 - 4cs^2o_18o_6o_15o_5o_5^2v_2^2o_17 -$
$2cs^2o_2o_18o_6^2o_8o_5v_2^2 + 8cs^2o_2o_18o_6o_15o_5^2v_1o_17v_3 - 4cs^4o_2o_18o_6^2o_15o_5o_5 - 2cs^4o_2o_18o_6^2o_8o_15o_5^2 + 8o_2o_18o_6^2o_15o_5^2v_1v_2^2v_3 -$
$2o_18o_6^2o_8o_15o_5v_2^2o_17v_3^2 - 8cs^2o_6o_8o_15o_5^2v_1o_17v_3 - 2cs^2o_2o_18o_6^2o_8o_5v_1o_17v_3 + 4o_6^2o_8o_15o_5^2v_1v_2^2o_17v_3 - 2cs^2o_18o_6^2o_8o_15o_5o_5o_17v_3^2 +$
$8o_18o_6^2o_15o_5^2v_1v_2^2o_17v_3 + 4cs^4o_2o_18o_6^2o_8o_15o_5 + 2cs^2o_18o_6^2o_8o_15o_5^2v_2^2o_17 - 2cs^2o_2o_18o_6o_8o_15o_5^2v_3^2 + 4cs^4o_18o_6o_8o_15o_5^2o_17 +$
$4o_18o_6^2o_8o_15o_5v_1v_2^2o_17v_3 + 4cs^2o_2o_18o_6^2o_15o_5^2 + 4cs^2o_18o_6o_15o_5^2v_2^2o_17 + 4cs^4o_2o_18o_6o_8o_5v_1o_17 - 4cs^2o_2o_18o_6o_15o_5^2v_2^2 -$
$8cs^2o_2o_18o_6^2o_15o_5^2v_1o_17v_3 - 8cs^2o_2o_18o_6o_15o_5^2v_1v_3 + 4o_2o_18o_6^2o_8o_5^2v_1v_2^2v_3 + 4o_6o_8o_15o_5^2v_2^2o_17v_3 + 2cs^2o_2o_18o_6^2o_8o_15o_5^2v_2^2 -$
$o_2o_18o_6^2o_8o_15o_5^2v_2^2o_17v_3^2 - 12cs^4o_2o_18o_6o_8o_15o_5o_17 + 4o_2o_18o_6o_15o_5o_5^2v_2^2o_17v_3 - 8o_2o_18o_6o_15o_5^2v_1v_2^2v_3 -$
$4cs^2o_18o_6o_15o_5^2v_2^2o_17 + 4o_2o_18o_6o_8o_15o_5^2v_1v_2^2v_3 + 4o_18o_6o_15o_5^2v_2^2o_17v_3^2 + 2cs^4o_2o_18o_6^2o_8o_5v_2^2o_17 - 4cs^4o_18o_6o_8o_15o_5^2o_17 -$
$4o_2o_18o_6^2o_15o_5o_5v_2^2o_17v_3^2 + cs^2o_2o_18o_6^2o_8o_5^2o_17v_3^2 + 4cs^2o_6o_8o_15o_5^2o_17v_3^2 + 2cs^2o_2o_18o_6^2o_8o_15o_5v_1o_17v_3 - 4o_18o_6o_8o_15o_5^2v_2^2o_17v_3^2 +$
$4cs^4o_2o_18o_8o_15o_5o_5o_17 - 4o_2o_2o_18o_6^2o_15o_5^2v_2^2v_3 - 4cs^2o_2o_18o_6^2o_8o_15o_5v_1v_3 + 4cs^2o_2o_18o_6^2o_15o_5^2v_2^2o_17 - 4cs^2o_18o_6o_15o_5^2v_2^2o_17 -$
$4o_18o_6^2o_8o_15o_5v_1v_2^2o_17v_3 - 4o_2o_18o_6^2o_8o_15o_5o_5v_2^2v_3 - 2cs^4o_18o_6^2o_8o_15o_5^2o_17 + 2cs^2o_2o_18o_6^2o_8o_15o_5^2v_2^2 + 8cs^2o_18o_6^2o_15o_5^2v_1o_17v_3 -$
$4cs^4o_18o_6^2o_15o_5o_5o_17 - 2cs^2o_2o_6o_8o_15o_5^2o_17v_3^2 + 8cs^2o_2o_18o_6^2o_15o_5^2v_1v_3 - 4cs^2o_2o_18o_6^2o_15o_5^2v_3^2 + o_2o_6^2o_8o_15o_5^2v_2^2o_17v_3^2 -$
$2cs^2o_2o_18o_6o_8o_15o_5^2v_2^2 - cs^2o_2o_18o_6^2o_8o_15o_5^2v_2^2o_17 + 4cs^4o_2o_18o_6^2o_15o_5o_5o_17 - 2o_2o_8o_15o_5^2v_2^2o_17v_3^2 + o_2o_18o_6^2o_8o_5v_2^2o_17v_3^2 +$
$4cs^4o_2o_18o_6o_8o_15o_17 - 2cs^4o_2o_18o_8o_15o_5^2o_17 - 2cs^2o_18o_6^2o_8o_15o_5v_2^2o_17 - 4cs^4o_2o_18o_6o_15o_5^2 + 4cs^2o_18o_6^2o_8o_15o_5v_1o_17v_3 -$
$4o_2o_2o_18o_6^2o_8o_15o_5v_1v_2^2v_3 - 4cs^2o_2o_18o_6^2o_8o_15o_5o_5v_3^2 + 2cs^4o_18o_6^2o_8o_15o_5o_17 - 4cs^2o_18o_6o_8o_15o_5^2o_17v_3^2 + 2o_2o_18o_6^2o_8o_15o_5^2v_1v_2^2o_17v_3 -$
$4o_2o_18o_6o_15o_5^2v_2^2o_17v_3^2 + 2o_2o_18o_6o_8o_15o_5^2v_2^2o_17v_3^2 + 4o_18o_6^2o_15o_5^2v_2^2o_17v_3^2 + 4cs^4o_18o_6^2o_15o_5^2o_17 -$
$4cs^4o_2o_18o_6^2o_8o_5 - 8o_2o_2o_18o_6^2o_15o_5v_1v_2^2v_3 - 2cs^4o_2o_18o_6o_8o_5^2o_17 + 4cs^2o_2o_18o_6^2o_15o_5v_2^2 - 4cs^2o_2o_18o_6o_15o_5^2v_1o_17v_3 +$
$2o_18o_6^2o_8o_15o_5^2v_2^2o_17v_3^2 - 4cs^2o_2o_18o_6^2o_15o_5o_5v_2^2o_17 + 4cs^2o_2o_18o_6^2o_8o_5v_1o_17v_3 - 4o_2o_18o_6^2o_8o_15o_5v_1v_2^2o_17v_3 + 4o_2o_18o_6o_15o_5v_2^2v_3^2 +$
$8cs^2o_2o_18o_6^2o_8o_15o_5v_1v_3 + 2cs^2o_2o_18o_6o_6o_15o_5^2o_17v_3^2 - 8o_6o_8o_15o_5^2v_1v_2^2o_17v_3 - 4cs^2o_2o_18o_6^2o_8o_15o_5v_2^2 + 2cs^4o_2o_18o_6o_8o_15o_5^2 -$
$2cs^2o_2o_18o_6^2o_8o_5o_17v_3^2 + cs^2o_2o_6^2o_8o_15o_5^2v_2^2o_17 - 2cs^2o_6^2o_8o_15o_5^2v_2^2o_17 + 2cs^2o_2o_18o_6^2o_8o_15o_5v_2^2o_17 + 2cs^4o_2o_18o_6o_8o_15o_5^2o_17 -$
$2o_2o_2o_6o_8o_15o_5^2v_2^2o_17v_3^2 - 8cs^2o_2o_18o_6^2o_15o_5v_1v_3 + 4cs^2o_18o_6^2o_15o_5o_5v_2^2o_17 + 2o_2o_2o_18o_6^2o_8o_15o_5v_2^2v_3 + 4cs^2o_2o_18o_6^2o_8o_5v_3^2 +$
$4cs^2o_2o_18o_6^2o_8o_5v_1v_3 - 4cs^2o_18o_6^2o_15o_5o_5^2o_17v_3^2 + 2o_2o_18o_6^2o_8o_15o_5v_2^2o_17v_3^2 - 2cs^2o_2o_6^2o_8o_15o_5v_1o_17v_3 - 2cs^2o_2o_6o_8o_15o_5^2v_2^2o_17 -$
$4cs^4o_6o_8o_15o_5^2o_17 - 8o_2o_18o_6^2o_15o_5^2v_1v_2^2o_17v_3 - cs^2o_2o_18o_6^2o_8o_15o_5^2o_17v_3^2 - 2o_2o_2o_6^2o_8o_15o_5^2v_1v_2^2o_17v_3 + 8cs^2o_2o_18o_6^2o_15o_5v_1o_17v_3 +$
$4cs^4o_2o_6o_8o_15o_5v_3 - 2o_2o_2o_18o_6^2o_8o_5^2v_2^2v_3 + 4cs^2o_2o_18o_6^2o_15o_5v_2^2o_17 + cs^2o_2o_6^2o_8o_15o_5^2v_2^2o_17 -$
$2o_2o_18o_6o_8o_15o_5^2v_2^2v_3 + 8cs^2o_18o_6o_8o_15o_5^2v_1o_17v_3 + 4cs^2o_2o_18o_6^2o_15o_5o_17v_3^2 + 4cs^2o_18o_6o_15o_5^2v_2^2 - 2cs^4o_2o_18o_15o_5o_5o_17 +$
$4cs^2o_2o_18o_6o_15o_5^2v_3^2 + 8o_18o_6o_8o_15o_5^2v_1v_2^2o_17v_3 + 2cs^4o_2o_18o_6^2o_8o_5^2 - 4cs^2o_2o_18o_6o_15o_5^2o_17v_3^2 - 8cs^2o_18o_6^2o_15o_5v_1o_17v_3 +$
$4cs^2o_18o_6o_15o_5^2o_17v_3^2 - 4cs^2o_2o_18o_6^2o_8o_15o_5v_1o_17v_3 + 2cs^2o_18o_6o_8o_15o_5^2o_17v_3^2 - 8o_18o_6o_15o_5^2v_1v_2^2o_17v_3 + 4cs^2o_6^2o_8o_15o_5^2v_1o_17v_3 +$
$4o_2o_2o_18o_6^2o_15o_5^2v_2^2o_17v_3^2 + 4cs^2o_2o_18o_6^2o_8o_5v_2^2 + 4cs^4o_2o_18o_6o_15o_5^2o_17 + 2cs^4o_6^2o_8o_15o_5^2o_17 + 8o_2o_18o_6^2o_15o_5v_1v_2^2o_17v_3$

$C_{24} = 4o_2o_2o_18o_6o_8o_15v_1^2v_3 + 2o_2o_18o_6o_8o_15v_1o_17v_3^2 + 4o_18o_6o_15o_5o_5v_1^2o_17v_3 + 2cs^2o_2o_18o_8o_15o_5v_3 + cs^2o_2o_18o_6o_8o_5v_1o_17 -$
$4cs^2o_18o_15o_5o_17v_3 - 2o_18o_6o_8o_15o_5v_1^2o_17v_3 - 2o_2o_18o_6o_8o_5v_1v_3^2 - 4o_2o_18o_15o_5v_1^2v_3 + cs^2o_2o_18o_6o_8o_5o_17v_3 - 4cs^2o_2o_18o_6o_8v_3 -$
$4o_2o_18o_6o_8v_1^2v_3 - 4o_2o_2o_18o_15o_5o_17v_1o_17v_3^2 + 4o_2o_18o_6o_15o_5o_5v_1^2v_3 + cs^2o_2o_6o_8o_15o_5v_1o_17 - 2cs^2o_18o_6o_8o_15o_5o_17v_3 -$
$4cs^2o_2o_18o_6o_15o_5v_1 + 2cs^2o_2o_18o_6o_8o_5v_3 + 2o_6o_8o_15o_5v_1^2o_17v_3 + 2o_2o_8o_15o_5v_1^2o_17v_3 - 4cs^2o_2o_18o_6o_15v_1o_17 + 2o_2o_18o_6o_8o_15o_5v_1v_3^2 +$
$o_2o_18o_6o_8o_5v_1o_17v_3^2 - 2cs^2o_6o_8o_15o_5v_1o_17 - 2o_2o_18o_8o_15o_5v_1^2o_17v_3 - 2o_2o_18o_6o_8v_1o_17v_3^2 - 2cs^2o_2o_8o_15o_5v_1o_17 +$
$4o_2o_18o_6o_15v_1^2o_17v_3 - 4o_2o_18o_6o_15v_1^2v_3 - o_2o_18o_6o_8o_15o_5v_1o_17v_3^2 + 4o_2o_18o_6o_15o_5v_1o_17v_3^2 + 2o_18o_6o_8o_15v_1^2o_17v_3 +$
$4cs^2o_2o_18o_6o_8v_1 - 4cs^2o_18o_8o_15o_5v_1o_17 + 4cs^2o_18o_6o_15o_5o_5o_17v_3 - 4cs^2o_2o_18o_6o_15o_5o_17v_3 + 2cs^2o_2o_18o_8o_15o_5o_17v_3 -$
$4cs^2o_8o_15o_5o_17v_3 - 2o_2o_2o_18o_8o_15o_5v_1v_3^2 - 2cs^2o_2o_18o_8o_15o_5v_1 - 4cs^2o_18o_6o_15o_17v_3 - 4o_18o_15o_5v_1^2o_17v_3 - 4cs^2o_2o_18o_15o_5o_17v_3 +$
$o_2o_18o_6o_15o_5v_1o_17v_3^2 + 4o_8o_15o_5v_1o_17v_3^2 + 2cs^2o_2o_18o_6o_8v_1o_17v_3 - 2cs^2o_2o_18o_6o_8o_15o_17v_3 -$
$2cs^2o_2o_18o_6o_8o_5v_1 + 4cs^2o_2o_18o_6o_15o_5v_3 + 4o_18o_6o_15v_1o_17v_3^2 - 4o_18o_8o_15o_5v_1o_17v_3^2 + 4cs^2o_2o_18o_15o_5o_5o_17v_3 - 4o_2o_18o_6o_15v_1o_17v_3^2 +$
$4o_2o_18o_15o_5v_1v_3^2 + 2o_2o_18o_8o_15o_5v_1o_17v_3^2 + 2o_2o_18o_6o_8v_1^2o_17v_3 - o_2o_18o_6o_8o_5v_1^2o_17v_3 + 4o_18o_6o_8v_1v_3^2 + 2cs^2o_2o_18o_6o_15o_5v_1 +$
$2cs^2o_2o_18o_6o_8o_17v_3 - 2cs^2o_18o_6o_8o_15v_1o_17 + 2cs^2o_2o_18o_6o_8o_15v_1o_17 - 2o_2o_8o_15o_5v_1o_17v_3^2 - 4o_2o_18o_6o_8o_15v_1v_3^2 -$
$2o_6o_15o_5v_1o_17v_3^2 + 2o_2o_18o_6o_8o_5v_1^2v_3 - 4cs^2o_2o_18o_15o_5v_3 + 4o_2o_18o_15o_5v_1^2o_17v_3 - 2o_2o_18o_6o_8o_15o_5v_1^2v_3 + 4cs^2o_18o_8o_15o_5o_17v_3 -$
$4cs^2o_18o_6o_15o_5v_1o_17 + 4cs^2o_2o_18o_6o_15o_5v_1o_17 + 2o_18o_6o_8o_15o_5v_1o_17v_3^2 - 2cs^2o_2o_18o_8o_15o_5o_17v_3 - 4o_2o_2o_18o_6o_15o_5v_1v_3^2 +$
$4cs^2o_8o_15o_5v_1o_17 - 4cs^2o_2o_18o_6o_15v_3 - 4cs^2o_2o_18o_6o_8o_15v_1 - 4o_18o_6o_15o_5v_1o_17v_3^2 + 4cs^2o_18o_6o_15v_1o_17 - 2o_2o_2o_18o_6o_8o_15v_1^2o_17v_3 +$
$4o_18o_8o_15o_5v_1^2o_17v_3 + 4cs^2o_2o_18o_15o_5v_1 - 4o_18o_6o_15v_1^2o_17v_3 + 2o_2o_18o_8o_15o_5v_1^2v_3 - cs^2o_2o_6o_8o_15o_5o_17v_3 + 2cs^2o_18o_6o_8o_15o_5v_1o_17 -$
$4o_8o_15o_5v_1^2o_17v_3 - o_2o_6o_8o_15o_5v_1^2o_17v_3 + 4cs^2o_2o_18o_6o_15o_17v_3 + 4o_2o_18o_6o_15v_1v_3^2 - 2cs^2o_2o_18o_6o_8o_15o_5v_3 + 2cs^2o_6o_8o_15o_5o_17v_3 +$
$2cs^2o_2o_8o_15o_5o_17v_3 + 4o_18o_15o_5v_1o_17v_3^2 + 4cs^2o_2o_18o_6o_8o_15v_3 + 4cs^2o_2o_18o_6o_15v_1 - cs^2o_2o_18o_6o_8o_5o_17v_3 + 4cs^2o_18o_15o_5v_1o_17 -$
$cs^2o_2o_18o_6o_8o_15o_5v_1o_17 - 2o_18o_6o_8o_15v_1o_17v_3^2 - 4o_2o_18o_6o_15o_5v_1^2o_17v_3 + o_2o_18o_6o_8o_15o_5v_1^2o_17v_3$

$C_{25} = 4o_18o_8o_15o_5v_1^2v_2^2o_17 - 4o_2o_18o_8o_15o_5v_1v_2^2v_3 - 4o_18o_6o_15v_1^2v_2^2o_17 + 8o_2o_18o_6o_15v_1v_2^2v_3 + 8cs^2o_2o_18o_6o_15v_1v_3 -$
$cs^2o_2o_6o_8o_15o_5v_2^2o_17 + 2cs^2o_2o_18o_6o_8o_5v_1^2 - 4cs^2o_2o_18o_6o_8v_1o_17v_3 + 8o_18o_15o_5v_1v_2^2o_17v_3 - 4cs^2o_18o_15o_5v_1^2o_17 - 4o_2o_18o_6o_15v_1^2v_2^2 +$
$8cs^2o_18o_15o_5v_1o_17v_3 - 8cs^2o_2o_18o_15o_5v_1o_17v_3 + cs^2o_2o_18o_6o_8o_15o_5v_1^2o_17 - o_2o_6o_8o_15o_5v_1^2v_2^2o_17 + 4cs^2o_2o_18o_6o_15v_2^2o_17 -$
$4o_8o_15o_5v_1^2v_2^2o_17 + 2cs^2o_6o_8o_15o_5v_2^2o_17 + 2cs^2o_2o_8o_15o_5v_2^2o_17 + 2cs^2o_2o_18o_8o_15o_5v_1^2 - cs^2o_2o_18o_6o_8o_5v_2^2o_17 - 2cs^2o_18o_6o_8o_15o_5v_1^2o_17 -$
$2o_2o_2o_18o_6o_8o_15v_1v_2^2o_17v_3 + 8o_2o_18o_6o_15o_5v_1v_2^2o_17v_3 - 4cs^2o_2o_18o_6o_8v_1^2 + 4cs^2o_2o_18o_6o_15o_5v_2^2 - 2cs^2o_2o_18o_6o_8o_15o_5v_1o_17v_3 -$

$$4o_2 0 o_1 8 o_6 o_1 5 o_5 v_1^2 v_2^2 o_1 7 - 4cs^2 o_2 0 o_1 8 o_6 o_8 o_5 v_1 v_3 + o_2 0 o_1 8 o_6 o_8 o_1 5 o_5 v_1^2 v_2^2 o_1 7 + 4cs^2 o_2 0 o_1 8 o_1 5 o_5 v_2^2 o_1 7 - 4o_1 8 o_6 o_8 o_1 5 v_1 v_2^2 o_1 7 v_3 +$$
$$4cs^2 o_1 8 o_6 o_8 o_1 5 o_5 v_1 o_1 7 v_3 + 2 o_2 0 o_1 8 o_6 o_8 o_1^2 v_2^2 o_1 7 - o_2 0 o_1 8 o_6 o_6 o_8 o_5 v_1^2 v_2^2 o_1 7 + 2cs^2 o_2 0 o_1 8 o_8 o_1 5 o_5 v_2^2 + 4cs^2 o_1 8 o_6 o_1 5 o_5 v_1^2 o_1 7 +$$
$$8 o_1 8 o_6 o_1 5 v_1 v_2^2 o_1 7 v_3 - 8 o_1 8 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 + 4 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1^2 v_2^2 - 8cs^2 o_1 8 o_8 o_1 5 o_5 v_1 o_1 7 v_3 + 2cs^2 o_2 0 o_1 8 o_6 o_8 v_2^2 o_1 7 -$$
$$4 o_2 0 o_1 8 o_6 o_8 v_1^2 v_2^2 - 4cs^2 o_8 o_1 5 o_5 v_1^2 o_1 7 - 4cs^2 o_2 0 o_1 8 o_6 o_1 5 o_5 v_2^2 o_1 7 - 4cs^2 o_2 0 o_1 8 o_6 o_8 v_2^2 + 8cs^2 o_2 0 o_1 8 o_1 5 o_5 v_1 v_3 - 4cs^2 o_1 8 o_6 o_1 5 v_1^2 o_1 7 +$$
$$8cs^2 o_2 0 o_1 8 o_6 o_8 v_1 v_3 + 4cs^2 o_2 0 o_1 8 o_6 o_1 5 o_5 v_1^2 - 4 o_2 0 o_1 8 o_1 5 o_5 v_1^2 v_2^2 + 4 o_2 0 o_1 8 o_1 5 o_5 v_1^2 v_2^2 o_1 7 + 2cs^2 o_2 0 o_1 8 o_6 o_8 o_5 v_2^2 - 4cs^2 o_2 0 o_1 8 o_8 o_1 5 o_5 v_1 v_3 +$$
$$2 o_2 0 o_6 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 + 2cs^2 o_1 8 o_6 o_8 o_5 v_1^2 o_1 7 + 8 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 + 4cs^2 o_1 8 o_8 o_1 5 o_5 v_2^2 o_1 7 + 4 o_2 0 o_1 8 o_6 o_1 5 o_5 v_1^2 v_2^2 +$$
$$4cs^2 o_2 0 o_1 8 o_8 o_1 5 o_5 v_1 o_1 7 v_3 - 2cs^2 o_2 0 o_1 8 o_8 o_1 5 o_5 v_2^2 o_1 7 - 2cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1^2 o_1 7 - 2 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1^2 v_2^2 o_1 7 + 4cs^2 o_2 0 o_1 8 o_1 5 o_5 v_1^2 o_1 7 +$$
$$2 o_1 8 o_6 o_8 o_1 5 v_1^2 v_2^2 o_1 7 - 8 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1 v_2^2 v_3 - 8cs^2 o_2 0 o_1 8 o_6 o_1 5 o_5 v_1 v_3 + 2cs^2 o_2 0 o_1 8 o_6 o_8 v_1^2 o_1 7 - 8cs^2 o_1 8 o_6 o_1 5 o_5 v_1 o_1 7 v_3 +$$
$$2 o_2 0 o_1 8 o_8 o_1 5 o_5 v_1^2 v_2^2 + 4cs^2 o_1 8 o_6 o_1 5 o_5 v_2^2 o_1 7 - 4cs^2 o_2 0 o_1 8 o_6 o_1 5 o_5 v_2^2 o_1 7 - 4 o_2 0 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 - 4cs^2 o_8 o_1 5 o_5 v_2^2 o_1 7 - 4cs^2 o_2 0 o_1 8 o_6 o_1 5 v_1^2 -$$
$$4 o_6 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 + 2cs^2 o_2 0 o_6 o_8 o_1 5 o_5 v_1 o_1 7 v_3 - 2cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 o_5 v_2^2 - 4cs^2 o_2 0 o_8 o_1 5 o_5 v_2^2 o_1 7 - 4cs^2 o_2 0 o_8 o_1 5 o_5 v_1 o_1 7 v_3 -$$
$$4 o_1 8 o_1 5 o_5 v_1^2 v_2^2 o_1 7 - 4cs^2 o_6 o_8 o_1 5 o_5 v_1 o_1 7 v_3 - 8cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1 v_3 + 8 o_2 0 o_1 8 o_1 5 o_5 v_1 v_2^2 o_1 7 + 4cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 v_2^2 +$$
$$4cs^2 o_1 8 o_8 o_1 5 o_5 v_2^2 o_1 7 + 8cs^2 o_1 8 o_6 o_1 5 v_1 o_1 7 v_3 + 2cs^2 o_1 8 o_6 o_8 o_5 v_2^2 o_1 7 - 4 o_2 0 o_1 8 o_6 o_8 o_5 v_1 v_2^2 v_3 - 2cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 v_2^2 o_1 7 -$$
$$4cs^2 o_2 0 o_1 8 o_1 5 o_5 v_1^2 - 8cs^2 o_2 0 o_1 8 o_6 o_1 5 v_1 o_1 7 v_3 - 2cs^2 o_2 0 o_1 8 o_8 o_1 5 o_5 v_1^2 o_1 7 - 8 o_2 0 o_1 8 o_6 o_1 5 v_1 v_2^2 o_1 7 v_3 + 8cs^2 o_2 0 o_1 8 o_6 o_1 5 o_5 v_1 o_1 7 v_3 +$$
$$4 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1 v_2^2 o_1 7 v_3 + 4 o_2 0 o_1 8 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 + 8 o_2 0 o_1 8 o_6 o_8 v_1 v_2^2 v_3 + 8cs^2 o_8 o_1 5 o_5 v_1 o_1 7 v_3 + 2cs^2 o_2 0 o_1 8 o_6 o_8 o_5 v_1 o_1 7 v_3 -$$
$$cs^2 o_2 0 o_6 o_8 o_1 5 o_5 v_1^2 o_1 7 - 4 o_2 0 o_1 8 o_6 o_8 v_1 v_2^2 o_1 7 v_3 + 4cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 o_5 v_1 v_3 + 4 o_1 8 o_6 o_1 5 o_5 v_1^2 v_2^2 o_1 7 - 8 o_2 0 o_1 8 o_6 o_1 5 o_5 v_1 v_2^2 v_3 +$$
$$4 o_2 0 o_1 8 o_6 o_8 o_1 5 o_5 v_1 v_2^2 v_3 - 8 o_1 8 o_6 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 + 4cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1^2 - 4cs^2 o_1 8 o_6 o_8 o_1 5 v_1 o_1 7 v_3 - 2 o_1 8 o_6 o_8 o_1 5 o_5 v_1^2 v_2^2 o_1 7 -$$
$$4cs^2 o_1 8 o_1 5 o_5 v_2^2 o_1 7 - 4cs^2 o_2 0 o_1 8 o_1 5 o_5 v_2^2 + 4 o_1 8 o_6 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 + 2 o_2 0 o_1 8 o_6 o_8 o_5 v_1^2 v_2^2 + 4cs^2 o_2 0 o_1 8 o_6 o_1 5 v_1^2 o_1 7 +$$
$$cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 o_5 v_2^2 o_1 7 + 2cs^2 o_2 0 o_8 o_1 5 o_5 v_1^2 o_1 7 + 2 o_2 0 o_1 8 o_6 o_8 o_5 v_1 v_2^2 o_1 7 v_3 + 2cs^2 o_6 o_8 o_1 5 o_5 v_1^2 o_1 7 - 2cs^2 o_1 8 o_6 o_8 o_1 5 o_5 v_2^2 o_1 7 +$$
$$2 o_6 o_8 o_1 5 o_5 v_1^2 v_2^2 o_1 7 - cs^2 o_2 0 o_1 8 o_6 o_8 o_5 v_1^2 o_1 7 - 2 o_2 0 o_1 8 o_6 o_8 o_1 5 o_5 v_1 v_2^2 + 2 o_2 0 o_8 o_1 5 o_5 v_1 v_2^2 o_1 7 - 8 o_2 0 o_1 8 o_1 5 o_5 v_1 v_2^2 o_1 7 v_3 +$$
$$4cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 v_1 o_1 7 v_3 - 2cs^2 o_2 0 o_1 8 o_6 o_8 o_1 5 o_5 v_1^2 - 2 o_2 0 o_1 8 o_8 o_1 5 o_5 v_1^2 v_2^2 o_1 7 - 4cs^2 o_2 0 o_1 8 o_6 o_1 5 v_2^2 + 4 o_2 0 o_1 8 o_6 o_1 5 v_1^2 v_2^2 o_1 7$$

$$C_{26} = 54 o_1 3 o_9 cs^2 o_1 8 o_6 o_2 2 o_1 1 - 12 o_1 3 o_9 o_1 8^2 o_2 2 o_1 1 + 36 o_9 cs^2 o_1 8^2 o_6^2 o_2 2 - 12 o_9 o_1 8^2 o_6^2 o_2 2 - 36 o_1 3 o_9 cs^2 o_1 8^2 o_6 o_1 1 + 6 o_1 3 o_1 8^2 o_6^2 o_2 2 v_3^2 -$$
$$12 o_1 3 o_9 o_1 8^2 o_6 o_1 1 v_3^2 + 36 cs^2 o_1 8^2 o_6^2 o_1 1 - 5 o_1 3 o_9 o_1 8^2 o_6^2 o_2 2 v_3^2 + 12 o_1 8^2 o_6^2 o_1 1 v_3^2 - 18 o_1 3 o_9 o_1 8^2 o_6 o_2 2 - 18 o_1 3 o_9 cs^2 o_1 8 o_6^2 o_1 1 +$$
$$6 o_1 3 o_1 8^2 o_6^2 o_1 1 - 12 o_1 3 o_9 o_1 8 o_2 2 o_1 1 v_3^2 + 18 o_1 3 o_9 cs^2 o_6^2 o_2 2 o_1 1 + 12 o_1 3 o_9 o_1 8^2 o_6 o_2 2 o_1 1 + 12 o_1 8^2 o_6^2 o_2 2 - 6 o_1 3 o_9 o_9 o_1 8 o_6^2 o_1 1 v_3^2 - 12 o_1 8^2 o_6^2 o_1 1 -$$
$$12 o_9 o_1 8^2 o_6^2 o_1 1 v_3^2 + 3 o_1 3 o_9 cs^2 o_1 8^2 o_6^2 o_2 2 o_1 1 + 12 o_1 3 o_9 o_1 8^2 o_6 o_1 1 + o_1 3 o_9 o_1 8^2 o_6^2 o_2 2 o_1 1 v_3^2 - 6 o_1 3 o_1 8^2 o_6^2 o_2 2 + 36 o_1 3 o_9 cs^2 o_1 8^2 o_2 2 o_1 1 -$$
$$6 o_1 3 o_9 o_6^2 o_2 2 o_1 1 + 3 o_1 3 o_9 o_1 8 o_6^2 o_2 2 o_1 1 - 3 o_1 3 o_9 o_1 8 o_6^2 o_2 2 o_1 1 v_3^2 - 36 cs^2 o_1 8^2 o_6^2 o_2 2 + 6 o_1 3 o_9 o_6^2 o_2 2 o_1 1 v_3^2 + 12 o_9 o_1 8^2 o_6^2 o_1 1 - 36 o_9 cs^2 o_1 8^2 o_6^2 o_1 1 +$$
$$6 o_1 3 o_9 o_1 8 o_6^2 o_1 1 + 54 o_1 3 o_9 cs^2 o_1 8^2 o_6 o_2 2 - 12 o_9 o_1 8^2 o_6 o_2 2 v_3^2 + 12 o_1 3 o_9 o_1 8 o_6 o_1 1 v_3^2 + 12 o_9 o_1 8^2 o_6 o_1 1 v_3^2 - 36 o_1 3 o_9 cs^2 o_1 8^2 o_2 2 -$$
$$36 o_1 3 o_9 cs^2 o_1 8 o_2 2 o_1 1 - 12 o_9 o_1 8^2 o_6 o_1 1 + 36 o_9 cs^2 o_1 8^2 o_6 o_1 1 - 12 o_1 3 o_9 o_1 8 o_6 o_1 1 - 15 o_1 3 o_9 cs^2 o_1 8^2 o_6^2 o_2 2 - 36 o_1 3 o_9 cs^2 o_1 8^2 o_6 o_2 2 o_1 1 +$$
$$18 o_1 3 cs^2 o_1 8^2 o_6^2 o_2 2 - 18 o_1 3 o_9 o_1 8 o_6 o_2 2 o_1 1 + 12 o_1 3 o_9 o_9 o_2 2 o_1 1 + 12 o_1 3 o_9 o_1 8^2 o_2 2 o_1 1 v_3^2 + 12 o_1 3 o_9 o_1 8^2 o_2 2 + 12 o_9 o_1 8^2 o_6^2 o_2 2 v_3^2 -$$
$$6 o_1 3 o_9 o_1 8^2 o_6^2 o_1 1 + 5 o_1 3 o_9 o_1 8^2 o_6^2 o_2 2 + 36 o_1 3 o_9 cs^2 o_1 8 o_6 o_1 1 - 12 o_1 3 o_9 o_1 8^2 o_6 o_2 2 o_1 1 v_3^2 + 12 o_1 3 o_9 o_1 8 o_2 2 o_1 1 - 9 o_1 3 o_9 cs^2 o_1 8 o_6^2 o_2 2 o_1 1 -$$
$$12 o_1 3 o_9 o_1 8^2 o_2 2 v_3^2 + 6 o_1 3 o_9 o_1 8^2 o_6^2 o_1 1 v_3^2 - 18 o_1 3 cs^2 o_1 8^2 o_6^2 o_1 1 - 12 o_1 8^2 o_6^2 o_2 2 v_3^2 - 36 o_9 cs^2 o_1 8^2 o_6 o_2 2 + 12 o_9 o_1 8^2 o_6 o_2 2 - 6 o_1 3 o_1 8^2 o_6^2 o_1 1 v_3^2 +$$
$$18 o_1 3 o_9 cs^2 o_1 8^2 o_6^2 o_1 1 + 18 o_1 3 o_9 o_1 8^2 o_6 o_2 2 v_3^2 - 12 o_1 3 o_9 o_6 o_2 2 o_1 1 v_3^2 + 18 o_1 3 o_9 o_1 8 o_6 o_2 2 o_1 1 v_3^2 - 36 o_1 3 o_9 cs^2 o_6 o_2 2 o_1 1 - o_1 3 o_9 o_1 8^2 o_6^2 o_2 2 o_1 1$$

$$C_{27} = -5 o_1 3 o_9 cs^2 o_1 8 o_6^3 o_2 2 - 6 o_1 3 o_9 cs^2 o_6^3 o_1 1 + 18 o_1 3 o_9 o_6^3 o_2 2 o_1 1 v_3^2 + 18 o_1 3 o_9 cs^2 o_1 8 o_6 o_2 2 o_1 1 + 36 o_1 8 o_6^3 o_1 1 v_3^2 - 15 o_1 3 o_9 o_1 8 o_6^3 o_2 2 v_3^2 -$$
$$18 o_1 3 o_9 o_1 8 o_6^2 o_2 2 - 36 o_9 o_1 8 o_6^2 o_2 2 v_3^2 - 12 o_1 3 o_9 cs^2 o_1 8 o_6^2 o_1 1 - 6 o_1 3 o_9 o_1 8 o_6^3 o_1 1 + 6 o_1 3 o_9 o_6^3 o_1 1 - 18 o_1 3 o_9 cs^2 o_6^2 o_2 2 o_1 1 + 6 o_1 3 cs^2 o_1 8 o_6^3 o_2 2 +$$
$$18 o_1 3 o_1 8 o_6^3 o_2 2 v_3^2 - 36 o_1 3 o_9 o_1 8 o_6^2 o_1 1 v_3^2 + 36 o_1 3 o_9 o_6^2 o_1 1 v_3^2 - 6 o_1 3 cs^2 o_1 8 o_6^3 o_1 1 + 5 o_1 3 o_9 o_1 8 o_6^3 o_2 2 + 12 o_1 3 o_9 cs^2 o_6^2 o_1 1 + 18 o_1 3 o_9 cs^2 o_1 8 o_6^2 o_2 2 +$$
$$18 o_1 3 o_9 o_6^2 o_2 2 o_1 1 + o_1 3 o_9 o_1 8 o_6^2 o_2 2 o_1 1 - 3 o_1 3 o_9 o_1 8 o_6^2 o_2 2 o_1 1 v_3^2 - 54 o_1 3 o_9 o_6^2 o_2 2 o_1 1 v_3^2 - 36 o_9 o_1 8 o_6^3 o_1 1 v_3^2 - 12 o_1 3 o_9 o_6^2 o_1 1 +$$
$$12 o_1 3 o_9 o_1 8 o_6^2 o_1 1 - 36 o_1 3 o_9 o_1 8 o_6 o_2 2 v_3^2 - o_1 3 o_9 cs^2 o_1 8 o_6^3 o_2 2 o_1 1 + 6 o_1 3 o_9 cs^2 o_1 8 o_6^3 o_1 1 + 12 cs^2 o_1 8 o_6^3 o_1 1 + 6 o_1 3 o_9 cs^2 o_6^3 o_2 2 o_1 1 -$$
$$12 o_1 3 o_9 cs^2 o_1 8 o_2 2 o_1 1 + 36 o_9 o_1 8 o_6^2 o_2 2 v_3^2 - 12 o_9 o_1 8 o_6^3 o_2 2 + 12 o_9 cs^2 o_1 8 o_6^3 o_2 2 + 12 o_1 8 o_6^3 o_2 2 - 12 o_1 3 o_9 o_6 o_2 2 o_1 1 + 6 o_1 3 o_1 8 o_6^3 o_1 1 +$$
$$54 o_1 3 o_9 o_1 8 o_6^2 o_2 2 v_3^2 + 12 o_9 cs^2 o_1 8 o_6^2 o_1 1 - 12 o_9 o_1 8 o_6^2 o_1 1 - 12 o_1 3 o_9 cs^2 o_1 8 o_6 o_2 2 + 12 o_9 o_1 8 o_6^2 o_2 2 - 12 o_9 cs^2 o_1 8 o_6^2 o_2 2 - 18 o_1 3 o_1 8 o_6^3 o_1 1 v_3^2 -$$
$$5 o_1 3 o_9 cs^2 o_1 8 o_6^2 o_2 2 o_1 1 - 6 o_1 3 o_1 8 o_6^3 o_2 2 - 6 o_1 3 o_9 o_6^2 o_2 2 o_1 1 - 12 o_1 8^3 o_6 o_1 1 + 36 o_9 o_1 8 o_6^2 o_1 1 v_3^2 - 12 o_9 cs^2 o_1 8 o_6^3 o_1 1 + 12 o_9 o_1 8 o_6^3 o_1 1 +$$
$$12 o_1 3 o_9 o_1 8 o_6 o_2 2 + 36 o_1 3 o_9 o_6 o_2 2 o_1 1 v_3^2 - 36 o_1 8 o_6^3 o_2 2 v_3^2 - 18 o_1 3 o_9 o_6^3 o_1 1 v_3^2 + 18 o_1 3 o_9 o_1 8 o_6^3 o_1 1 v_3^2 + 12 o_1 3 o_9 cs^2 o_6 o_2 2 o_1 1 - 12 cs^2 o_1 8 o_6^3 o_2 2$$

$$C_{28} = -48 cs^4 o_1 8^2 o_6 - 72 o_6^2 v_3^4 + 144 cs^2 o_1 8 o_6^2 v_3^4 + 30 o_1 8 o_6^3 v_3^4 + 3 o_1 8^2 o_6^3 v_3^4 + cs^2 o_1 8^2 o_6^4 + 108 cs^2 o_6^3 v_3^2 - 36 cs^2 o_1 8^2 o_6 v_3^2 - 8 cs^2 o_1 8^2 o_6^2 +$$
$$12 cs^2 o_1 8^2 o_6 - 12 o_1 8^2 o_6^2 v_3^4 - 72 o_1 8 o_6^2 v_3^2 + 36 o_6^3 v_3^4 - 72 cs^2 o_1 8 o_6^3 v_3^2 - 3 cs^4 o_1 8^2 o_6^3 + 24 cs^4 o_1 8^2 o_6^2 - 216 cs^2 o_6^2 v_3^2 + 72 o_1 8 o_6^3 v_3^4 - 36 o_6^3 v_3^4 +$$
$$6 cs^2 o_1 8^2 o_6^3 v_3^2 - 24 cs^4 o_1 8 o_6^2 + 24 cs^4 o_1 8^2 + 12 o_1 8^2 o_6^2 v_3^2 - 24 cs^2 o_1 8 o_6 + 6 cs^4 o_1 8 o_6^3 - 3 o_1 8^2 o_6^3 v_3^2 - 12 cs^2 o_1 8^2 o_6^2 v_3^2 + 24 cs^2 o_1 8 o_6^2 + 72 o_6^2 v_3^2 -$$
$$30 o_1 8 o_6^3 v_3^4 + 72 cs^2 o_1 8 o_6 v_3^2 + 24 cs^4 o_1 8 o_6 - 6 cs^2 o_1 8 o_6^3$$

2.4.4 Conservation of momentum: ρv_2

📎 attached text file: `output_d3q27_nse_clbm1_symbolic_pde_02.txt`

$$v_2 \frac{\partial \rho}{\partial t} + \rho \frac{\partial v_2}{\partial t} + \frac{v_1 v_2 \delta_l}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{\rho v_2 \delta_l}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{\rho v_1 \delta_l}{\delta_t} \frac{\partial v_2}{\partial x_1} + \left(cs^2 + v_2^2\right) \frac{\delta_l}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{2 \rho v_2 \delta_l}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{v_2 \delta_l v_3}{\delta_t} \frac{\partial \rho}{\partial x_3} + \frac{\rho \delta_l v_3}{\delta_t} \frac{\partial v_2}{\partial x_3} +$$
$$\frac{\rho v_2 \delta_l}{\delta_t} \frac{\partial v_3}{\partial x_3} + (-2 + o_5) \frac{cs^2 \delta_l^2}{2 \delta_t o_5} \frac{\partial \rho}{\partial x_1} \frac{\partial v_1}{\partial x_1} + (-2 + o_5) \frac{cs^2 \delta_l^2}{2 \delta_t o_5} \frac{\partial \rho}{\partial x_1} \frac{\partial v_2}{\partial x_2} +$$
$$(-2 + 4cs^2 - 2cs^2 o_1 0 + o_1 0 - 3 o_1 0 v_2^2 + 6 v_2^2) \frac{\delta_l^2}{\delta_t o_1 0} \frac{\partial \rho}{\partial x_2} \frac{\partial v_2}{\partial x_2} + (2 - o_1 0) \frac{3 \rho v_2 \delta_l^2}{\delta_t o_1 0} \left(\frac{\partial v_2}{\partial x_2}\right)^2 + (-2 + o_7) \frac{cs^2 \delta_l^2}{2 \delta_t o_7} \frac{\partial \rho}{\partial x_3} \frac{\partial v_3}{\partial x_2} +$$
$$(-2 + o_7) \frac{cs^2 \delta_l^2}{2 \delta_t o_7} \frac{\partial \rho}{\partial x_3} \frac{\partial v_2}{\partial x_3} + (-2 + o_5) \frac{cs^2 \rho \delta_l^2}{2 \delta_t o_5} \frac{\partial^2 v_2}{\partial x_1^2} + (-2 + o_5) \frac{cs^2 \rho \delta_l^2}{2 \delta_t o_5} \frac{\partial^2 v_1}{\partial x_1 \partial x_2} +$$
$$(-2 + 6cs^2 - 3cs^2 o_1 0 + o_1 0 - o_1 0 v_2^2 + 2 v_2^2) \frac{v_2 \delta_l^2}{2 \delta_t o_1 0} \frac{\partial^2 \rho}{\partial x_2^2} + (-2 + 2cs^2 - cs^2 o_1 0 + o_1 0 - 3 o_1 0 v_2^2 + 6 v_2^2) \frac{\rho \delta_l^2}{2 \delta_t o_1 0} \frac{\partial^2 v_2}{\partial x_2^2} +$$

$$(-2+o_7)\frac{cs^2\rho\delta_l^2}{2\delta_t o_7}\frac{\partial^2 v_3}{\partial x_2\partial x_3} + (-2+o_7)\frac{cs^2\rho\delta_l^2}{2\delta_t o_7}\frac{\partial^2 v_2}{\partial x_3^2} + (-1+3cs^2+v_1^2)\frac{v_1 v_2\delta_l^3}{12\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + (-1+cs^2+3v_1^2)\frac{\rho v_2\delta_l^3}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} +$$

$$C_1\frac{\rho v_1\delta_l^3}{6o_1 2\delta_t o_5}\frac{\partial^3 v_2}{\partial x_1^3} + (-12-o_5^2+12o_5)\frac{cs^4\delta_l^3}{6\delta_t o_5^2}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} + C_2\frac{\rho v_2\delta_l^3}{12\delta_t o_1 0^2 o_1 5 o_5}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C_3\frac{\delta_l^3}{12\delta_t o_1 0^2}\frac{\partial^3\rho}{\partial x_2^3} +$$

$$(-24+36cs^2-36cs^2o_1 0+5cs^2o_1 0^2+11o_1 0^2v_2^2-4o_1 0^2+24o_1 0-60o_1 0v_2^2+60v_2^2)\frac{\rho v_2\delta_l^3}{6\delta_t o_1 0^2}\frac{\partial^3 v_2}{\partial x_2^3} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3}$$

$$+ C_4\frac{\rho v_2\delta_l^3}{12\delta_t o_7 o_1 6 o_1 0^2}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + (-12+12o_7-o_7^2)\frac{cs^4\delta_l^3}{6\delta_t o_7^2}\frac{\partial^3\rho}{\partial x_2\partial x_3^2} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} +$$

$$(-1+3cs^2+v_3^2)\frac{v_2\delta_l^3 v_3}{12\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + C_5\frac{\rho\delta_l^3 v_3}{6\delta_t o_1 9 o_7}\frac{\partial^3 v_2}{\partial x_3^3} + (-1+cs^2+3v_3^2)\frac{\rho v_2\delta_l^3}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$(cs^2 o_9-2cs^2+6v_1^4-3o_9v_1^4+3o_9v_1^2-6v_1^2-cs^4o_9+24cs^2v_1^2-12cs^2o_9v_1^2+2cs^4)\frac{v_2\delta_l^4}{24\delta_t o_9}\frac{\partial^4\rho}{\partial x_1^4} +$$

$$(-4-3cs^2o_9+6cs^2-5o_9v_1^2+10v_1^2+2o_9)\frac{\rho v_1 v_2\delta_l^4}{12\delta_t o_9}\frac{\partial^4 v_1}{\partial x_1^4} + C_6\frac{\rho\delta_l^4}{24o_1 2^2\delta_t o_5^3}\frac{\partial^4 v_2}{\partial x_1^4} + C_7\frac{cs^2 v_1\delta_l^4}{12o_2 1 o_1 2^2\delta_t o_1 0 o_9 o_1 5 o_5^2}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} +$$

$$C_8\frac{cs^2\rho\delta_l^4}{12o_2 1 o_1 2\delta_t o_1 0 o_9 o_1 5 o_5^3}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} +$$

$$(3cs^2 o_1 2-o_1 2o_9-9cs^2 o_9-o_1 2+3cs^2 o_1 2o_9-3o_9 v_1^2+o_1 2v_1^2+3o_9+o_1 2o_9 v_1^2)\frac{\rho v_1 v_2\delta_l^4}{12o_1 2\delta_t o_9}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} +$$

$$C_9\frac{cs^2 v_2\delta_l^4}{12o_2 1 o_1 2\delta_t o_1 0^3 o_1 5^2 o_5^2}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} + C_{10}\frac{cs^2\rho\delta_l^4}{12o_2 1 o_1 2\delta_t o_1 0^2 o_1 5 o_5^3}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} + C_{11}\frac{\rho\delta_l^4}{12\delta_t o_1 0^3 o_1 5^2 o_5^3}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} + C_{12}\frac{v_2\delta_l^4}{12\delta_t o_1 0^3}\frac{\partial^4\rho}{\partial x_2^4} +$$

$$C_{13}\frac{\rho\delta_l^4}{12\delta_t o_1 0^3}\frac{\partial^4 v_2}{\partial x_2^4} +$$

$$(-9cs^2 o_9+3cs^2 o_1 3o_9+o_1 3o_9 v_1^2-o_1 3o_9-o_1 3-3o_9 v_1^2+3cs^2 o_1 3+3o_9+o_1 3v_1^2)\frac{\rho v_1 v_2\delta_l^4}{12\delta_t o_1 3o_9}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$$

$$C_{14}\frac{cs^4\rho\delta_l^4}{12o_8 o_1 2\delta_t o_2^2 o_6 o_1 7o_1 6o_1 0o_1 4o_1 5o_5^3}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} + C_{15}\frac{\rho\delta_l^4}{12\delta_t o_7^3 o_1 6^2 o_1 0^3}\frac{\partial^4 v_3}{\partial x_3^2\partial x_3} + C_{16}\frac{\delta_l^4}{12o_8 o_1 2\delta_t o_1 9o_7 o_6 o_1 4o_2 0o_5}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} +$$

$$C_{17}\frac{\rho\delta_l^4}{4o_8 o_1 2\delta_t o_1 9o_7 o_1 4o_2 0o_5}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} + C_{18}\frac{\rho\delta_l^4}{4o_8 o_1 2\delta_t o_1 9o_7^2 o_1 4o_2 0o_5}\frac{\partial^4 v_2}{\partial x_1^2\partial x_3^2} + C_{19}\frac{\rho\delta_l^4 v_3}{2o_8 o_1 2\delta_t o_1 9o_7 o_1 4o_2 0o_5}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} +$$

$$C_{20}\frac{\delta_l^4}{2o_8\delta_t o_1 9o_7 o_1 7o_1 6o_1 0o_2 0o_2 3o_1 5o_5}\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2} + C_{21}\frac{\delta_l^4}{12o_8\delta_t o_1 9o_7^3 o_6 o_1 7o_1 6o_1 0o_2 0o_2 3o_1 5o_5^2}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C_{22}\frac{\rho v_2\delta_l^4}{o_8\delta_t o_1 9o_7 o_1 7o_1 6o_1 0o_2 0o_2 3o_1 5o_5}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} + C_{23}\frac{\rho\delta_l^4}{2o_8\delta_t o_1 9o_7 o_1 7o_1 6o_1 0o_2 0o_2 3o_1 5o_5}\frac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C_{24}\frac{cs^2 v_2\delta_l^4}{12\delta_t o_1 9o_7^2 o_1 6^2 o_1 0^3 o_2 3}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} + C_{25}\frac{cs^2\rho\delta_l^4}{12\delta_t o_1 9o_7^3 o_1 6o_1 0o_1 0^2 o_2 3}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} +$$

$$(-o_1 8o_1 1-o_1 8+3cs^2 o_1 8-3o_1 1v_3^2-9cs^2 o_1 1+3cs^2 o_1 8o_1 1+3o_1 1+o_1 8v_3^2+o_1 8o_1 1v_3^2)\frac{\rho v_2\delta_l^4 v_3}{12o_1 8\delta_t o_1 1}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} +$$

$$C_{26}\frac{cs^2\delta_l^4 v_3}{12\delta_t o_1 9^2 o_7^2 o_1 1o_1 6o_1 0o_2 3}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} +$$

$$(o_1 9v_3^2-3o_1 1v_3^2-o_1 9-9cs^2 o_1 1+3o_1 1+o_1 9o_1 1v_3^2-o_1 9o_1 1+3cs^2 o_1 9o_1 1+3cs^2 o_1 9)\frac{\rho v_2\delta_l^4 v_3}{12\delta_t o_1 9o_1 1}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} +$$

$$C_{27}\frac{cs^2\rho\delta_l^4}{12\delta_t o_1 9o_7^3 o_1 1o_1 6o_1 0o_2 3}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} +$$

$$(6v_3^4-2cs^2+3o_1 1v_3^2-12cs^2 o_1 1v_3^2+cs^2 o_1 1-cs^4 o_1 1-6v_3^2+24cs^2 v_3^2+2cs^4-3o_1 1v_3^4)\frac{v_2\delta_l^4}{24\delta_t o_1 1}\frac{\partial^4\rho}{\partial x_3^4} +$$

$$C_{28}\frac{\rho\delta_l^4}{24\delta_t o_1 9^2 o_7^3}\frac{\partial^4 v_2}{\partial x_3^4} + (-4+6cs^2-5o_1 1v_3^2-3cs^2 o_1 1+2o_1 1+10v_3^2)\frac{\rho v_2\delta_l^4 v_3}{12\delta_t o_1 1}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 6+9cs^2 o_1 2-18cs^2-3o_1 2-6v_1^2+o_1 2o_5+9cs^2 o_5-o_1 2v_1^2 o_5+3o_1 2v_1^2-3cs^2 o_1 2o_5+3v_1^2 o_5-3o_5$

$C_2 = -12o_1 0^2 o_5-11cs^2 o_1 0^2 o_1 5o_5-6o_1 0^2 o_1 5+6o_1 0^2 v_2^2 o_1 5-36cs^2 o_1 0^2+36cs^2 o_1 0^2 o_5-3o_1 0^2 v_2^2 o_1 5o_5-12o_1 0^2 v_2^2+6o_1 0o_1 5o_5+12o_1 0^2 v_2^2 o_5+12o_1 0^2+18cs^2 o_1 0^2 o_1 5+36cs^2 o_1 5o_5+3o_1 0^2 o_1 5o_5-12o_1 0v_2^2 o_5-36cs^2 o_1 0o_5-6o_1 0v_2^2 o_1 5o_5+12v_2^2 o_1 5o_5-12o_1 5o_5-18cs^2 o_1 0o_1 5o_5+12o_1 0o_5$

$C_3 = 24cs^2 o_1 0^2 v_2^2+36v_2^4-12cs^2+12cs^2 o_1 0-cs^2 o_1 0^2-7o_1 0^2 v_2^2-36o_1 0v_2^4+7o_1 0^2 v_2^4-12cs^4 o_1 0+36o_1 0v_2^2+144cs^2 v_2^2+cs^4 o_1 0^2-144cs^2 o_1 0v_2^2-36v_2^2+12cs^4$

$C_4 = -18cs^2 o_7 o_1 6o_1 0-36cs^2 o_1 0^2+12o_7 o_1 0^2 v_2^2-12o_1 0^2 v_2^2-11cs^2 o_7 o_1 6o_1 0^2+12o_7 o_1 6v_2^2+12o_1 0^2-3o_7 o_1 6o_1 0^2 v_2^2+6o_1 6o_1 0^2 v_2^2+6o_7 o_1 6o_1 0-6o_7 o_1 6o_1 0v_2^2+12o_7 o_1 0+36cs^2 o_7 o_1 0^2+36cs^2 o_7 o_1 6-12o_7 o_1 0v_2^2+18cs^2 o_1 6o_1 0^2-36cs^2 o_7 o_1 0-12o_7 o_1 0^2-6o_1 6o_1 0^2+3o_7 o_1 6o_1 0^2-12o_7 o_1 6$

$C_5 = 6+3o_1 9v_3^2-18cs^2+o_1 9o_7+3o_7 v_3^2-3o_1 9-3o_7-3cs^2 o_1 9o_7-6v_3^2+9cs^2 o_7+9cs^2 o_1 9-o_1 9o_7 v_3^2$

$C_6 = 24cs^4 o_1 2^2 o_5^2+12o_1 2^2 v_1^2 o_5^2+36v_1^4 o_5^3-3o_1 2^2 v_1^2 o_5^3-3cs^4 o_1 2^2 o_5^2+72cs^2 o_1 2v_1^2 o_5-72v_1^4 o_5^2+12cs^2 o_1 2^2 o_5-30o_1 2v_1^4 o_5^3-8cs^2 o_1 2^2 o_5^2+144cs^2 o_1 2v_1^2 o_5^2+72o_1 2v_1^4 o_5^2+cs^2 o_1 2^2 o_5^3-72cs^2 o_1 2v_1^2 o_5^3-48cs^4 o_1 2^2 o_5+3o_1 2^2 v_1^4 o_5^3-6cs^2 o_1 2o_5^3-12cs^2 o_1 2^2 v_1^2 o_5^3+72v_1^2 o_5^3+24cs^4 o_1 2o_5+24cs^2 o_1 2o_5^2-12o_1 2^2 v_1^4 o_5^3+6cs^2 o_1 2^2 v_1^2 o_5^3-36v_1^4 o_5^3+6cs^4 o_1 2o_5^3-72o_1 2v_1^2 o_5^2+24cs^4 o_1 2^2-24cs^2 o_1 2o_5-216cs^2 v_1^4 o_5^2-36cs^2 o_1 2^2 v_1^2 o_5+30o_1 2v_1^2 o_5^3-24cs^4 o_1 2o_5^2+108cs^2 v_1^2 o_5^3$

$$C_7 = -12o_21o_12^2o_10o_9o_15 + 54cs^2o_21o_12o_10o_9o_15o_5 + 12o_21o_12^2o_5^2 + 6o_21o_10o_9v_1^2o_15o_5^2 - 12o_21o_12^2o_10o_5^2 - 12o_12^2o_10o_9o_5 +$$
$$12o_21o_12^2o_10v_1^2o_5^2 - 12o_21o_12^2v_1^2o_5^2 + 5o_21o_12^2o_10o_15o_5^2 - 6o_21o_12^2o_15o_5^2 + 54cs^2o_21o_12^2o_10o_15o_5 - 3o_21o_12o_10o_9v_1^2o_15o_5^2 +$$
$$18cs^2o_21o_12^2o_10v_1^2o_15o_5^2 - 5o_21o_12^2o_10v_1^2o_15o_5^2 - 6o_12^2o_9v_1^2o_15o_5^2 + 36cs^2o_12^2o_10o_9o_5 + 6o_21o_12^2v_1^2o_15o_5^2 - 12o_21o_12^2o_10o_9v_1^2o_15o_5 +$$
$$36cs^2o_21o_12^2o_10o_5^2 - 36cs^2o_21o_12^2o_10o_9o_15o_5 + o_21o_12^2o_10o_9v_1^2o_15o_5^2 - 12o_21o_12^2o_10v_1^2o_15 - 36cs^2o_21o_12^2o_10o_5 +$$
$$3cs^2o_21o_12^2o_10o_9o_15o_5^2 - 12o_12^2o_9o_5^2 + 18o_21o_12o_10o_9v_1^2o_15o_5 + 12o_21o_12^2o_10o_15 + 18o_21o_12^2o_10v_1^2o_15o_5 - 36cs^2o_12^2o_10o_9o_5^2 -$$
$$36cs^2o_21o_12^2o_10o_15 - 12o_21o_12^2o_10v_1^2o_5 + 12o_12^2o_10o_9o_5^2 - 15cs^2o_21o_12^2o_10o_15o_5^2 - 18o_21o_12^2o_10o_15o_5 + 36cs^2o_21o_12^2o_10o_9o_15 -$$
$$9cs^2o_21o_12o_10o_9o_15o_5^2 + 12o_21o_12^2o_10o_5 - 12o_21o_10o_9v_1^2o_15o_5 + 6o_12^2o_10o_9v_1^2o_15o_5^2 - 36cs^2o_21o_10o_9o_15o_5 - 12o_12o_10o_9o_15o_5 -$$
$$6o_21o_10o_9o_15o_5^2 - 18cs^2o_21o_12o_10o_9o_15o_5^2 - 36cs^2o_21o_12^2o_5^2 + 12o_12^2o_9v_1^2o_5^2 + 12o_21o_12o_10o_9o_15 + 3o_21o_12o_10o_9o_15o_5^2 +$$
$$12o_12o_10o_9v_1^2o_15o_5 + 6o_12^2o_9o_10o_5^2 - 18cs^2o_12^2o_9o_10o_5^2 - o_21o_12^2o_10o_9o_15o_5^2 + 12o_12^2o_10o_9v_1^2o_5 + 18cs^2o_12^2o_10o_9o_15o_5^2 +$$
$$12o_12^2o_10o_9o_15o_5 - 12o_12^2o_10o_9v_1^2o_5^2 - 12o_21o_12o_10o_9v_1^2o_15 - 6o_12^2o_10o_9o_15o_5^2 - 36cs^2o_12^2o_10o_9o_15o_5 + 36cs^2o_12^2o_9o_5^2 +$$
$$12o_21o_12^2o_10o_9o_15o_5 - 18o_21o_12o_10o_9o_15o_5 - 36cs^2o_21o_12o_10o_9o_15 - 6o_12o_10o_9v_1^2o_15o_5^2 + 12o_21o_12^2o_10o_9v_1^2o_15 -$$
$$12o_12^2o_10o_9v_1^2o_15o_5 + 36cs^2o_12o_10o_9o_15o_5 + 12o_21o_10o_9o_15o_5 + 6o_12o_10o_9o_15o_5^2 + 18cs^2o_21o_10o_9o_15o_5^2$$

$$C_8 = 18cs^2o_21o_12o_10o_9o_15o_5 - 54o_21o_10o_9v_1^2o_15o_5^2 - 6cs^2o_12o_9o_15o_5^3 + 54o_21o_12o_10v_1^2o_15o_5^2 + 36o_12o_9v_1^2o_5^3 + 18o_21o_10o_9v_1^2o_15o_5^3 -$$
$$3o_21o_12o_10o_9v_1^2o_15o_5^2 + 6o_12o_9o_15o_5^3 + 12cs^2o_12o_9o_5^3 - 18o_12o_9v_1^2o_15o_5^3 - 15o_21o_12o_10v_1^2o_15o_5^3 - 18o_10o_9v_1^2o_15o_5^3 - cs^2o_21o_12o_10o_9o_15o_5^3 -$$
$$12cs^2o_21o_12o_5^3 - 36o_21o_12o_10v_1^2o_15o_5 + 36o_10o_9v_1^2o_15o_5^2 - 5cs^2o_21o_12o_10o_9o_15o_5^2 + 36o_21o_10o_9v_1^2o_15o_5 - 18o_21o_12o_10o_15o_5^2 +$$
$$12cs^2o_21o_10o_9o_15o_5^2 - 12cs^2o_21o_12o_10o_15o_5 + 12cs^2o_10o_9o_15o_5 - 36o_21o_12o_10v_1^2o_5^2 + 18o_21o_10o_9o_15o_5^2 - 12cs^2o_12o_10o_9o_15o_5^2 +$$
$$6o_10o_9o_15o_5^3 + 18o_21o_12v_1^2o_15o_5^2 + o_21o_12o_10o_9o_15o_5^2 + 36o_21o_10o_9v_1^2o_5^3 + 6cs^2o_21o_10o_9o_5^3 - 6o_21o_10o_9o_15o_5^3 - 6cs^2o_10o_9o_15o_5^3 +$$
$$5o_21o_12o_10o_15o_5^3 - 12o_12o_9o_5^3 - 12o_10o_9o_15o_5^2 + 18o_12o_10o_9v_1^2o_15o_5^3 + 12o_21o_12o_10o_5^2 + 12o_21o_12o_5^3 + 12cs^2o_12o_10o_9o_5^3 +$$
$$6cs^2o_21o_12o_15o_5^3 + 6cs^2o_21o_10o_9o_15o_5^3 - 6o_12o_10o_9o_15o_5^3 + 12o_12o_10o_9o_5^3 + 12cs^2o_21o_12o_10o_5^3 - 5cs^2o_21o_12o_10o_15o_5^3 - 36o_12o_10o_9v_1^2o_5^3 -$$
$$12cs^2o_21o_12o_10o_9o_15 - 12cs^2o_12o_10o_9o_5^3 - 12o_21o_12o_10o_5^3 - 36o_12o_10o_9v_1^2o_15o_5^3 + 18cs^2o_21o_12o_10o_15o_5^3 + 36o_12o_10o_9v_1^2o_5^3 - 36o_12o_12v_1^2o_5^3 +$$
$$12o_21o_12o_10o_15o_5 - 12cs^2o_21o_12o_10o_5^3 - 12o_21o_10o_9o_15o_5 - 12o_12o_10o_9o_5^3 + 12o_12o_10o_9o_15o_5 - 18cs^2o_21o_10o_9o_15o_5^2 - 6o_21o_12o_15o_5^3$$

$$C_9 = 12o_21o_12o_10^2o_15^2 - 12o_12o_10^3v_2o_15o_5^2 + 36cs^2o_21o_12o_15^2o_5^2 + 18o_21o_12o_10^2v_2o_15o_5^2 + 12o_21o_12o_10^3o_5 + 18cs^2o_12o_10^3o_15^2o_5^2 -$$
$$36cs^2o_21o_12o_10^3o_15 - 36cs^2o_21o_12o_10o_15^2o_5^2 + 18o_21o_12o_10^3v_2o_15o_5 - 18cs^2o_10^3o_15^2o_5^2 + 12o_21o_12o_10^3v_2o_15^2 - o_21o_12o_10^3o_15^2o_5^2 -$$
$$40cs^2o_21o_12o_10^3o_15^2o_5 + 18cs^2o_21o_10^2o_15^2o_5^2 - 36cs^2o_21o_12o_10^2o_5^2 - 6o_21o_10^2o_15^2o_5^2 + 12o_21o_12o_10^2o_5^2 - 6o_21o_10^3o_15^2o_5^2 +$$
$$12o_21o_12o_10^3o_15 + 12o_21o_12o_10^3v_2o_5^2 - 12o_21o_12o_15^2o_5^2 - 36cs^2o_21o_12o_10^3o_5 + 54cs^2o_21o_12o_10^2o_15o_5^2 - 36cs^2o_21o_12o_10^2o_15^2 -$$
$$12o_21o_12o_10^3v_2o_5 + 36cs^2o_21o_2o_10^2o_15o_5^2 + 36cs^2o_21o_12o_10^3o_5 - 18o_21o_12o_10^2o_15o_5^2 + 12o_21o_10o_10^2o_15^2o_5 - 12o_21o_12o_10^3o_15^2 +$$
$$12o_12o_10^3o_15^2o_5 + 36cs^2o_21o_12o_10^3o_15^2 - 6o_21o_12o_10^3v_2o_15o_5^2 - 36cs^2o_12o_10^3o_15^2o_5 + 12o_21o_12o_10o_15^2o_5^2 + 36cs^2o_10^3o_15^2o_5 -$$
$$12o_21o_12o_10^3v_2o_15 + 12o_12o_10^2v_2o_15o_5^2 + 5cs^2o_21o_12o_10^3o_15^2o_5^2 + 12o_21o_12o_10^3o_15^2o_5 - 36cs^2o_21o_10^2o_15^2o_5 - 12o_21o_12o_10o_10v_2o_15^2o_5^2 +$$
$$12o_12o_10^3v_2o_15o_5 - 12o_12o_10^2o_15o_5^2 - 12o_21o_12o_10^3o_5 + 12o_21o_12o_10o_15o_5^2 + o_21o_12o_10^3v_2o_15^2o_5^2 + 36cs^2o_12o_10^3o_15o_5 -$$
$$12o_21o_12o_10^2v_2o_5^2 + 6o_10^3o_15^2o_5^2 - 18o_21o_12o_10^3o_15o_5 - 12o_12o_10^2v_2o_15o_5 - 6o_12o_10^2v_2o_15^2o_5^2 - 18cs^2o_21o_12o_10^3o_15o_5^2 -$$
$$12o_12o_10^3v_2o_15^2o_5 - 12o_21o_12o_10o_10v_2o_15o_5^2 + 18o_21o_12o_10^2v_2o_15o_5 + 6o_12o_10^3o_15^2o_5 - 6o_10^3v_2o_15^2o_5^2 - 12o_21o_12o_10o_15^2o_5^2 -$$
$$18cs^2o_21o_12o_10^2o_15^2o_5^2 + 54cs^2o_21o_12o_10o_10^2o_15^2o_5 + 2o_21o_12o_10o_10^2o_15^2o_5^2 - 12o_21o_12o_10^3o_15o_5 + 12o_21o_12o_10o_15o_5^2 + 12o_10o_10v_2o_15^2o_5 -$$
$$18o_21o_12o_10o_10^2o_15o_5 - 6cs^2o_21o_12o_10o_10^2o_15^2o_5^2 + 12o_21o_12v_2o_15^2o_5^2 + 6o_12o_10^3v_2o_15^2o_5^2 - 2o_21o_12o_10^2v_2o_15^2o_5^2 - 36cs^2o_12o_10^3o_15o_5^2 -$$
$$12o_21o_12o_10^3v_2o_15^2o_5 - 36cs^2o_21o_12o_10o_10o_5o_5^2 - 12o_10^3o_15^2o_5 + 54cs^2o_21o_12o_10^3o_15o_5 + 6o_21o_12o_10^3o_15o_5^2 + 6o_21o_10o_10^2v_2o_15^2o_5^2$$

$$C_{10} = -18o_10^2v_2^2o_15o_5^3 - 12o_21o_12o_10^2o_5^3 + 12o_21o_10o_10o_15o_5^2 + 12o_12o_10^2o_5^3 + 18o_21o_12v_2^2o_15o_5^3 - cs^2o_21o_12o_10^2o_15o_5^3 + 6cs^2o_21o_10o_10o_15o_5^3 -$$
$$24cs^2o_21o_12o_10^2o_5^2 - 6o_21o_10o_10o_5o_5^3 + 24o_21o_12o_10^2o_5^2 + 36o_10^2v_2^2o_15o_5^2 + 12cs^2o_21o_12o_10^2o_5^3 - 12cs^2o_10o_10o_5o_5^2 -$$
$$4cs^2o_21o_12o_10^2o_15o_5^2 - 36o_21o_12o_10^2v_2^2o_15o_5^2 - 12cs^2o_21o_12o_10^2o_15o_5^3 + 18o_12o_10^2o_15o_5^2 + 12cs^2o_10^2o_15o_5^2 -$$
$$12cs^2o_21o_12o_10^2o_15 + 18cs^2o_21o_12o_10^2o_15o_5 + 36o_12o_10o_10v_2^2 + 36o_10o_10v_2^2o_5^3 - 12o_21o_12o_10^2o_5 - 6o_12o_10^2o_15o_5^3 -$$
$$36o_21o_10o_10v_2^2o_5^3 - 36o_10^2v_2^2o_15o_5^2 - 6cs^2o_10^2o_15o_5^3 + 12cs^2o_21o_10o_10^3 + 12cs^2o_21o_12o_10^2o_5 + 6cs^2o_21o_10^2o_15o_5^3 + 12o_12o_10^2o_15o_5^2 -$$
$$36o_21o_10o_10v_2^2o_15o_5^2 - 24o_21o_12o_10o_10o_5o_5^2 - 12cs^2o_21o_12o_10o_10o_5o_5 - 72o_21o_12o_10^2v_2^2o_5^2 - 12cs^2o_21o_10^2o_5^3 + 72o_21o_10o_10v_2^2o_15o_5^2 -$$
$$36o_12o_10^2v_2^2o_5^3 + 6o_12o_10o_10o_15o_5^3 + 12cs^2o_21o_12o_10^2o_5^2 - 6cs^2o_21o_10o_10o_15o_5^3 + 6o_21o_10o_10o_15o_5^3 + 36o_12o_10o_10^2v_2^2o_5^3 + 18o_21o_10o_10v_2^2o_15o_5^3 +$$
$$36o_12o_10^2v_2^2o_5^3 - 18o_21o_12o_10o_10v_2^2o_15o_5^3 - 12o_21o_12o_10o_10o_5^2 + 6cs^2o_21o_12o_15o_5^3 + 12o_21o_12o_10o_15o_5^2 - 12cs^2o_21o_12o_10o_10^3 - 6cs^2o_21o_12o_10o_10o_5o_5^3 -$$
$$12o_10^2o_15o_5^3 - 18o_21o_10o_10v_2^2o_15o_5^3 - 36o_21o_12o_10o_10v_2^2o_15o_5 - 12cs^2o_21o_12o_15o_5^3 + 12o_21o_12o_10o_10o_5^3 + 36o_12o_10o_10^2v_2^2o_5 +$$
$$24cs^2o_21o_12o_10o_10o_5o_5^3 + 6o_10^2o_15o_5^3 + 12o_21o_12o_10o_10o_15o_5 - 12o_12o_10o_10o_5^3 + 12cs^2o_21o_12o_10o_10o_5^3 - 6o_21o_12o_15o_5^3$$

$$C_{11} = -36o_10^3v_2^4o_5^2 + 36o_10^3v_2^4o_15o_5^2 - 72o_10^2v_2^2o_15o_5^3 + cs^4o_10^2o_15^2o_5^3 + 12cs^4o_10^3o_15o_5 + 36cs^2o_10^3v_2^2o_15o_5 + 36cs^2o_10^2v_2^2o_15o_5^2 +$$
$$108cs^2o_10^3v_2^2o_5^3 - 5cs^2o_10^3o_15^2o_5^2 + 12cs^4o_10^3o_15^2 - 12cs^2o_15^2o_5^3 + 72v_2^4o_15o_5^3 + 6cs^4o_10^2o_15^2o_5^2 + 36o_10^3v_2^4o_5^3 - 39o_10^3v_2^4o_15o_5^3 +$$
$$36o_10^2v_2^2o_5^3 - 90o_10o_2v_2^4o_15^2o_5^3 - 108cs^2o_10^3v_2^2o_5^2 + 198cs^2o_10^2v_2^2o_15o_5^3 + 12cs^2o_10o_15^2o_5^3 - 306cs^2o_10v_2^2o_15^2o_5^3 + 72o_10^2v_2^4o_15o_5^3 -$$
$$36o_10^3v_2^2o_15o_5^3 - 12cs^2o_10^2o_15o_5^3 - 99cs^2o_10^3v_2^2o_15o_5^3 + 6cs^4o_10^3o_15o_5^3 + 12cs^4o_10^2o_5^3 - 72v_2^2o_15^2o_5^3 + 6cs^2o_10^3o_15^2o_5 + 6cs^4o_10^2o_15o_5^3 +$$
$$39o_10^3v_2^2o_15o_5^3 - 36cs^2o_10v_2^2o_15^2o_5^2 + 12cs^2o_10o_15^2o_5^2 + 90o_10v_2^2o_15^2o_5^3 - 18cs^4o_10^3o_15o_5^2 + 54cs^2o_10^3v_2^2o_15o_5^2 - 12cs^2o_10^3o_15o_5o_5 -$$
$$cs^2o_10^2o_15^2o_5^3 - 4o_10^3v_2^2o_15^2o_5^3 - 36o_10^3v_2^2o_5^3 - 3cs^2o_10^3v_2^2o_15^2o_5^2 - 36o_10^2v_2^4o_5^3 + 13cs^4o_10^3o_15^2o_5^2 + 36o_10v_2^2o_15o_5^3 + 6o_10^3v_2^2o_15^2o_5^2 -$$
$$6cs^2o_10^2o_15^2o_5^2 + 36o_10^3v_2^2o_5^3 + 19o_10^2v_2^4o_15^2o_5^3 - 108cs^2o_10^2v_2^2o_5^3 - 108cs^2o_10v_2^2o_15o_5^3 - cs^4o_10^3o_15^2o_5^3 + 12cs^2o_10^3v_2^2o_15^2o_5^3 +$$
$$4o_10^3v_2^4o_15^2o_5^3 - 12cs^4o_10o_15^2o_5^3 + 12cs^4o_10^2o_15o_5o_5 + 60cs^2o_10^2v_2^2o_15^2o_5^3 - 36o_10v_2^4o_15o_5^3 - 6cs^2o_10^3o_15o_5^3 - 19o_10^2v_2^2o_15^2o_5^3 - 6cs^4o_10^2o_15o_5^3 -$$
$$6o_10^3v_2^2o_15^2o_5^3 - 12cs^4o_10o_15^2o_5^3 - 18cs^2o_10^3v_2^2o_15^2o_5 - 24cs^4o_10^3o_15^2o_5 + 18cs^2o_10^3o_15o_5^3 + 18cs^2o_10^2v_2^2o_15^2o_5^3 + 252cs^2v_2^2o_15^2o_5^3$$

$$C_{12} = 12 + 10o_10^3v_2 + 404cs^2o_10^2v_2 + 144v_2^4 - 132cs^2 + 198cs^2o_10 - 78cs^2o_10^2 - o_10^3 - 34cs^2o_10^3v_2 - 98o_10^2v_2 + 6cs^2o_10^3 - 216o_10v_2^4 +$$
$$8o_10^2 + 90o_10^2v_2^4 - 216cs^4o_10 - 18o_10 + 234o_10v_2 - 5cs^4o_10^3 - 9o_10^3v_2 + 672cs^2v_2^2 + 82cs^4o_10^2 - 1008cs^2o_10v_2 - 156v_2^2 + 144cs^4$$

$$C_{13} = 12 + 14o_10^3v_2 + 252cs^2o_10^2v_2 + 504v_2^4 - 36cs^2 + 54cs^2o_10 - 22cs^2o_10^2 - o_10^3 - 18cs^2o_10^3v_2 - 154o_10^2v_2 + 2cs^2o_10^3 - 756o_10v_2^4 +$$
$$8o_10^2 + 310o_10^2v_2^4 - 36cs^4o_10 - 18o_10 + 378o_10v_2 - cs^4o_10^3 - 29o_10^3v_2 + 432cs^2v_2^2 + 14cs^4o_10^2 - 648cs^2o_10v_2 - 252v_2^2 + 24cs^4$$

$$C_{14} = 12o_8o_12o_7o_6o_17o_16o_10o_14o_15o_5 + 12o_12o_7^2o_6o_16o_10o_14o_15o_5^3 + 12o_8o_12o_7^2o_6o_16o_10o_14o_5^3 - 12o_12o_7^2o_6o_16o_10o_14o_15o_5^2 -$$
$$12o_12o_7o_6o_17o_16o_10o_15o_5^3 - 12o_8o_12o_7^2o_6o_16o_10o_14o_5^2 - 18o_8o_12o_7o_17o_16o_10o_14o_15o_5^3 + 12o_12o_7^2o_6o_17o_16o_10o_14o_15o_5^2 -$$
$$12o_8o_12o_7^2o_17o_16o_10o_14o_5^3 + 6o_8o_7^2o_6o_17o_16o_10o_15o_5^3 - 12o_8o_12o_7^2o_6o_14o_15o_5^3 + 12o_8o_12o_7^2o_17o_16o_14o_5^3 + 6o_8o_12o_7o_6o_17o_16o_10o_14o_15o_5^3 -$$
$$12o_8o_12o_7^2o_6o_16o_10o_14o_15o_5^3 + 12o_8o_12o_17o_16o_10o_14o_15o_5^3 + 12o_12o_7^2o_17o_16o_10o_14o_5^2 - 12o_12o_7^2o_6o_17o_16o_10o_14o_15o_5^3 -$$
$$18o_8o_12o_7o_6o_17o_16o_10o_14o_15o_5^2 + 12o_8o_12o_7^2o_6o_16o_10o_14o_15o_5^2 - 12o_8o_12o_7^2o_6o_16o_14o_5^3 + 12o_8o_12o_7^2o_17o_4o_15o_5^3 +$$
$$6o_8o_12o_7o_6o_17o_16o_10o_15o_5^3 - 12o_8o_7^2o_6o_17o_16o_10o_15o_5^2 - 6o_8o_7o_6o_17o_16o_10o_14o_15o_5^3 + 12o_8o_12o_7^2o_6o_17o_16o_10o_15o_5^2 +$$
$$24o_8o_12o_7^2o_6o_17o_16o_10o_14o_15o_5 - 12o_8o_12o_7^2o_17o_10o_14o_15o_5^3 + 12o_8o_12o_7^2o_6o_16o_14o_15o_5^3 + 12o_8o_12o_7o_6o_16o_10o_14o_15o_5^3 -$$
$$24o_8o_12o_7^2o_6o_17o_16o_10o_14o_15 - 12o_8o_12o_7o_6o_10o_14o_15o_5^3 + 12o_8o_7o_6o_17o_16o_10o_14o_15o_5^3 + 12o_8o_12o_7^2o_17o_16o_10o_14o_15o_5 -$$
$$6o_8o_12o_7^2o_6o_17o_16o_10o_15o_5^3 - 12o_12o_7^2o_6o_17o_16o_10o_15o_5^3 - 12o_8o_12o_7^2o_17o_16o_14o_15o_5^3 + 12o_8o_12o_7^2o_6o_10o_14o_15o_5^3 -$$
$$12o_12o_7o_6o_16o_10o_14o_15o_5^3 - o_8o_12o_7^2o_6o_17o_16o_10o_14o_15o_5^3 - 18o_8o_12o_7^2o_17o_16o_10o_14o_15o_5^3 - 2o_8o_12o_7^2o_6o_17o_16o_10o_14o_15o_5^3 +$$
$$12o_12o_7^2o_6o_17o_16o_10o_15o_5^3 - 6o_8o_12o_2o_6o_17o_16o_10o_14o_15o_5^3 + 12o_8o_12o_7o_17o_10o_14o_15o_5^3 + 10o_8o_12o_7^2o_17o_16o_10o_14o_15o_5^3 +$$
$$12o_12o_7o_6o_17o_16o_10o_14o_15o_5^3$$

$$C_{15} = 18cs^2o_7^2o_16^2o_10^2v_2^2 - 12cs^4o_7^3o_16^2o_10 - 4o_7^3o_16^2o_10^3v_2^2 - 18cs^4o_7^2o_16o_10^3 + 36cs^2o_7o_16o_10^3v_2^2 - 39o_7^3o_16o_10^3v_2^2 - 36o_7^2o_10^3v_2^4 +$$
$$6cs^2o_7^3o_16o_10^2 + 12cs^4o_7^2o_16o_10^2 - 24cs^4o_7o_16^2o_10^3 + 72o_7^3o_16^2v_2^4 + 36o_7^3o_10^2v_2^2 + 12cs^4o_16^2o_10^3 - 6cs^2o_7^3o_16o_10^3 + 12cs^2o_7^3o_16^2o_10^3v_2^2 +$$
$$12cs^4o_7^3o_16^2 + 12cs^2o_7o_16^2o_10 - 108cs^2o_7o_16o_10v_2^2 + 72o_7^3o_16o_10^2v_2^4 - 12cs^2o_7o_16o_10^3 - 6cs^2o_7^2o_16^2o_10^2 - 19o_7^3o_16^2o_10^2v_2^2 -$$
$$3cs^2o_7^2o_16^2o_10^3v_2^2 - cs^4o_7^2o_16^2o_10^3 - 108cs^2o_7^2o_10^3v_2^2 - 90o_7^3o_16^2o_10v_2^4 - 5cs^2o_7^2o_16^2o_10^3 + 6o_7^2o_16^2o_10^3v_2^2 + 252cs^2o_7^3o_16^2v_2^2 +$$
$$60cs^2o_7^3o_16^2o_10^2v_2^2 + cs^4o_7^3o_16^2o_10^3 - 36o_7^3o_10^3v_2^2 + 36o_7^2o_16o_10^3v_2^4 + 36o_7^3o_16o_10v_2^2 - 12cs^2o_7^3o_16^2 + 19o_7^3o_16^2o_10^2v_2^4 + 18cs^2o_7^2o_16o_10^3 +$$
$$12cs^2o_7^3o_16^2o_10 - 306cs^2o_7^3o_16^2o_10v_2^2 + 54cs^2o_7^2o_16o_10^3v_2^2 - 6cs^4o_7^3o_16o_10^2 - 72o_7^3o_16o_10^2v_2^2 + 198cs^2o_7^3o_16o_10^2v_2^2 + 36o_7^3o_10^3v_2^4 -$$
$$12cs^2o_7^2o_16o_10^2 - 36o_7^3o_16o_10v_2^2 - 36o_7^2o_16o_10^3v_2^2 + 6cs^2o_7o_16^2o_10^3 - 6o_7^2o_16^2o_10^3v_2^4 + 90o_7^3o_16^2o_10v_2^2 - 108cs^2o_7o_10^2v_2^2 - 12cs^4o_7^2o_16^2o_10 +$$
$$6cs^4o_7^3o_16o_10^3 - 18cs^2o_7o_16^2o_10^3v_2^2 + 12cs^4o_7o_16o_10^3 + 39o_7^3o_16o_10^3v_2^2 + 36o_7^2o_10^3v_2^2 + 6cs^4o_7o_16^2o_10^2 + 36cs^2o_7^2o_16o_10^2v_2^2 +$$
$$4o_7^3o_16^2o_10^3v_2^4 - 36cs^2o_7^2o_16^2o_10v_2^2 + 108cs^2o_7^3o_10^3v_2^2 + 13cs^4o_7^2o_16^2o_10^3 - 99cs^2o_7^3o_16o_10^3v_2^2 - cs^2o_7^3o_16^2o_10^2 - 72o_7^3o_16^2v_2^2 - 36o_7^3o_10^2v_2^4$$

$$C_{16} = 30o_8o_19o_7o_6o_14o_2o_0v_1^2v_2o_5v_3^2 - 12cs^2o_12o_19o_6o_2o_0v_1v_2o_5 - 12cs^2o_8o_12o_19o_7o_6o_2o_0v_1^2v_2 + 12cs^2o_12o_19o_7o_6o_14v_1v_2^2o_5 +$$
$$6o_8o_19o_7o_6o_14o_2o_0v_1v_2^2v_3^2 - 6cs^2o_8o_12o_19o_7o_6o_2o_0v_1o_5v_3^2 - 12cs^2o_12o_19o_6o_14o_2o_0v_2o_5v_3^2 + 6cs^2o_8o_12o_19o_7o_6o_14v_1v_2^2 -$$
$$6cs^2o_8o_12o_7o_6o_14v_2o_5v_3^2 - 12o_12o_19o_6o_14o_2o_0v_1^2v_2o_5v_3^2 + 12o_8o_12o_19o_6o_14v_1v_2^2o_5v_3^2 + 3cs^2o_8o_19o_7o_6o_14o_2o_0v_2o_5v_3^2 -$$
$$6o_8o_12o_19o_7o_6o_14v_1v_2^2o_5v_3^2 + 12cs^2o_12o_19o_7o_6o_14v_2v_3^2 + 12o_12o_19o_6o_14v_1^2v_2o_5v_3^2 - 12cs^2o_12o_19o_7o_6o_2o_0v_1^2v_2o_5 + 6cs^2o_8o_12o_6o_14o_2o_0v_1v_2^2o_5 -$$
$$12cs^2o_12o_19o_7o_6o_14o_2o_0v_2v_3^2 - 6cs^2o_8o_12o_19o_7o_6o_14o_2o_0v_1v_3^2 + 6cs^2o_8o_12o_19o_6o_2o_0v_1o_5v_3^2 + 12cs^2o_12o_19o_6o_14v_1^2v_2o_5 -$$
$$12cs^2o_12o_19o_7o_6o_14o_2o_0v_1v_2^2o_5 - 6cs^2o_8o_12o_19o_7o_6o_14o_2o_0v_1v_2^2 - 12o_8o_12o_6o_14v_1v_2^2o_5v_3^2 - 3cs^2o_8o_12o_7o_6o_14o_2o_0v_1o_5v_3^2 +$$
$$6o_8o_12o_19o_7o_6o_2o_0v_1^2v_2o_5v_3^2 + 12cs^2o_8o_12o_19o_6o_14v_1o_5v_3^2 + 12cs^2o_12o_19o_6o_2o_0v_1^2v_2o_5 - 6o_8o_12o_19o_6o_2o_0v_1^2v_2o_5v_3^2 - 6o_8o_12o_7o_6o_14v_1^2v_2o_5v_3^2 -$$
$$12o_12o_19o_6o_2o_0v_1v_2^2o_5v_3^2 - 6o_8o_19o_7o_6o_14o_2o_0v_1^2v_2v_3^2 - 12cs^2o_12o_19o_7o_6o_14v_1^2v_2o_5 + 6cs^2o_8o_12o_19o_7o_6o_14v_1v_3^2 - 6cs^2o_8o_12o_6o_14o_2o_0v_1^2v_2o_5 +$$
$$12cs^2o_12o_19o_7o_6o_2o_0v_1v_2^2o_5 - 12cs^2o_12o_19o_6o_14v_1v_2^2o_5 + 12cs^2o_12o_19o_7o_6o_14o_2o_0v_1^2v_2o_5 + 12cs^2o_8o_19o_7o_6o_2o_0v_1^2v_2 -$$
$$3o_8o_12o_7o_6o_14o_2o_0v_1v_2^2o_5v_3^2 - 6cs^2o_8o_12o_19o_7o_6o_14v_1o_5v_3^2 - 12cs^2o_12o_19o_7o_6o_2o_0v_2o_5v_3^2 -$$
$$12o_8o_12o_19o_6o_14v_1^2v_2o_5v_3^2 + 12o_12o_19o_6o_14o_2o_0v_1v_2^2o_5v_3^2 + 12cs^2o_12o_19o_6o_14v_2o_5v_3^2 + 6o_8o_19o_7o_6o_14v_1^2v_2o_5v_3^2 -$$
$$6cs^2o_8o_12o_19o_6o_14o_2o_0v_1o_5v_3^2 - 12cs^2o_12o_19o_7o_6o_2o_0v_1v_3^2 + 3cs^2o_8o_19o_7o_6o_14o_2o_0v_1^2v_2o_5 - 6cs^2o_8o_12o_7o_6o_14v_1^2v_2o_5 +$$
$$12cs^2o_8o_19o_7o_6o_2o_0v_2v_3^2 - 12o_12o_19o_7o_6o_14o_2o_0v_1^2v_2v_3^2 + 12o_8o_19o_7o_6o_2o_0v_1^2v_2v_3^2 - 12cs^2o_12o_19o_6o_14o_2o_0v_1^2v_2o_5 - 3o_8o_19o_7o_6o_14o_2o_0v_1v_2^2o_5v_3^2 +$$
$$6cs^2o_8o_19o_7o_6o_14o_2o_0v_1v_2^2 + 6cs^2o_8o_19o_7o_6o_14o_2o_0v_1v_3^2 + 6cs^2o_8o_12o_7o_6o_14v_1v_2^2o_5 - 3cs^2o_8o_19o_7o_6o_14o_2o_0v_1v_2^2o_5 -$$
$$4cs^4o_8o_12o_19o_7o_14o_2o_0v_2o_5 - 6cs^2o_8o_12o_6o_14o_2o_0v_2o_5v_3^2 + 2cs^4o_8o_12o_19o_7o_6o_14o_2o_0v_2o_5 + 3cs^2o_8o_12o_19o_7o_6o_14o_2o_0v_1o_5v_3^2 +$$
$$3o_8o_12o_7o_6o_14o_2o_0v_1^2v_2o_5v_3^2 - 12cs^2o_8o_12o_19o_7o_6o_2o_0v_2v_3^2 + 12cs^2o_12o_19o_7o_6o_14o_2o_0v_2o_5v_3^2 + 12cs^2o_12o_19o_6o_2o_0v_2o_5v_3^2 +$$
$$12o_8o_12o_6o_14v_1^2v_2o_5v_3^2 + 6cs^2o_8o_19o_7o_6o_2o_0v_1o_5v_3^2 - 12cs^2o_12o_19o_7o_6o_14v_2o_5v_3^2 - 12cs^2o_12o_19o_7o_6o_2o_0v_1v_2^2 - 12cs^2o_12o_19o_7o_6o_14o_2o_0v_1^2v_2 +$$
$$12o_12o_19o_7o_6o_14o_2o_0v_1^2v_2v_3^2 - 12cs^2o_8o_12o_6o_14v_1o_5v_3^2 + 12o_12o_19o_6o_2o_0v_1^2v_2o_5v_3^2 + 12cs^2o_12o_19o_7o_6o_14v_1^2v_2v_3^2 + 12cs^2o_12o_19o_6o_14o_2o_0v_1v_2^2o_5 -$$
$$6o_8o_12o_19o_7o_6o_2o_0v_1v_2^2o_5v_3^2 - 12o_8o_19o_7o_6o_2o_0v_1v_2^2v_3^2 + 6o_8o_12o_19o_6o_2o_0v_1v_2^2o_5v_3^2 + 6o_8o_12o_7o_6o_14v_1v_2^2o_5v_3^2 + 12cs^2o_12o_19o_6o_14o_2o_0v_1o_5v_3^2 -$$
$$12cs^2o_8o_12o_6o_14v_1v_2^2o_5 + 6cs^2o_8o_12o_19o_7o_6o_2o_0v_2o_5v_3^2 - 12o_12o_19o_7o_6o_2o_0v_1^2v_2o_5v_3^2 + 6cs^2o_8o_19o_7o_6o_2o_0v_1v_2^2o_5 +$$
$$6o_8o_12o_6o_14o_2o_0v_1v_2^2o_5v_3^2 - 6o_8o_12o_19o_7o_6o_14v_1^2v_2v_3^2 + 12cs^2o_12o_19o_7o_6o_2o_0v_2v_3^2 - 6cs^2o_8o_12o_19o_6o_2o_0v_2o_5v_3^2 + 12o_8o_12o_19o_7o_6o_2o_0v_1v_2^2v_3^2 +$$
$$6cs^2o_8o_12o_19o_6o_14o_2o_0v_1^2v_2o_5 + 12cs^2o_8o_12o_19o_7o_6o_2o_0v_1v_2^2 + 3cs^2o_8o_12o_19o_7o_6o_14o_2o_0v_1v_2^2o_5 - 12cs^2o_8o_19o_7o_6o_2o_0v_1v_3^2 -$$
$$6cs^2o_8o_12o_19o_7o_6o_14v_1v_2^2 - 3cs^2o_8o_19o_7o_6o_14o_2o_0v_1o_5v_3^2 + 6cs^2o_8o_12o_7o_6o_14v_1o_5v_3^2 + 6o_8o_19o_7o_6o_2o_0v_1v_2^2o_5v_3^2 - 6cs^2o_8o_19o_7o_6o_2o_0v_1^2v_2o_5 +$$
$$3cs^2o_8o_12o_7o_6o_14o_2o_0v_2o_5v_3^2 - 6cs^2o_8o_19o_7o_6o_14o_2o_0v_2v_3^2 + 6o_8o_12o_19o_7o_6o_14v_1v_2^2v_3^2 - 12cs^2o_8o_12o_19o_6o_14v_2o_5v_3^2 +$$
$$12cs^2o_8o_12o_19o_7o_6o_2o_0v_1v_3^2 - 12cs^2o_8o_19o_7o_6o_2o_0v_1v_2^2 + 12cs^2o_8o_12o_6o_14v_1^2v_2o_5 - 12o_12o_19o_7o_6o_14o_2o_0v_1v_2^2o_5v_3^2 -$$
$$3o_8o_19o_7o_6o_14o_2o_0v_1^2v_2o_5v_3^2 + 6cs^2o_8o_19o_7o_6o_14o_2o_0v_2o_5v_3^2 + 6cs^2o_8o_12o_19o_7o_6o_14o_2o_0v_1^2v_2 + 6o_8o_19o_7o_6o_14o_2o_0v_1^2v_2o_5v_3^2 +$$
$$12o_12o_19o_7o_6o_14v_1v_2^2o_5v_3^2 - 6cs^2o_8o_12o_19o_6o_14o_2o_0v_2o_5v_3^2 - 6o_8o_19o_7o_6o_14o_2o_0v_1v_2^2o_5v_3^2 + 12cs^2o_12o_19o_7o_6o_2o_0v_1^2v_2 +$$
$$6cs^2o_12o_19o_6o_2o_0v_1v_2^2o_5 + 12cs^2o_12o_19o_7o_6o_14o_2o_0v_1v_2^2 - 12o_12o_19o_7o_6o_14v_1^2v_2o_5v_3^2 + 3o_8o_12o_19o_7o_6o_14o_2o_0v_1v_2^2o_5v_3^2 +$$
$$6cs^2o_8o_12o_6o_14o_2o_0v_1o_5v_3^2 - 3cs^2o_8o_12o_7o_6o_14o_2o_0v_2o_5v_3^2 + 12o_12o_19o_7o_6o_2o_0v_1^2v_2v_3^2 + 6cs^2o_8o_12o_19o_7o_6o_14v_1^2v_2o_5 -$$
$$12cs^2o_8o_12o_19o_7o_6o_14v_1v_2^2 - 6o_8o_19o_7o_6o_2o_0v_1^2v_2o_5v_3^2 - 12o_12o_19o_7o_6o_14v_1v_2^2v_3^2 + 6o_8o_19o_7o_6o_14o_2o_0v_1v_2^2v_3^2 - 6cs^2o_12o_19o_7o_6o_14v_2v_3^2 -$$
$$6cs^2o_8o_12o_19o_7o_6o_2o_0v_1v_2^2 + 12cs^2o_8o_12o_6o_14v_2o_5v_3^2 + 12cs^2o_12o_19o_7o_6o_14v_1v_3^2 + 12o_12o_19o_7o_6o_14o_2o_0v_1^2v_2o_5v_3^2 -$$
$$12cs^2o_8o_12o_19o_6o_14v_1^2v_2o_5 - 12cs^2o_12o_19o_6o_2o_0v_1o_5v_3^2 - 6cs^2o_8o_19o_7o_6o_2o_0v_2o_5v_3^2 + 3cs^2o_8o_12o_7o_6o_14o_2o_0v_1^2v_2o_5$$

$$C_{17} = -8o_12o_19o_7o_14o_2o_0v_1v_2v_3^2 - 4cs^2o_12o_19o_14v_2^2o_5 + 4cs^2o_8o_12o_19o_7o_2o_0v_3^2 - 4cs^2o_12o_19o_7o_14o_2o_0v_2^2o_5 - 8cs^2o_8o_12o_19o_14v_1v_2o_5 +$$
$$2o_8o_19o_7o_2o_0v_2^2o_5v_3^2 - 2o_8o_12o_19o_7o_14o_2o_0v_2^2v_3^2 + 2cs^2o_8o_12o_7o_14v_2^2o_5 - 8cs^2o_12o_19o_7o_14o_2o_0v_1v_2 + cs^2o_8o_12o_19o_7o_14o_2o_0o_5v_3^2 +$$
$$4o_8o_12o_19o_7o_2o_0v_2^2v_3^2 + 2cs^2o_8o_12o_19o_2o_0o_5v_3^2 - 2cs^2o_8o_12o_19o_7o_14o_2o_0v_2^2 + 2o_8o_19o_7o_14o_2o_0v_1v_2o_5v_3^2 - 2cs^2o_8o_12o_19o_7o_14o_2o_0v_3^2 +$$

$$4cs^2o_8o_{12}o_{19}o_{14}o_{20}v_1v_2o_5 - 4o_{12}o_{19}o_7o_{14}o_{20}v_2^2o_5v_3^2 - cs^2o_8o_{19}o_7o_{14}o_{20}o_5v_3^2 + 8cs^2o_8o_{12}o_{14}v_1v_2o_5 + 8cs^2o_8o_{19}o_7o_{20}v_1v_2 +$$
$$8o_8o_{12}o_{14}v_1v_2o_5v_3^2 - 4cs^2o_8o_{12}o_{19}o_7o_{14}v_1v_2 + 4cs^2o_{12}o_{19}o_7o_{14}o_5v_3^2 + 8o_8o_{19}o_7o_{20}v_1v_2v_3^2 - 2cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5 -$$
$$4o_8o_{19}o_7o_{20}v_1v_2o_5v_3^2 - 8o_8o_{12}o_{19}o_{14}v_1v_2o_5 - 4cs^2o_8o_{12}o_{19}o_{20}v_1v_2o_5 + 2cs^2o_8o_{19}o_7o_{20}v_2^2o_5 - 2cs^2o_8o_{12}o_{19}o_7o_{14}v_2^2o_5 +$$
$$4cs^2o_8o_{12}o_{19}o_7o_{20}v_2^2 - o_8o_{12}o_7o_{14}o_{20}v_2^2o_5v_3^2 - 8o_8o_{12}o_{19}o_7o_{20}v_1v_2v_3^2 + 8cs^2o_{12}o_{19}o_7o_{20}v_1v_2 - 4cs^2o_{12}o_{19}o_7o_{20}v_2^2 - 4o_{12}o_{19}o_{14}v_2^2o_5v_3^2 +$$
$$2cs^2o_8o_{12}o_{14}o_{20}v_2^2o_5 + 2o_8o_{12}o_7o_{14}v_2^2o_5v_3^2 - cs^2o_8o_{12}o_7o_{14}o_{20}o_5v_3^2 + 2cs^2o_8o_{19}o_7o_{14}o_{20}v_1v_2o_5 - 8cs^2o_{12}o_{19}o_7o_{20}v_1v_2o_5 +$$
$$4o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2v_3^2 - 4o_{12}o_{19}o_7o_{14}v_2^2o_5v_3^2 - 2o_8o_{12}o_{19}o_7o_{14}v_2^2o_5v_3^2 + 4cs^2o_{12}o_{19}o_7o_{20}v_2^2o_5 - 2cs^2o_8o_{12}o_{19}o_7o_{20}o_5v_3^2 -$$
$$4o_8o_{12}o_{19}o_{20}v_1v_2o_5v_3^2 + 4o_{12}o_{19}o_{14}o_{20}v_2^2o_5v_3^2 + 8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5v_3^2 + 4cs^2o_{12}o_{19}o_{14}o_{20}o_5v_3^2 + 2o_8o_{19}o_7o_{14}o_{20}v_2^2v_3^2 -$$
$$2o_8o_{12}o_{19}o_7o_{20}v_2^2o_5v_3^2 - 4cs^2o_{12}o_{19}o_{20}o_5v_3^2 - 8cs^2o_{12}o_{19}o_7o_{14}v_1v_2o_5 - 4cs^2o_8o_{12}o_{14}v_2^2o_5 - 2cs^2o_8o_{12}o_{19}o_{14}o_{20}v_2^2o_5 - 4o_{12}o_{19}o_{20}v_2^2o_5v_3^2 -$$
$$4cs^2o_8o_{12}o_{14}o_{20}v_1v_2o_5 + o_8o_{12}o_{19}o_7o_{14}o_{20}v_2^2o_5v_3^2 - 4o_8o_{12}o_{19}o_7o_{14}v_1v_2v_3^2 + 4cs^2o_8o_{12}o_{19}o_{14}v_2^2o_5 - 4o_{12}o_{19}o_7o_{20}v_2^2v_3^2 -$$
$$4o_8o_{12}o_7o_{14}v_1v_2o_5v_3^2 + 2cs^2o_8o_{19}o_7o_{14}o_{20}v_2^2 + 4cs^2o_8o_{19}o_7o_{14}v_1v_2v_3^2 + 4cs^2o_8o_{12}o_{19}o_{14}o_5v_3^2 + 2o_8o_{19}o_7o_{14}v_2^2v_3^2 -$$
$$8o_{12}o_7o_{20}v_1v_2o_5v_3^2 - 4cs^2o_8o_{12}o_7o_{14}v_2^2 - 4cs^2o_8o_8o_{19}o_7o_{20}v_1v_2 - 2cs^2o_8o_{12}o_{19}o_{14}o_{20}o_5v_3^2 - 4cs^2o_{12}o_{14}o_5v_3^2 + 4o_8o_{12}o_{19}o_{14}v_2^2o_5v_3^2 +$$
$$2cs^2o_8o_{12}o_7o_{14}o_{20}v_1v_2o_5 + 2o_8o_{12}o_7o_{14}o_{20}v_1v_2o_5v_3^2 - o_8o_9o_7o_{14}o_{20}v_2^2o_5v_3^2 - 4cs^2o_{12}o_{19}o_{20}v_2^2o_5 - 4o_8o_{12}o_4v_2^2o_5v_3^2 +$$
$$4cs^2o_{12}o_{19}o_{14}o_{20}v_2^2o_5 + 8o_{12}o_{19}o_{14}v_1v_2o_5v_3^2 + 2o_8o_{12}o_{19}o_{20}v_2^2o_5v_3^2 - 4o_8o_{19}o_7o_{20}v_2^2v_3^2 - 2cs^2o_8o_{12}o_{19}o_7o_{20}v_2^2o_5 + 4cs^2o_{12}o_{19}o_7o_{20}o_5v_3^2 -$$
$$8o_{12}o_{19}o_{14}o_{20}v_1v_2o_5v_3^2 + 4cs^2o_8o_{12}o_{19}o_7o_{20}v_1v_2o_5 - 8cs^2o_8o_{12}o_{19}o_7o_{20}v_1v_2 - cs^2o_8o_{12}o_7o_{14}o_{20}o_2o_5^2 - 4cs^2o_{12}o_{19}o_7o_{14}v_3^2 +$$
$$4o_8o_{12}o_{19}o_7o_{14}v_1v_2o_5v_3^2 + 2cs^2o_8o_{12}o_{14}o_{20}o_5v_3^2 + 4o_{12}o_{19}o_7o_{14}o_{20}v_2^2v_3^2 + 2cs^2o_8o_{19}o_7o_{14}o_{20}v_3^2 - 4o_8o_{19}o_7o_{14}o_{20}v_1v_2v_3^2 -$$
$$8cs^2o_{12}o_{19}o_{14}o_{20}v_1v_2o_5 - 2cs^2o_8o_{12}o_{19}o_7o_{14}o_5v_3^2 + 2cs^2o_8o_{19}o_7o_{20}o_5v_3^2 - 4o_{12}o_{19}o_7o_{20}v_2^2v_3^2 + 8cs^2o_{12}o_{19}o_{20}v_1v_2o_5 -$$
$$4cs^2o_8o_{19}o_7o_{14}o_{20}v_1v_2 + 4o_{12}o_{19}o_7o_{20}v_2^2o_5v_3^2 - 4cs^2o_8o_{19}o_7o_{20}v_3^2 - 4o_8o_{12}o_{14}o_{20}v_1v_2o_5v_3^2 + 4cs^2o_{12}o_{19}o_7o_{14}v_2^2o_5 + 2cs^2o_8o_{12}o_{19}o_7o_{14}v_3^2 +$$
$$4cs^2o_{12}o_{19}o_7o_{14}o_{20}v_3^2 - 4cs^2o_2o_7o_{14}v_1v_2o_5 + 4o_8o_{12}o_{19}o_7o_{20}v_1v_2o_5v_3^2 - cs^2o_8o_{19}o_7o_{14}o_{20}o_2o_5^2 + 8o_{12}o_{19}o_7o_{14}v_1v_2v_3^2 +$$
$$8cs^2o_{12}o_{19}o_7o_{14}v_1v_2 + 2cs^2o_8o_{12}o_9o_{20}v_2^2o_5 + cs^2o_8o_{12}o_7o_{14}o_{20}v_2^2 - 8o_{12}o_{19}o_7o_{14}v_1v_2o_5v_3^2 + 8o_{12}o_9o_{20}v_1v_2o_5v_3^2 +$$
$$2cs^2o_8o_{12}o_7o_{14}o_5v_3^2 + 4cs^2o_{12}o_{19}o_7o_{14}o_{20}v_2^2 + 2o_8o_{12}o_{14}o_{20}v_2^2o_5v_3^2 + 8cs^2o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5 + 8o_{12}o_9o_{20}v_1v_2o_5v_3^2 -$$
$$4cs^2o_8o_{19}o_7o_{20}o_2v_2^2 + 2cs^2o_8o_{12}o_{19}o_7o_{14}v_2^2 - 2o_8o_{12}o_{19}o_{14}o_{20}v_2^2o_5v_3^2 + 4cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2 - 2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5v_3^2 -$$
$$4cs^2o_{12}o_{19}o_7o_{14}o_{20}o_5v_3^2 + 4o_{12}o_{19}o_7o_{14}v_2^2o_5v_3^2 + 4o_8o_{12}o_{19}o_{14}o_{20}v_1v_2o_5v_3^2 - 4cs^2o_{12}o_{19}o_{14}o_5v_3^2 + 8cs^2o_{12}o_{19}o_{14}v_1v_2o_5$$

$C_{18} = -2cs^2o_8o_{12}o_7o_{14}o_{20}v_1^2o_5^2 + 4o_8o_{12}o_7^2o_{14}v_1v_2o_5^2v_3^2 - 8o_{12}o_{19}o_7o_{14}v_1v_2o_5^2v_3^2 + 4cs^2o_{12}o_{19}o_7^2o_{20}v_1^2o_5 + 8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5^2v_3^2 +$
$2o_8o_{12}o_{19}o_7^2o_{14}v_1^2o_5^2v_3^2 - 2o_8o_{12}o_{19}o_7o_{20}v_1^2o_5^2v_3^2 - 2o_8o_7o_{14}o_{20}v_1v_2o_5^2v_3^2 + 4cs^2o_8o_{12}o_7o_{14}o_4o_5^2v_3^2 + 2cs^2o_8o_{12}o_{19}o_7^2o_{14}v_1^2o_5^2 +$
$8cs^2o_{12}o_{19}o_7^2o_{20}v_1v_2o_5^2 + 2cs^2o_8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5^2 - 2o_8o_{12}o_7^2o_{14}v_1^2o_5^2v_3^2 - 2cs^2o_8o_{12}o_{19}o_7o_{20}v_1^2o_5^2 - 2cs^2o_8o_{12}o_{19}o_7^2o_{14}o_{20}o_5^2v_3^2 -$
$8cs^2o_{12}o_{19}o_7o_{14}v_1v_2o_5^2 - 2cs^2o_8o_9o_7^2o_{20}v_1^2o_5^2 - 4cs^4o_{12}o_{19}o_7^2o_{14}o_2o_5 + 2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1^2o_5^2v_3^2 - 4o_8o_{19}o_7o_{14}o_{20}v_1v_2o_5^2v_3^2 -$
$4cs^2o_{12}o_{19}o_7o_{14}o_{20}o_5^2v_3^2 + 4o_8o_{12}o_7o_{14}v_1^2o_5^2v_3^2 + 2cs^2o_8o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5^2 - 8cs^2o_{12}o_{19}o_7^2o_{20}v_1v_2o_5^2 + 2cs^4o_8o_{19}o_7^2o_{20}o_2o_5^2 -$
$4cs^2o_8o_{12}o_{19}o_7o_{14}o_5^2v_3^2 + 8cs^2o_{12}o_{19}o_7^2o_{14}v_1v_2o_5^2 + 2cs^2o_8o_{12}o_{19}o_7^2o_{20}o_5^2v_3^2 + 2cs^4o_8o_{12}o_{19}o_7^2o_{14}o_5 + 2cs^2o_8o_{12}o_{19}o_7^2o_{14}o_{20}o_5o_5^2v_3^2 -$
$2o_8o_{12}o_7o_{14}o_{20}v_1^2o_5^2v_3^2 - 4cs^4o_{12}o_{19}o_7^2o_{14}o_5 + 4cs^2o_8o_9o_7^2o_{14}o_{20}v_1v_2o_5^2 + 4o_{12}o_{19}o_7^2o_{14}o_{20}v_1^2o_5^2v_3^2 - 2cs^2o_8o_{12}o_9o_7^2o_{14}o_{20}v_1^2o_5 +$
$4cs^2o_{12}o_{19}o_7^2o_{14}o_{20}o_5^2v_3^2 + 4cs^4o_8o_{12}o_7o_{14}o_4o_2o_5 + 4cs^2o_{12}o_{19}o_7^2o_{20}o_5^2v_3^2 - 2cs^4o_8o_{12}o_{19}o_{14}o_2o_5^2 - 4o_8o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5^2v_3^2 +$
$cs^2o_8o_{12}o_7^2o_{14}o_{20}v_1^2o_5^2 - 4o_8o_{12}o_{19}o_7^2o_{14}v_1v_2o_5^2v_3^2 + 2cs^4o_8o_{12}o_7^2o_{14}o_5^2 - 2cs^2o_8o_{12}o_7^2o_{14}v_1^2o_5^2 - 4o_8o_{12}o_{19}o_7o_{14}v_1^2o_5^2v_3^2 +$
$4o_8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5^2v_3^2 + 2o_8o_{12}o_{19}o_7^2o_{20}v_1^2o_5^2v_3^2 + 4cs^4o_8o_{12}o_{19}o_{14}o_2o_5 + 4o_{12}o_{19}o_7^2o_{14}v_1^2o_5^2v_3^2 - 4cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5^2 -$
$2o_8o_9o_7^2o_{20}v_1^2o_5^2v_3^2 - 4cs^2o_8o_{12}o_{19}o_7^2o_{14}o_5^2v_3^2 - 4o_{12}o_{19}o_7o_{14}v_1^2o_5^2v_3^2 + 4o_8o_{19}o_7o_{14}o_{20}v_1^2o_5^2v_3^2 + 4cs^2o_8o_{19}o_7^2o_{20}o_5^2v_3^2 + o_8o_{12}o_7^2o_{14}o_{20}v_1^2o_5^2v_3^2 +$
$2cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1^2o_5^2 - 4cs^4o_8o_9o_7^2o_{20}o_2o_5 - 4cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5 - 8o_8o_9o_7^2o_{20}v_1v_2o_5v_3^2 + 8o_8o_{12}o_{19}o_7o_{14}v_1v_2o_5^2v_3^2 -$
$2cs^4o_8o_{12}o_{19}o_7^2o_{14}o_5 - 8cs^2o_8o_{12}o_9o_7^2o_{14}v_1v_2o_5 + 2cs^4o_8o_{12}o_{19}o_7o_{20}o_2o_5 - 2cs^4o_8o_{12}o_{19}o_7^2o_{14}o_{20} - 2cs^2o_8o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5 -$
$4cs^4o_{12}o_{19}o_7o_{20}o_2o_5 + 4cs^4o_{12}o_{19}o_7^2o_{14}o_5 - 2cs^2o_8o_{12}o_{19}o_7^2o_{14}o_5v_3^2 - 4o_8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5^2v_3^2 + 4cs^2o_8o_{19}o_7^2o_{20}o_5v_3^2 +$
$cs^2o_8o_9o_7^2o_{14}o_{20}v_1^2o_5^2 - cs^2o_8o_{12}o_{19}o_7^2o_{14}o_{20}v_1^2o_5^2 - 2cs^2o_8o_{12}o_{19}o_7^2o_{14}v_1^2o_5^2 - 8cs^2o_8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5^2 + 8o_{12}o_{19}o_7^2o_{14}v_1v_2o_5^2v_3^2 -$
$8o_8o_{12}o_7o_{14}v_1v_2o_5^2v_3^2 + 4cs^2o_8o_{19}o_7^2o_{20}v_1^2o_5^2 - 8o_{12}o_{19}o_7o_{20}v_1v_2o_5^2v_3^2 + 4cs^4o_{12}o_{19}o_7^2o_{14}o_{20}o_5 + 4o_{12}o_{19}o_7^2o_{20}v_1^2o_5^2v_3^2 -$
$8o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5^2v_3^2 + 4o_8o_2o_7o_{14}o_{20}v_1v_2o_5^2v_3^2 - 2o_8o_{19}o_7^2o_{14}o_{20}v_1^2o_5v_3^2 + 2cs^4o_8o_{12}o_{19}o_7^2o_{14}o_{20}o_5 - o_8o_{12}o_{19}o_7^2o_{14}o_{20}v_1^2o_5^2v_3^2 +$
$4cs^2o_{12}o_{19}o_7o_{14}v_1^2o_5 - 4cs^2o_{12}o_{19}o_7^2o_{20}v_1^2o_5 + 8cs^2o_8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5 + 4cs^2o_{12}o_{19}o_7^2o_{14}o_{20}v_1^2o_5 - 8o_{12}o_{19}o_7^2o_{14}v_1v_2o_5v_3^2 -$
$2cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5 + 8cs^2o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5 + 4cs^4o_{12}o_{19}o_7o_{14}o_{20}o_5 - 4cs^2o_8o_{12}o_{19}o_7o_{14}v_1^2o_5 + 2cs^2o_8o_{12}o_{19}o_7^2o_{20}v_1^2o_5 +$
$4o_{12}o_{19}o_7o_{14}v_1^2o_5^2v_3^2 + 4cs^2o_{12}o_{19}o_7^2o_{14}v_1v_2o_5 + 4cs^2o_8o_{12}o_7o_{14}v_1v_2o_5 + 4cs^4o_{19}o_7^2o_{20}o_2o_5 - 2cs^2o_8o_{12}o_{19}o_{14}o_5^2v_3^2 - 4cs^4o_{12}o_{19}o_7o_{14}o_5 +$
$o_8o_9o_7^2o_{14}o_{20}v_1^2o_5^2v_3^2 + 8cs^2o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5 - 4o_{12}o_{19}o_7^2o_{20}v_1^2o_5^2v_3^2 + 8o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5v_3^2 + 4cs^4o_8o_{12}o_{19}o_7o_{14}o_5 -$
$2cs^4o_8o_{12}o_{19}o_7^2o_{20}o_5 + 4cs^4o_8o_9o_7o_{14}o_{20}o_5 + 4cs^4o_8o_{12}o_9o_7o_{14}o_{20} + 2cs^4o_8o_{12}o_9o_7o_{14}o_{20}o_5 + 2o_8o_{12}o_{19}o_7^2o_{14}o_{20}v_1^2o_5v_3^2 +$
$cs^2o_8o_{12}o_7^2o_{14}o_{20}o_5o_5^2v_3^2 - 4o_{12}o_{19}o_7^2o_{14}v_1^2o_5^2v_3^2 + 4cs^2o_8o_{12}o_7o_{14}v_1^2o_5^2 + 4o_{12}o_{19}o_7o_{20}v_1^2o_5^2v_3^2 - 8cs^2o_8o_{12}o_7o_{14}v_1v_2o_5^2 +$
$4cs^2o_{12}o_{19}o_7^2o_{14}o_5v_3^2 - 2cs^2o_8o_{12}o_7o_{14}o_{20}o_5^2v_3^2 + 4o_8o_9o_7^2o_{20}v_1^2o_5v_3^2 - 4cs^2o_{12}o_{19}o_7o_{14}o_{20}v_1^2o_5 - 2cs^4o_8o_{12}o_7^2o_{14}o_{20}o_5 +$
$4cs^2o_8o_{12}o_{19}o_7^2o_{14}v_1v_2o_5 + 4o_8o_{19}o_7^2o_{20}v_1v_2o_5^2v_3^2 - 2cs^2o_8o_{12}o_9o_7^2o_{20}o_5^2v_3^2 - 2o_8o_{12}o_7^2o_{14}o_{20}v_1v_2o_5^2v_3^2 + 8o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5^2v_3^2 +$
$2cs^2o_8o_{12}o_{19}o_7^2o_{14}o_5v_3^2 - 8cs^2o_8o_9o_7^2o_{20}v_1v_2o_5 + 8o_8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5v_3^2 - 2cs^2o_8o_{12}o_{19}o_7o_{20}o_5^2v_3^2 + 4cs^2o_8o_{12}o_{19}o_7o_{20}v_1v_2o_5^2 -$
$4cs^2o_8o_{12}o_9o_7^2o_{20}v_1v_2o_5^2 - 4cs^2o_{12}o_2o_7o_{14}o_{20}v_1v_2o_5^2 - 4o_{12}o_{19}o_7^2o_{14}v_1^2o_5v_3^2 + 4cs^2o_8o_{19}o_7^2o_{14}o_5^2v_3^2 + 4cs^2o_8o_{12}o_{19}o_7o_{20}o_5^2v_3^2 -$
$cs^2o_8o_{12}o_{19}o_7^2o_{14}o_2o_5o_5^2v_3^2 + 4o_8o_{12}o_{19}o_7^2o_{14}v_1v_2o_5v_3^2 + 2o_8o_{12}o_{19}o_7^2o_{14}o_{20}v_1v_2o_5^2v_3^2 + 4cs^2o_{12}o_{19}o_7o_{14}o_4o_5^2 - 4cs^2o_{12}o_{19}o_7^2o_{20}o_5^2v_3^2 -$
$4o_8o_{12}o_{19}o_7^2o_{20}v_1^2o_5v_3^2 - 4cs^2o_{12}o_{19}o_7o_{14}v_1^2o_5 + 4cs^2o_{12}o_{19}o_7o_{20}v_1^2o_5 - 8cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2o_5 + 4cs^2o_8o_2o_7o_{14}o_{20}v_1v_2o_5^2 -$
$4cs^4o_{12}o_{19}o_7^2o_{20}o_5 + 4cs^4o_8o_{12}o_{19}o_7^2o_{20}o_5 - 2cs^4o_8o_9o_7o_{14}o_{20}o_2o_5 + 4o_8o_9o_7^2o_{14}o_{20}v_1v_2o_5v_3^2 - 12cs^4o_8o_{12}o_{19}o_7o_{14}o_{20}o_5 -$
$8o_{12}o_{19}o_7^2o_{20}v_1v_2o_5v_3^2 - 2o_8o_{12}o_{19}o_7^2o_{14}v_1^2o_5v_3^2 + cs^2o_8o_9o_7^2o_{14}o_{20}o_2o_5^2v_3^2 - 4cs^2o_{12}o_{19}o_7^2o_{14}o_{20}v_1^2o_5 - 4cs^2o_{12}o_9o_7^2o_{20}v_1v_2o_5^2 +$
$8cs^2o_8o_{12}o_{19}o_7o_{14}v_1v_2o_5^2 - 4cs^2o_8o_{12}o_9o_7^2o_{20}v_1^2o_5 - 4cs^4o_8o_2o_7o_{14}o_5^2 + 2cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}o_5^2v_3^2$

$C_{19} = 4o_8o_{12}o_{19}o_7o_{20}v_1v_2^2 - cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_2o_5 - 4o_8o_{12}o_{19}o_{14}v_1v_2^2o_5 - 2cs^2o_8o_{12}o_{19}o_2o_2v_2o_5 - 2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1v_2^2 +$
$4o_8o_{12}o_{14}v_1v_2^2o_5 - 2o_8o_{12}o_{19}o_7o_{14}v_1^2v_2 + o_8o_9o_7o_{14}o_{20}v_1^2v_2o_5 - 2cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_1 + 2cs^2o_8o_{19}o_7o_{20}v_1o_5 + 2o_8o_{12}o_9o_{20}v_1v_2^2o_5 -$
$2cs^2o_8o_{12}o_{19}o_7o_{14}v_1o_5 - 4cs^2o_{12}o_{19}o_{14}v_1v_2o_5 - 4o_8o_{12}o_{14}v_1v_2^2o_5 - o_8o_9o_7o_{14}o_{20}v_1v_2^2o_5 - 4cs^2o_{12}o_{19}o_7o_{14}o_{20}v_1o_5 -$
$4cs^2o_{12}o_{19}o_7o_{14}v_2o_5 + 4cs^2o_8o_{12}o_{19}o_7o_{20}v_1 + 4o_8o_{12}o_{19}o_{14}v_1v_2^2o_5 + 4o_8o_9o_7o_{20}v_1^2v_2 - 2o_8o_{12}o_9o_{20}v_1^2v_2o_5 + 4cs^2o_{12}o_{19}o_7o_{20}v_2 -$
$4o_{12}o_{19}o_7o_{14}o_{20}v_1^2v_2 + 2cs^2o_8o_2o_7o_{14}v_1o_5 + cs^2o_8o_9o_7o_{14}o_{20}v_2o_5 + 4o_{12}o_{19}o_7o_{20}v_1^2v_2 + 2cs^2o_8o_{12}o_{19}o_7o_{20}v_2o_5 + 4o_{12}o_{19}o_7o_{14}v_1v_2^2o_5 -$
$2o_8o_{12}o_9o_{14}o_{20}v_1v_2^2o_5 - 4cs^2o_8o_{12}o_{14}v_1o_5 - 4cs^2o_{12}o_{19}o_7o_{20}v_2 - 4o_{12}o_{19}o_7o_{14}v_1v_2^2 - 2cs^2o_8o_{12}o_9o_{14}o_{20}v_1o_5 +$
$cs^2o_8o_{12}o_2o_7o_{14}o_{20}v_2o_5 + 2o_8o_{12}o_{14}o_{20}v_1v_2^2o_5 - 4cs^2o_{12}o_{19}o_7o_{20}v_1 + 4cs^2o_8o_{12}o_{19}o_{14}v_1o_5 - 4o_{12}o_{19}o_7o_{20}v_1^2v_2o_5 +$
$2o_8o_{12}o_{19}o_{14}o_{20}v_1^2v_2o_5 + 2cs^2o_8o_{12}o_{14}o_{20}v_1o_5 + 2cs^2o_8o_{12}o_{19}o_7o_{14}o_{20}v_2 - 4o_{12}o_{19}o_7o_{14}v_1^2v_2o_5 + 4o_{12}o_{19}o_7o_{20}v_1v_2^2o_5 +$

$$4cs^2o_1 2o_1 9o_7 o_2 0v_1 o_5 - 4cs^2o_1 2o_1 9o_1 4o_2 0v_2 o_5 - 2o_8 o_1 2o_1 4o_2 0v_1^2 v_2 o_5 + 4cs^2o_1 2o_1 9o_2 0v_2 o_5 + 2o_8 o_1 9o_7 o_1 4o_2 0v_1 v_2^2 - 2cs^2o_8 o_1 2o_1 9o_7 o_1 4v_2 +$$
$$4cs^2o_8 o_1 9o_7 o_2 0v_2 - 2o_8 o_1 9o_7 o_2 0v_1^2 v_2 o_5 - 2cs^2o_8 o_1 2o_1 9o_7 o_2 0v_1 o_5 + 2cs^2o_8 o_1 2o_1 4v_2 o_5 + 2cs^2o_8 o_1 9o_7 o_1 4o_2 0v_1 -$$
$$4o_8 o_1 2o_1 9o_7 o_2 0v_1^2 v_2 - cs^2o_8 o_1 2o_7 o_1 4o_2 0v_1 o_5 + 2o_8 o_1 2o_1 9o_7 o_1 4v_1 v_2^2 - 4cs^2o_1 2o_1 9o_7 o_1 4v_1 - 4o_1 2o_1 9o_7 o_1 4o_2 0v_1 v_2^2 o_5 +$$
$$2o_8 o_1 2o_1 9o_7 o_1 4o_2 0v_1^2 v_2 - 4cs^2o_1 2o_1 9o_7 o_1 4o_2 0v_2 - 4cs^2o_8 o_1 2o_1 9o_1 4v_2 o_5 + 4o_1 2o_1 9o_7 o_1 4o_2 0v_1 v_2^2 - 2cs^2o_8 o_1 2o_1 4o_2 0v_2 o_5 +$$
$$2o_8 o_1 9o_7 o_2 0v_1 v_2^2 o_5 - 4cs^2o_1 2o_1 9o_7 o_2 0v_2 o_5 + 4o_1 2o_1 9o_7 o_1 4o_2 0v_1^2 v_2 o_5 - 4o_8 o_1 9o_7 o_2 0v_1 v_2^2 - 4cs^2o_1 2o_1 9o_2 0v_1 o_5 + 4cs^2o_1 2o_1 9o_1 4o_2 0v_1 o_5 +$$
$$2cs^2o_8 o_1 2o_1 9o_2 0v_1 o_5 + 2o_8 o_1 2o_1 9o_7 o_1 4v_1^2 v_2 o_5 + cs^2o_8 o_1 2o_1 9o_7 o_1 4o_2 0v_1 o_5 + o_8 o_1 2o_1 9o_7 o_1 4o_2 0v_1 v_2^2 o_5 - 4o_1 2o_1 9o_1 4o_2 0v_1^2 v_2 o_5 -$$
$$4o_1 2o_1 9o_2 0v_1 v_2^2 o_5 + 4o_1 2o_1 9o_1 4v_1^2 v_2 o_5 + o_8 o_1 2o_7 o_1 4o_2 0v_1^2 v_2 o_5 - 4o_1 2o_1 9o_7 o_2 0v_1 v_2^2 - 2o_8 o_1 2o_1 9o_7 o_2 0v_1 v_2^2 o_5 + 2cs^2o_8 o_1 2o_1 9o_7 o_1 4v_2 o_5 +$$
$$4o_1 2o_1 9o_7 o_1 4v_1^2 v_2 - 2cs^2o_8 o_1 9o_7 o_2 0v_2 o_5 - 2o_8 o_1 2o_7 o_1 4v_1^2 v_2 o_5 + 4cs^2o_1 2o_1 9o_7 o_1 4o_2 0v_2 o_5 + 4o_1 2o_1 9o_1 4o_2 0v_1 v_2^2 o_5 - 4cs^2o_8 o_1 9o_7 o_2 0v_1 +$$
$$2cs^2o_8 o_1 2o_1 9o_7 o_1 4v_1 - o_8 o_1 2o_1 9o_7 o_1 4o_2 0v_1^2 v_2 o_5 + 4o_1 2o_1 9o_2 0v_1^2 v_2 o_5 + 4cs^2o_1 2o_1 9o_1 4v_2 o_5 - 2o_8 o_1 9o_7 o_1 4o_2 0v_1^2 v_2 +$$
$$4cs^2o_1 2o_1 9o_7 o_1 4v_1 o_5 - 2o_8 o_1 2o_1 9o_7 o_1 4v_1 v_2^2 o_5 - 2cs^2o_8 o_1 9o_7 o_1 4o_2 0v_2 - 2cs^2o_8 o_1 2o_7 o_1 4v_2 o_5 + 2o_8 o_1 2o_1 9o_7 o_2 0v_1^2 v_2 o_5 +$$
$$2o_8 o_1 2o_7 o_1 4v_1 v_2^2 o_5 - cs^2o_8 o_1 9o_7 o_1 4o_2 0v_1 o_5 + 4cs^2o_1 2o_1 9o_7 o_1 4v_2 - 4o_1 2o_1 9o_1 4v_1 v_2^2 o_5 + 4cs^2o_1 2o_1 9o_7 o_1 4o_2 0v_1 - o_8 o_1 2o_7 o_1 4o_2 0v_1 v_2^2 o_5$$

$C_{20} = 2cs^2o_8 o_1 9o_7 o_1 6o_2 0o_2 3v_2^2 o_1 5o_5 v_3 + 2cs^2o_1 9o_1 7o_1 6o_1 0v_1 o_2 3o_1 5o_5 v_3^2 - o_8 o_7 o_1 7o_1 6o_1 0o_2 0v_1 v_2^2 o_1 5o_5 v_3^2 +$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_1 7o_1 6o_1 0o_2 0v_2^2 o_1 5o_5 v_3 + o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 - 2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3o_5 v_3^2 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1 o_2 3o_5 v_3^2 - 2cs^2o_8 o_1 9o_7 o_1 7o_2 0v_1 o_2 3o_1 5o_5 v_3 - 2o_8 o_1 9o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5o_5 v_3 -$
$2cs^2o_8 o_1 9o_1 7o_1 0o_2 0v_2^2 o_1 5o_5 v_3 + cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1 o_2 3o_1 5o_5 v_3 - 2o_8 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3 - 2cs^2o_8 o_1 9o_7 o_1 7o_1 0o_2 0v_1 v_2^2 o_1 5o_5 +$
$2cs^2o_8 o_1 9o_7 o_1 6o_2 0v_1^2 o_2 3o_1 5o_5 v_3 + 2o_8 o_1 9o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 - 2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3v_3 + 2cs^2o_1 7o_1 6o_1 0v_1 o_2 3o_1 5o_5 v_3^2 +$
$2cs^2o_8 o_1 9o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 - 2cs^2o_8 o_1 9o_7 o_1 7o_1 0o_2 0v_1^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_1 6o_1 0o_2 0v_2^2 o_1 5o_5 v_3 + 2o_8 o_1 7o_1 6o_1 0o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 +$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0o_2 3v_2^2 v_3 - 2cs^2o_1 9o_7 o_1 7o_1 6o_1 0v_1 o_2 3o_1 5o_5 v_3^2 + 2o_8 o_1 7o_1 6o_1 0o_2 0v_1 v_2^2 o_1 5o_5 v_3^2 + cs^2o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_2^2 o_1 5o_5 v_3 +$
$2cs^2o_8 o_1 9o_1 7o_1 6o_1 0o_2 0v_1^2 o_1 5o_5 v_3 + 2cs^2o_1 9o_7 o_1 7o_1 6o_1 0v_1 o_2 3o_1 5v_3^2 + 2o_8 o_1 9o_7 o_1 6o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 + 2o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5v_3 -$
$2cs^2o_8 o_1 9o_7 o_1 6o_2 0v_1^2 o_2 3o_5 v_3 - o_8 o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 - 2cs^2o_8 o_1 9o_7 o_1 7o_1 0o_2 0v_1^2 o_2 3o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 7o_2 0v_1 v_2^2 o_1 5o_5 +$
$cs^2o_8 o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 - 2cs^2o_8 o_1 9o_1 7o_1 6o_1 0v_1 o_2 3v_2^2 o_1 5o_5 + 2cs^2o_1 9o_7 o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5v_3 -$
$2cs^2o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5v_3 + 2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0o_2 3v_2^2 o_1 5v_3 - o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 -$
$2o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 - 2cs^2o_8 o_1 9o_7 o_1 7o_1 0o_2 0o_2 3v_2^2 o_1 5o_5 v_3 + 2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5v_3 + 2cs^2o_8 o_1 9o_7 o_1 6o_2 0v_1 o_2 3v_2^2 o_5 -$
$2o_8 o_1 9o_7 o_1 6o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 + 2o_8 o_1 9o_1 7o_1 0o_2 0v_1 v_2^2 o_1 5o_5 v_3 - cs^2o_8 o_7 o_1 7o_1 6o_1 0v_1 o_2 3o_1 5o_5 v_3 + o_8 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3v_3 + 2o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5v_3 +$
$o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 - o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1 o_2 3v_2^2 o_5 v_3^2 + 2o_8 o_1 9o_1 7o_1 6o_1 0o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 - cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1 o_2 3v_2^2 o_1 5 -$
$2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_5 v_3^2 + o_8 o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 - 2cs^2o_1 9o_1 7o_1 6o_1 0v_1 o_2 3o_1 5o_5 v_3 - 2cs^2o_1 9o_7 o_1 7o_1 6o_1 0o_2 3v_2^2 o_1 5v_3 +$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1^2 o_2 3o_1 5v_3 - o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1 v_2^2 o_1 5o_5 v_3 - 2cs^2o_8 o_1 7o_1 6o_1 0o_2 3v_2^2 o_1 5o_5 v_3 - cs^2o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1 v_2^2 o_1 5o_5 +$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5 + 2cs^2o_8 o_1 9o_7 o_1 7o_2 0v_1^2 o_2 3o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 7o_1 0o_2 0v_2^2 o_1 5o_5 v_3 -$
$2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3o_1 5v_3^2 - 2cs^2o_1 9o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 - 2cs^2o_8 o_1 9o_1 6o_1 0o_2 0v_1 o_2 3o_1 5o_5 v_3^2 -$
$2cs^2o_8 o_1 9o_1 7o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 - cs^2o_8 o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_1 5o_5 v_3^2 - 2o_8 o_1 9o_7 o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 + 2o_1 9o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 +$
$2cs^2o_1 9o_7 o_1 7o_1 6o_1 0o_2 3v_2^2 o_1 5o_5 v_3 + 2o_1 9o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 + 2o_8 o_1 9o_1 7o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1^2 o_2 3o_1 5o_5 v_3 - 2cs^2o_8 o_1 9o_7 o_1 6o_2 0v_1 o_2 3o_1 5o_5 v_3^2 + 2cs^2o_8 o_1 9o_1 7o_1 0o_2 0v_1 v_2^2 o_1 5o_5 +$
$2cs^2o_8 o_1 9o_7 o_1 7o_1 0o_2 0v_1^2 o_1 5o_5 v_3 - 2cs^2o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5 - 2cs^2o_8 o_1 7o_1 6o_1 0v_1^2 o_2 3v_2^2 o_1 5o_5 - 2cs^2o_8 o_1 9o_7 o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 + 2cs^2o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5 + 2cs^2o_8 o_1 9o_7 o_1 7o_2 0o_2 3v_2^2 o_1 5o_5 v_3 -$
$2cs^2o_8 o_1 9o_1 7o_1 6o_1 0o_2 0v_1 v_2^2 o_1 5o_5 + 2cs^2o_8 o_1 9o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 - 2o_1 9o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 +$
$2o_8 o_1 9o_7 o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 - 2o_1 9o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 - 2o_8 o_1 9o_1 7o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3 - 2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 v_3 -$
$2o_8 o_1 7o_1 6o_1 0o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 + 2cs^2o_1 9o_7 o_1 7o_1 6o_1 0v_1^2 o_2 3o_1 5o_5 v_3 - cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 - cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 3v_2^2 o_1 5o_5 v_3 +$
$2cs^2o_8 o_1 9o_7 o_1 7o_1 0o_2 0v_1 o_2 3o_1 5o_5 v_3 - 2o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5v_3 + 2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_3^2 + cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_5 - 2o_8 o_1 9o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 -$
$2cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 + cs^2o_8 o_1 9o_7 o_1 7o_1 6o_2 0o_2 0o_2 3v_2^2 o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1 o_2 3v_2^2 o_1 5o_5 +$
$cs^2o_8 o_7 o_1 7o_1 6o_1 0o_2 3v_2^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_2^2 o_5 v_3 - 2cs^2o_8 o_1 9o_7 o_1 7o_2 0v_2^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 7o_1 6o_1 0o_2 0v_1 o_1 5o_5 v_3^2 +$
$2cs^2o_1 9o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 - 2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5v_3^2 + 2cs^2o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 +$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_1 5o_5 v_3^2 - o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 v_3 - 2cs^2o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3o_5 v_3 + cs^2o_8 o_7 o_1 7o_1 6o_1 0v_1^2 o_2 3o_1 5o_5 v_3 - 2o_8 o_1 9o_1 7o_1 0o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 + 2o_8 o_1 9o_7 o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 -$
$2o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5v_3 - 2cs^2o_8 o_1 9o_7 o_1 7o_2 0v_2^2 o_1 5o_5 v_3 + o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1^2 o_2 3v_2^2 o_5 v_3 - 2o_8 o_1 9o_1 7o_1 6o_1 0o_2 0v_1 v_2^2 o_1 5o_5 v_3^2 +$
$2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_5 v_3 - 2cs^2o_1 9o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5o_5 v_3 - o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 - 2cs^2o_8 o_1 7o_1 6o_1 0o_2 0v_1^2 o_1 5o_5 v_3 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_2^2 o_1 5o_5 v_3 - 2o_8 o_1 9o_1 7o_1 6o_1 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 + cs^2o_8 o_7 o_1 7o_1 6o_1 0o_2 0v_1 o_2 3o_1 5o_5 v_3^2 -$
$2cs^2o_8 o_1 9o_1 7o_1 6o_1 0v_1 o_2 3o_1 5o_5 v_3 - cs^2o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1^2 o_2 3o_1 5o_5 v_3 -$
$2o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5o_5 v_3 + 2cs^2o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 o_1 5o_5 v_3 -$
$2cs^2o_1 9o_7 o_1 7o_1 6o_1 0o_2 0o_2 3v_2^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 7o_2 0v_1 o_1 5o_5 v_3^2 + 2o_8 o_1 9o_7 o_1 7o_2 0v_2^2 o_2 3v_2^2 o_1 5o_5 v_3 -$
$2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_2^2 + 2o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1^2 o_2 3v_2^2 o_1 5v_3 + o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 v_3 -$
$2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0o_2 3v_2^2 o_1 5v_3 - 2cs^2o_1 9o_7 o_1 6o_1 0o_2 0o_2 3v_2^2 o_1 5v_3 + 2cs^2o_8 o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5v_3 +$
$o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 - 2cs^2o_8 o_1 9o_1 7o_1 6o_1 0o_2 0o_2 3v_2^2 o_1 5o_5 v_3 - o_8 o_1 9o_7 o_1 7o_1 6o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 +$
$2cs^2o_8 o_1 9o_1 7o_1 0o_2 0v_1^2 o_2 3o_1 5o_5 v_3 + 2cs^2o_1 9o_1 7o_1 6o_1 0o_2 0v_1^2 o_2 3o_1 5o_5 v_3 - 2cs^2o_8 o_1 9o_7 o_1 7o_2 0v_1 o_2 3v_2^2 o_1 5o_5 - 2o_8 o_1 9o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 -$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0v_1 o_2 3o_1 5v_3^2 - 2cs^2o_8 o_1 9o_7 o_1 6o_2 0o_2 3v_2^2 o_5 v_3 + 2o_8 o_1 9o_7 o_1 7o_1 0o_2 0v_1^2 v_2^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 0o_2 0o_2 3v_2^2 o_1 5o_5 v_3 +$
$cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0o_2 3v_2^2 o_1 5o_5 v_3 + 2cs^2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1 o_2 3v_3^2 - 2o_1 9o_7 o_1 7o_1 6o_1 0v_1 o_2 3v_2^2 o_1 5o_5 v_3^2 -$
$2o_8 o_1 9o_7 o_1 6o_1 0o_2 0v_1^2 o_2 3v_2^2 o_1 5o_5 v_3 + 2cs^2o_1 9o_1 7o_1 6o_1 0v_1 o_2 3v_2^2 o_1 5o_5 - cs^2o_8 o_1 9o_7 o_1 7o_1 6o_1 0o_2 0o_2 0o_2 3v_2^2 o_1 5v_3 +$

$$
\begin{aligned}
&2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2v_3^2 - o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3^2 - o_8o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}v_3^2 + \\
&o_8o_{19}o_7o_{17}o_{16}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3^2 - 2cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5 + 2cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15} - \\
&2cs^2o_8o_{19}o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5v_3 + 2cs^2o_{19}o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5v_3 - o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}v_3 + \\
&2cs^2o_8o_{19}o_{17}o_{10}o_{20}o_{23}v_2^2o_{15}o_5v_3 + 2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3 - 2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}v_3 + \\
&2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}o_5v_3 + 2cs^2o_8o_{19}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3 - 2o_8o_{19}o_7o_{16}o_{20}v_1^2o_{23}v_2^2o_5v_3 + o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5v_3^2 + \\
&2cs^2o_8o_{19}o_7o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5v_3 + cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5v_3 + 2cs^2o_8o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5 + \\
&cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5v_3 - 2cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}v_3 + 2o_8o_{19}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3 - 2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}v_3^2 + \\
&2cs^2o_{19}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3 + 2cs^2o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}o_{15}v_3^2 + o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5v_3^2 + 2cs^2o_8o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5 + \\
&2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}o_5v_3 - cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5v_3 - 2cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}v_3 + \\
&2cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_1o_{23}o_5v_3^2 + cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3^2 + cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_1o_{23}o_{15}o_5v_3^2 + \\
&2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3^2 + 2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5v_3^2 - 2cs^2o_8o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 + \\
&2cs^2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5 + 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 + cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}v_3^2 + \\
&2o_8o_{19}o_7o_{17}o_{20}v_1v_2^2o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}o_{23}v_2^2v_3 - cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5v_3 + 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{23}v_2^2o_{15}o_5v_3 - \\
&2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5v_3 - 2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}o_5v_3 + 2cs^2o_{19}o_7o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 + \\
&cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5 - 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15} - 2cs^2o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 + \\
&cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}v_3 - cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5 + 2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3^2 + \\
&2o_8o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5v_3^2 - 2cs^2o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5 - \\
&2cs^2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5v_3 - 2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1v_2^2o_{15}o_5v_3^2 - 2cs^2o_8o_7o_{17}o_{16}o_{20}v_1o_{15}o_5v_3^2 + \\
&cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_1^2o_{23}o_5v_3 + o_8o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_5v_3 - 2o_8o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}o_5v_3 - \\
&2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5v_3 + o_8o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}v_3 - 2cs^2o_8o_{19}o_{17}o_{16}o_{10}o_{20}v_1o_5v_3^2 + \\
&2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}o_5v_3^2 + o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5v_3^2 + 2o_8o_{19}o_7o_6o_{20}v_1o_{23}v_2^2o_5v_3^2 - \\
&2cs^2o_8o_{19}o_{10}o_{20}v_1^2o_{23}o_{15}o_5v_3 + 2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}v_3 - cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_1o_{23}v_2^2o_5 - 2cs^2o_8o_{19}o_7o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 - \\
&cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3^2 - o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_5v_3 - o_8o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5v_3^2 - \\
&2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5 - cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_5v_3 + 2cs^2o_8o_{19}o_7o_{10}o_{20}v_1o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_7o_{16}o_{20}v_1o_{23}v_2^2o_{15}o_5
\end{aligned}
$$

$$
\begin{aligned}
C_{21} =\ &12cs^2o_8o_{19}o_7^3o_6o_{20}o_{23}o_{15}o_5^2v_3^2 - 18cs^4o_8o_{19}o_7^3o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5 - 12cs^2o_8o_{19}o_7^2o_6o_{17}o_{10}o_{20}o_{23}v_2^2o_{15}o_5^2 + \\
&12cs^2o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_{23}v_2^2o_5 + 12o_8o_{19}o_7^3o_6o_{17}o_{20}v_2^2o_{15}o_5^2v_3^2 + 12cs^4o_8o_{19}o_7^3o_{17}o_{16}o_{20}o_{23}o_5^2 + 12cs^4o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{23}o_{15}o_5^2 + \\
&12cs^4o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{23}o_{15}o_5^2 - 12o_8o_{19}o_7^3o_6o_{17}o_{10}o_{20}o_2v_2^2o_{15}o_5^2v_3^2 + 24o_{19}o_7^3o_6o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5^2v_3 - \\
&12cs^4o_8o_{19}o_7^3o_{17}o_{16}o_{20}o_{23}o_{15}o_5^2 + 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5v_3 + 24cs^2o_{19}o_7^3o_6o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5^2v_3 + \\
&12o_8o_7^2o_6o_{17}o_{16}o_{10}o_{20}v_2^2o_{15}o_5^2v_3^2 + 6cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5^2 - 12o_8o_7^2o_6o_{17}o_{16}o_{10}o_{20}o_2v_2^2o_{15}o_5^2v_3^2 - \\
&6cs^2o_8o_7^3o_6o_{17}o_{16}o_{10}o_{23}o_{15}o_5^2v_3 + 12o_8o_{19}o_7^3o_6o_{17}o_{10}o_{20}o_2v_2^2o_{15}o_5^2v_3 + 12cs^4o_8o_{19}o_7^3o_6o_{10}o_{20}o_{23}o_{15}o_5^2 - \\
&12o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5^2v_3^2 + 12o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5v_3^2 - 12cs^2o_8o_{19}o_7^3o_6o_{10}o_{20}o_{23}v_2^2o_{15}o_5 + \\
&12o_8o_{19}o_7^3o_6o_{17}o_{16}o_2v_1v_2^2o_{15}o_5^2v_3 + 12cs^4o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_{23}o_5^2 - 12o_8o_{19}o_7^3o_6o_{17}o_{20}o_2v_2^2o_{15}o_5^2v_3^2 + \\
&24o_8o_{19}o_7^3o_6o_{17}o_{10}o_{20}o_{23}o_5^2v_3^2 - 6cs^2o_8o_{19}o_7^3o_6o_{10}o_{20}o_{23}o_5^2v_3^2 - 12cs^2o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_{23}o_5^2v_3^2 + \\
&6cs^4o_8o_7^3o_6o_{17}o_{16}o_{10}o_{23}o_{15}o_5^2 - 12o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5 + 12cs^2o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5v_3^2 - \\
&6o_8o_{19}o_7^3o_6o_{17}o_{16}o_{20}o_{23}v_2^2o_5^2v_3^2 - 12cs^4o_{19}o_7^2o_6o_{16}o_{10}o_{20}o_{23}o_{15}o_5 - 12cs^2o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}o_{15}o_5^2v_3 - \\
&6o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_5v_3^2 - 12o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_{23}v_2^2o_5^2v_3^2 - 12o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5^2v_3 + \\
&24cs^2o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5^2v_3 + 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{20}v_1o_{23}o_5v_3 + 24cs^2o_8o_{19}o_7^3o_6o_{17}o_{20}v_1o_{23}o_{15}o_5^2v_3 - \\
&24cs^2o_8o_{19}o_7^2o_6o_{17}o_{10}o_{20}v_1o_{15}o_5^2v_3 + 12cs^4o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5 - 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{20}v_1o_{23}o_{15}o_5v_3 - \\
&12cs^2o_8o_{19}o_7^3o_6o_{10}o_{20}o_{23}o_{15}o_5^2v_3^2 - 12cs^4o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_{23}o_{15}o_5^2 + 24cs^2o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}v_1o_{23}o_5^2v_3 - \\
&24o_8o_{19}o_7^3o_6o_2v_1o_{23}v_2^2o_{15}o_5^2v_3 + 24cs^2o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3 - 24cs^2o_{19}o_7^3o_6o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5v_3 - \\
&24cs^2o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5^2v_3 + 12o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5^2v_3 - \\
&12cs^2o_8o_{19}o_7^3o_6o_{10}o_{20}o_{23}o_{15}o_5^2v_3^2 - cs^4o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5^2 - 6cs^2o_8o_7^3o_6o_{17}o_{16}o_{10}o_{23}v_2^2o_5^2 - \\
&12o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5^2v_3^2 + 6cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}o_{15}o_5^2v_3^2 - 12cs^2o_8o_{19}o_7^2o_6o_{17}o_{10}o_{20}o_{23}o_{15}o_5^2v_3^2 + \\
&12cs^2o_8o_{19}o_7^3o_6o_{20}o_{23}v_2^2o_{15}o_5^2 + 12cs^4o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5 - 12o_8o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5^2v_3 + \\
&24o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5^2v_3 - 12o_8o_{19}o_7^3o_6o_{16}o_{20}o_{23}v_2^2o_{15}o_5^2v_3^2 + 24o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3 - \\
&24o_8o_{19}o_7^2o_6o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5^2v_3 - 24o_8o_7^2o_6o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5^2v_3 + 12o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5o_5v_3 - \\
&12cs^2o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5v_3^2 - 12cs^2o_8o_{19}o_7^2o_6o_{17}o_{16}o_{20}o_{23}v_2^2o_{15}o_5^2 + 12o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5^2v_3^2 + \\
&24o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5^2v_3 - 12o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5v_3^2 + 12o_{19}o_7^2o_6o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5^2v_3^2 + \\
&12cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}o_5^2 + 6cs^4o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}o_5^2 + 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{20}v_2^2o_{15}o_5^2 - \\
&6cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_5v_3^2 + 12o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5^2v_3^2 - 12cs^4o_8o_{19}o_7^3o_6o_{17}o_{16}o_{20}o_{23}o_5^2 - \\
&12cs^2o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5^2 + 12o_8o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5^2v_3 + 12cs^4o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5 - \\
&6cs^2o_8o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5 + 6cs^2o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}o_{15}o_5^2v_3^2 - 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{10}o_{20}o_{15}o_5^2v_3^2 - \\
&6o_8o_{19}o_7^3o_6o_{17}o_{16}o_{20}v_2^2o_{15}o_5^2v_3^2 + 24cs^2o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5^2v_3 - 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{10}o_{20}o_2v_2^2o_{15}o_5^2 - \\
&12cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3 + 6o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5^2v_3^2 - 12cs^4o_8o_{19}o_7^2o_6o_{17}o_{10}o_{20}o_{23}o_{15}o_5^2 + \\
&6cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_2^2o_5o_5^2 - 12cs^2o_8o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3 - 6cs^2o_8o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{15}o_5^2v_3^2 + \\
&6cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_2o_{23}o_{15}o_5v_3^2 - 24cs^2o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5^2v_3 + 24o_8o_{19}o_7^3o_6o_{16}o_{20}v_1o_{23}v_2^2o_{15}o_5^2v_3 - \\
&12cs^4o_8o_{19}o_7^2o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_5 + 12o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_5^2v_3 - 24o_{19}o_7^2o_6o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5^2v_3 - \\
&6o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}v_2^2o_{15}o_5^2v_3^2 + 12cs^2o_{19}o_7^3o_6o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_5^2o_5o_5 - 24o_8o_{19}o_7^2o_6o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5^2v_3 - \\
&24o_8o_7^2o_6o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5^2v_3 + 12o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5v_3 - \\
&12cs^2o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5^2v_3^2 + 24o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5v_3 + 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{20}o_2o_{15}o_5^2v_3^2 + 10cs^4o_8o_{19}o_7^3o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5^2 + \\
&12cs^4o_8o_7^2o_6o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5 - 6cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{20}o_{23}v_2^2o_5^2 - 12cs^2o_8o_{19}o_7^3o_6o_{16}o_{10}o_{20}o_{23}v_2^2o_5^2 - \\
&6o_8o_8^3o_6o_{17}o_{16}o_{10}o_{20}v_2^2o_{15}o_5^2v_3^2 - 24cs^2o_{19}o_7^2o_6o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5^2v_3 - 12cs^4o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{23}o_{15}o_5 + \\
&12cs^2o_{19}o_7^2o_6o_{16}o_{10}o_{20}o_2o_{23}o_{15}o_5^2v_3^2 + 24cs^2o_8o_{19}o_7^3o_6o_{16}o_{20}v_1o_{23}o_{15}o_5^2v_3 - 12cs^2o_8o_{19}o_7^3o_6o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_5v_3 -
\end{aligned}
$$

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\begin{aligned}
&12cs^2o_8o_1 9o_7^3o_6o_1 6o_2o_2o_2 3o_1 5o_5^2v_3^2 - 12o_8o_1 9o_7^2o_6o_1 7o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 - 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5 + \\
&12cs^2o_8o_1 9o_7^3o_6o_1 7o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - 12cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - 24cs^2o_8o_1 9o_7^3o_6o_1 7o_1o_0o_2 0v_1o_2 3o_1 5o_5^2v_3 + \\
&24cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5^2v_3 - 24cs^2o_8o_1 9o_7^3o_6o_2 0v_1o_2 3o_1 5o_5^2v_3 - 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - \\
&24cs^2o_8o_1 9o_7^3o_6o_1 6o_2 0v_1o_2 3o_5^2v_3 + 12o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + 12cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5^2v_3 - \\
&6o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5v_3^2 + 12cs^2o_8o_1 9o_7^2o_6o_1 7o_1o_0o_2o_0o_1 5o_5^2v_3^2 + 12o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + \\
&24o_1 9o_7^3o_6o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_1 5o_5^2v_3 + 24o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_1 5o_5v_3 - 24o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_5v_3 - \\
&12cs^4o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5 - 2cs^4o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2 + 12cs^2o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5 + \\
&12cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5^2 + 6o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5v_3^2 - 12cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5^2v_3^2 - \\
&24o_8o_1 9o_7^3o_6o_1 6o_2 0v_1o_2 3v_2^2o_5^2v_3 - 24cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_1o_1 5o_5^2v_3 + 24cs^2o_8o_1 9o_7^3o_6o_1 7o_1o_0o_2 0v_1o_1 5o_5^2v_3 - \\
&12cs^4o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_1 5o_5^2 - 12cs^4o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_5o_5^2 + \\
&12cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_5v_3 + 12cs^2o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5^2v_3^2 + 12cs^2o_8o_1 3o_7^3o_6o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5^2 + \\
&24cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5^2v_3 + 12cs^2o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5 - 12cs^2o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5 + \\
&12o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + 24cs^4o_8o_1 9o_7o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2 - 24o_8o_1 9o_7^3o_6o_1 7o_2 0v_1v_2^2o_1 5o_5^2v_3 - \\
&12cs^4o_8o_1 9o_7^3o_1 7o_1o_0o_2o_0o_2 3o_1 5o_5^2 - 6o_8o_3^3o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + 12o_8o_3^3o_6o_1 7o_1 6o_1o_0v_1o_2 3v_2^2o_1 5o_5^2v_3 - \\
&12o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5v_3^2 + 12cs^2o_8o_1 9o_7^3o_6o_1 6o_2o_0o_2 3v_2^2o_5^2 - 12o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_5^2v_3 + \\
&6o_8o_1 9o_7^3o_6o_1 7o_1 6o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + 12cs^2o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 + 12cs^4o_1 9o_7^3o_6o_1 6o_2o_0o_2 3o_1 5o_5^2 - \\
&24o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_1 5o_5^2v_3 + 12cs^2o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5 - 12o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + \\
&6cs^4o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5 + 24o_1 9o_7^2o_6o_1 7o_1 6o_1o_0v_1o_2 3v_2^2o_5^2v_3 - 12o_1 9o_7^3o_6o_1 7o_1 6o_2 0v_1o_2 3v_2^2o_1 5o_5^2v_3 - \\
&18cs^4o_1 9o_7^2o_7o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2 - 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_5 + 12o_8o_1 9o_7^2o_6o_1 7o_1o_0o_2 0v_2^2o_1 5o_5^2v_3^2 - \\
&12cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5^2 + 12cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5^2v_3^2 + 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_5^2v_3^2 - \\
&12cs^4o_8o_1 9o_7^3o_6o_2o_0o_2 3o_1 5o_5^2 - 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2 + 24o_8o_1 9o_7^3o_6o_1 7o_1o_0o_2 0v_1v_2^2o_1 5o_5^2v_3 - \\
&24cs^2o_1 9o_7^2o_6o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5^2v_3 - 12cs^4o_8o_1 9o_7^2o_1 7o_1 6o_1o_0o_2o_0o_2 3o_5^2 - 12cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2 + \\
&6o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 0v_2^2o_1 5o_5^2v_3^2 + 12cs^2o_8o_1 9o_7^3o_6o_1 7o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2 - 24o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_1v_2^2o_1 5o_5^2v_3 + \\
&12cs^2o_8o_1 9o_7^2o_6o_1 7o_1o_0o_2 0v_2^2o_1 5o_5^2 + 12o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_5o_5^2v_3^2 - 12cs^4o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5^2 + \\
&12o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0v_1o_2 3v_2^2o_1 5o_5v_3 + 12cs^2o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5v_3^2 + 6o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_5v_3^2 + \\
&24o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0v_1o_2 3v_2^2o_1 5o_5^2v_3 + 12cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_2o_0v_1o_1 5o_5^2v_3 - 12cs^2o_1 9o_7^2o_6o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - \\
&24cs^2o_8o_7^2o_6o_1 7o_2 0v_1o_1 5o_5^2v_3 + 24o_8o_1 9o_7^2o_6o_1 7o_2 0v_1o_2 3v_2^2o_5^2v_3 + 12cs^2o_8o_1 9o_7^3o_6o_1 6o_2o_0o_2 3o_5^2v_3^2 + \\
&24cs^2o_1 9o_7^2o_6o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5^2v_3 - 24o_1 9o_7^2o_6o_1 7o_1o_0o_2 0v_1v_2^2o_1 5o_5^2v_3 + 24cs^2o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5v_3 + \\
&12cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2 - 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_2o_0v_2^2o_1 5o_5^2 + 12cs^4o_1 9o_7^3o_1 7o_1 6o_1o_0o_2o_0o_2 3o_5 + \\
&6cs^2o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5 - 12o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_2^2o_1 5o_5^2v_3^2 + 6cs^2o_8o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2 - \\
&24cs^2o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5^2v_3 - 6cs^4o_8o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5 + 12cs^4o_8o_1 9o_7^2o_7 1o_1o_0o_2o_0o_2 3o_1 5o_5^2 - \\
&24cs^2o_8o_1 9o_7^2o_6o_1 6o_1o_0o_2 0v_1o_2 3o_5v_3 + 12cs^2o_8o_1 9o_7^2o_6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2 - 6cs^4o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5 - \\
&6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5v_3^2 + 12o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5v_3^2 - 12o_8o_1 9o_7^2o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + \\
&12cs^4o_8o_1 9o_7o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5 + 12o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5^2v_3^2 - 12cs^2o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - \\
&12cs^4o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5^2 - 12cs^2o_8o_1 9o_7^3o_6o_1 7o_2 0o_2o_2 3o_1 5o_5^2v_3^2 + 6cs^2o_8o_1 9o_7^3o_6o_1 6o_2o_0o_2 3o_5^2v_3^2 + \\
&24cs^2o_8o_1 9o_7^3o_6o_1o_0o_2 0v_1o_2 3o_1 5o_5^2v_3 + 12o_8o_1 9o_7^3o_6o_1 6o_2o_0o_2 3v_2^2o_5^2v_3^2 - 12o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_1 5o_5v_3 + \\
&12cs^2o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - 12cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_2^2o_1 5o_5^2 - 6cs^4o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 3o_1 5o_5^2 + \\
&12cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_1 5o_5^2v_3^2 + 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_5^2 - 12o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 0v_1v_2^2o_1 5o_5^2v_3 + \\
&12cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_2^2o_1 5o_5^2 + 12cs^4o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5 + \\
&12cs^4o_8o_1 9o_7^3o_1 7o_2o_0o_2 3o_1 5o_5^2 - 12cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_1 5o_5^2v_3 + 24cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_1o_1 5o_5^2v_3 + \\
&12o_8o_1 9o_7^3o_6o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 - 24o_1 9o_7^2o_6o_1 7o_1 6o_1o_0v_1o_2 3v_2^2o_1 5o_5^2v_3 - 12o_8o_1 9o_7^3o_6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + \\
&12cs^4o_8o_1 9o_7^3o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5 + 12cs^2o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2 - 24cs^2o_8o_7^2o_6o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5^2v_3 - \\
&12cs^2o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5 + 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 - 12cs^2o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5 - \\
&6o_8o_3^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2v_3^2 - 12cs^2o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5 - 12cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5^2v_3 - \\
&12cs^2o_8o_1 9o_7^3o_6o_1 7o_2o_0o_2 3v_2^2o_1 5o_5^2 - 24cs^2o_1 9o_7^3o_6o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5v_3 + 24cs^2o_8o_1 9o_7^2o_6o_1 7o_1o_0o_2 0v_1o_2 3o_1 5o_5^2v_3 + \\
&6cs^2o_8o_7^3o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - 6cs^2o_8o_1 9o_7^3o_6o_1 7o_1 6o_2o_0o_1 5o_5^2v_3^2 + 12cs^2o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 + \\
&12cs^2o_8o_1 9o_7^2o_6o_1o_0o_2o_0o_2 3o_1 5o_5^2v_3^2 - 24o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_1 5o_5v_3 + 12cs^4o_8o_1 9o_7^2o_6o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2 - \\
&12o_1 9o_7^3o_6o_1 7o_1 6o_1o_0o_2 3v_2^2o_1 5o_5^2v_3^2 + 12cs^4o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5^2 - 24o_8o_1 9o_7^3o_6o_1 7o_1o_0o_2 0v_1o_2 3v_2^2o_1 5o_5^2v_3 + \\
&12cs^2o_8o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3o_5v_3^2 + 24o_8o_7^2o_6o_1 7o_1 6o_1o_0o_2 0v_1o_2 3v_2^2o_1 5o_5^2v_3 - 18cs^4o_8o_1 9o_7^2o_6o_1 7o_1 6o_1o_0o_2o_0o_2 3o_1 5o_5 - \\
&12cs^2o_1 9o_7^3o_6o_1 6o_1o_0o_2o_0o_2 3v_2^2o_1 5o_5^2
\end{aligned}
$$

$C_{22} = -o_8o_7o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5o_5v_3^2 - cs^2o_8o_1 9o_7o_1 7o_1 6o_1o_0v_1o_2 3o_1 5 - 2o_8o_1 9o_7o_1 6o_1o_0o_2 0v_1^2o_2 3v_3 - 2o_8o_1 9o_1 7o_1o_0o_2 0v_1^2o_1 5o_5v_3 +$
$2o_8o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5v_3^2 + 2cs^2o_8o_1 9o_1o_0o_2 0v_1o_2 3o_1 5o_5 + 2o_8o_1 9o_7o_1 7o_1o_0o_2 0v_1o_2 3o_1 5o_5v_3^2 + 2cs^2o_8o_1 9o_7o_1 7o_1o_0o_2 0v_1 5o_5o_5v_3 +$
$2cs^2o_8o_1 9o_7o_1 7o_2o_0v_1o_1 5o_5 - cs^2o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 3o_1 5o_5o_5v_3 + 2cs^2o_8o_1 9o_7o_1 6o_1o_0o_2o_0o_2 3o_1 5v_3 + 2o_1 9o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5o_5v_3^2 -$
$o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1^2o_2 3o_5v_3 + o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_1 5o_5v_3^2 + cs^2o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_5 + 2o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1^2o_2 3o_1 5v_3 -$
$2cs^2o_8o_1 9o_1 7o_1o_0o_2 0v_1o_2 3o_1 5o_5 - o_8o_1 9o_7o_1 7o_1 6o_1o_0v_1^2o_2 3o_1 5o_5v_3 - o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5v_3^2 - cs^2o_8o_1 9o_7o_1 7o_1 6o_2 0v_1o_1 5o_5 +$
$2o_8o_1 9o_7o_1 6o_2 0v_1^2o_2 3o_1 5o_5v_3 + 2o_8o_1 9o_1 7o_1 6o_1o_0o_2 0v_1^2o_1 5o_5v_3 + 2cs^2o_8o_1 9o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5 - 2o_1 9o_7o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5o_5v_3^2 -$
$2cs^2o_1 9o_7o_1 7o_1 6o_1o_0o_2 3o_1 5v_3 + 2cs^2o_8o_1 9o_7o_1 7o_1o_0o_2 0v_1^2o_2 3o_1 5v_3 - 2o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_5o_5v_3^2 -$
$2o_8o_1 9o_7o_1 7o_2o_0v_1o_2 3o_1 5o_5o_5v_3^2 - 2cs^2o_8o_1 9o_7o_1 6o_2o_0o_2 3o_5o_5v_3 - 2o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3v_3^2 + 2cs^2o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5 +$
$2cs^2o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5o_5 + cs^2o_8o_1 9o_7o_1 7o_1 6o_2 0v_1o_2 3o_1 5o_5 + 2cs^2o_8o_1 9o_1 7o_1 6o_1o_0o_2 0o_1 5o_5o_5v_3 + 2cs^2o_8o_1 9o_7o_2 0v_1o_2 3o_1 5o_5 +$
$o_8o_1 9o_7o_1 7o_1 6o_2o_0v_1^2o_1 5o_5v_3 + 2cs^2o_8o_1 9o_7o_1 6o_2o_0o_2 3o_1 5o_5o_5v_3 + cs^2o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3o_1 5 - 2o_8o_1 9o_7o_1 7o_1 6o_2 0v_1^2o_2 3o_5v_3 +$
$2o_1 9o_7o_1 7o_1 6o_1o_0v_1o_2 3o_1 5v_3^2 + 2o_8o_1 9o_1 6o_1o_0o_2 0v_1^2o_2 3o_1 5o_5o_5v_3 + o_8o_7o_1 7o_1 6o_1o_0v_1^2o_2 3o_1 5o_5o_5v_3 - cs^2o_8o_7o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5 -$
$2o_8o_1 9o_7o_1 7o_1o_0o_2 0v_1^2o_2 3o_1 5o_5o_5v_3 - 2o_8o_1 7o_1 6o_1o_0v_1^2o_2 3o_1 5o_5o_5v_3 - 2cs^2o_8o_1 9o_7o_1 7o_2 0v_1o_2 3o_1 5o_5 + 2cs^2o_1 9o_1 7o_1 6o_1o_0v_1o_2 3o_1 5o_5 +$
$cs^2o_8o_1 9o_7o_1 7o_1 6o_2o_0o_2 3o_5o_5v_3 + 2cs^2o_8o_1 9o_7o_1 6o_1o_0o_2o_0o_2 3o_5o_5v_3 - o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1^2o_2 3o_1 5v_3 - o_8o_1 9o_7o_1 7o_1 6o_1o_0o_2 0v_1o_2 3v_3^2 +$

$$2cs^2o_8o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5 - 2o_{19}o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}o_5v_3 - cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}o_5v_3 + 2cs^2o_8o_{19}o_{17}o_{16}o_{10}o_{23}o_{15}o_5v_3 +$$
$$2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{20}o_{23}o_{15}v_3 - 2cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5 + o_8o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5v_3^2 + 2cs^2o_8o_{19}o_7o_{10}o_2o_{23}o_{15}o_5v_3 +$$
$$cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 + 2o_8o_{19}o_7o_{17}o_{10}o_2v_1^2o_{15}o_5v_3 + 2cs^2o_8o_{19}o_7o_{17}o_{10}o_2v_1o_{15}o_5 +$$
$$o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 - 2o_8o_{19}o_7o_{16}o_2v_1o_{23}o_{15}o_5v_3^2 + 2cs^2o_8o_{17}o_{16}o_{10}o_2v_1o_{15}o_5 + 2o_{19}o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}o_5v_3 +$$
$$2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 + 2o_8o_{19}o_7o_7o_2v_1^2o_{23}o_{15}o_5v_3 + 2cs^2o_{19}o_7o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 - 2cs^2o_{19}o_7o_7o_{17}o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 +$$
$$2o_8o_{17}o_{16}o_{10}o_2v_1o_{15}o_5v_3^2 + o_8o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}v_3 - cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2o_{15}o_5v_3 - cs^2o_8o_7o_{17}o_{16}o_{10}o_2o_{15}o_5 -$$
$$2cs^2o_8o_{19}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5 + 2cs^2o_8o_{17}o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 - 2o_8o_{19}o_7o_7o_2v_1^2o_{15}o_5v_3 - o_8o_7o_{17}o_{16}o_{10}o_2v_1o_{15}o_5v_3^2 -$$
$$2o_8o_{19}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 - 2o_8o_{19}o_7o_{16}o_{10}o_2v_1o_{23}o_{15}v_3^2 - 2cs^2o_{19}o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 + cs^2o_8o_7o_{17}o_{16}o_{10}o_{23}o_{15}o_5v_3 +$$
$$2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{23} - 2o_8o_{19}o_7o_{17}o_{10}o_2v_1o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_7o_7o_2o_{15}o_5v_3 + 2o_8o_{19}o_7o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 -$$
$$2cs^2o_8o_{19}o_7o_7o_{10}o_2v_1o_{15}o_5 + 2o_{19}o_7o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 - 2cs^2o_{19}o_7o_{20}v_1^2o_{23}o_{15}o_5v_3 + 2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{15}o_5 +$$
$$2o_8o_{19}o_{17}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 + 2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15}v_3 - 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 + 2o_8o_{19}o_7o_{20}v_1o_{15}o_5v_3^2 -$$
$$2cs^2o_8o_{19}o_7o_{17}o_{16}v_1o_{23}o_{15}o_5 + o_8o_7o_{17}o_{16}o_{10}o_2v_1^2o_{15}o_5v_3 + cs^2o_8o_7o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5 - cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2o_{23}o_3o_5v_3 -$$
$$2o_8o_{17}o_{16}o_{10}o_2v_1^2o_{15}o_5v_3 - 2o_{19}o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 + 2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 + 2cs^2o_8o_{19}o_7o_{17}o_{20}o_2o_{23}o_{15}o_5v_3 -$$
$$o_8o_{19}o_7o_7o_{17}o_{16}o_{10}v_1o_2o_{23}o_{15}v_3^2 - 2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 - 2cs^2o_{19}o_7o_7o_{16}o_{10}o_2v_1o_{23}o_{15}o_5 + 2o_8o_{19}o_7o_{16}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 +$$
$$2o_8o_{19}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 + o_8o_{19}o_7o_{17}o_{16}o_2v_1o_{23}o_{15}o_5v_3^2 - o_8o_7o_{17}o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 + cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2o_{23}v_3 -$$
$$2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{15}o_5 + 2o_{19}o_7o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 - cs^2o_8o_{19}o_7o_7o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5 - 2cs^2o_8o_{19}o_7o_{10}o_2v_1o_{23}o_{15}o_5 -$$
$$2cs^2o_8o_{19}o_7o_7o_{10}o_2o_{23}o_{15}o_5v_3 - 2cs^2o_8o_{19}o_7o_{10}o_2o_{15}o_5v_3 + 2o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 + 2cs^2o_{19}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5 -$$
$$2cs^2o_{19}o_7o_7o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15} - 2cs^2o_8o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5 + 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2o_{23}o_{15} + 2o_8o_{19}o_7o_{16}o_{10}o_2v_1o_{23}v_3^2 +$$
$$cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}o_{15}o_5v_3 + 2cs^2o_8o_{19}o_7o_{16}o_{20}o_2o_{23}o_{15}o_5v_3 + 2o_8o_{17}o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 + o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{15}o_5v_3^2 -$$
$$2cs^2o_{19}o_7o_{16}o_{10}o_2v_1o_{23}o_{15}o_5 + 2cs^2o_{19}o_7o_7o_{16}o_{10}o_{10}o_2v_1o_{23}o_{15}o_5 - 2o_8o_{19}o_7o_{17}o_{10}v_1o_{23}o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_7o_{10}o_2o_{23}o_{15}o_5v_3 -$$
$$2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{15}o_5v_3^2 + 2cs^2o_{19}o_7o_7o_{16}o_{10}o_2v_1o_{23} - 2o_8o_{19}o_7o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_7o_{16}o_{10}o_2o_{23}v_3 -$$
$$2o_8o_{19}o_7o_{17}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 + 2o_8o_{19}o_7o_{20}v_1o_{23}o_{15}o_5v_3^2 + 2o_8o_{19}o_7o_{16}o_{20}v_1o_{23}o_5v_3^2 - cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_1o_{23}o_5 -$$
$$2o_{19}o_{17}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 - 2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}v_3 - 2cs^2o_8o_{19}o_7o_{16}o_{10}o_2v_1o_{23} + cs^2o_8o_{19}o_7o_{17}o_{16}v_1o_{23}o_{15}o_5 -$$
$$cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2o_{20}o_{23}o_{15}v_3 + 2o_8o_{19}o_7o_{16}o_{10}o_2v_1^2o_{23}o_5v_3 - 2o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1^2o_{23}o_5v_3 + 2o_{19}o_7o_{16}o_{10}o_2v_1o_{23}o_{15}v_3^2 +$$
$$2o_{19}o_{16}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 + o_8o_{19}o_7o_{17}o_{16}o_2v_1^2o_{23}o_5v_3 - 2cs^2o_{19}o_7o_{16}o_{10}o_2o_{23}o_{15}v_3 - o_8o_{19}o_7o_{17}o_{16}o_2v_1o_{15}o_5v_3^2 -$$
$$2o_8o_{19}o_7o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 - 2o_8o_{19}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 - cs^2o_8o_{19}o_7o_7o_{17}o_{16}o_{10}o_2v_1o_{23} - o_8o_{19}o_7o_{17}o_{16}o_2v_1^2o_{23}o_{15}o_5v_3 -$$
$$2cs^2o_8o_{19}o_7o_{16}o_{10}o_2o_{23}o_{15}o_5v_3 + o_8o_7o_{17}o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 + 2o_8o_{19}o_7o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 + cs^2o_8o_{19}o_7o_7o_{17}o_{16}o_{10}o_2v_1o_5 +$$
$$cs^2o_8o_{19}o_7o_{17}o_{10}o_2o_{23}o_{15}o_5v_3 + o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1o_{23}o_5v_3^2 - 2o_{19}o_7o_{17}o_{16}o_{10}o_2v_1^2o_{23}o_{15}o_5v_3 -$$
$$o_8o_{19}o_7o_{17}o_{16}o_{10}o_2v_1^2o_{15}o_5v_3 - 2cs^2o_8o_{19}o_7o_{16}o_{10}o_2v_1o_{23}o_{15} - 2o_{19}o_7o_7o_{16}o_{10}o_2v_1o_{23}o_{15}v_3^2 - 2cs^2o_8o_7o_{16}o_{10}o_2o_{20}o_{15}o_5v_3 -$$
$$2cs^2o_8o_{19}o_7o_{16}o_{10}o_2o_{20}o_{23}o_{15}o_5v_3 - 2o_8o_7o_{16}o_{10}o_2v_1o_{23}o_{15}o_5v_3^2 - 2cs^2o_8o_{19}o_{20}o_2o_{23}o_{15}o_5v_3 - cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}o_2o_{23}o_{15}o_5v_3 -$$
$$2cs^2o_8o_{19}o_7o_{16}o_{20}v_1o_{23}o_{15}o_5 + 2o_8o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}o_5v_3$$

$C_{23} = -2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2v_3 + 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{15}o_5v_3 - 4o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}v_3 +$
$cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23} - 2o_8o_{19}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 - cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5 + 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}o_5 -$
$2cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15} - 4o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5v_3 + cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{23}v_2^2o_{15} - 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_3 -$
$4o_8o_{19}o_7o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3 + 4cs^2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3 - 4o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}v_3 -$
$cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_5 + 4cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1o_{15}o_5v_3 + cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_1^2o_{23}o_5 + 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23}o_5 -$
$2cs^2o_8o_{19}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5 + 2o_8o_{19}o_7o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}o_5 - 4cs^2o_8o_{19}o_7o_{16}o_{20}v_1o_{23}o_{15}o_5v_3 + 2cs^2o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5 -$
$2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5 - 2cs^2o_8o_{17}o_{16}o_{10}o_{20}v_2^2o_{15}o_5 - 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5 -$
$cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_2^2o_{15}o_5 - cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}o_2o_{23}v_2^2o_{15}o_5 - 2cs^2o_8o_{19}o_7o_{20}o_2o_{23}v_2^2o_{15}o_5 - 4o_8o_{19}o_7o_{17}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3 -$
$4o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_2^2o_{15}o_5v_3 - 2cs^2o_8o_{19}o_7o_{10}o_{20}v_1^2v_2^2o_{15}o_5 + 2cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5 +$
$2cs^2o_8o_7o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5 - 2o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 - 2o_8o_{19}o_7o_{17}o_{16}o_{10}v_1v_2^2o_{15}o_5v_3 + 2cs^2o_8o_{19}o_7o_{17}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5 -$
$cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_{15} + cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_2^2o_{15}o_5 - 2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15} + cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5 +$
$2cs^2o_8o_{19}o_7o_{10}o_{20}v_1^2o_{23}o_{15}o_5 - o_8o_{19}o_7o_{17}o_{16}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 - 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5 + 2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15}o_5 -$
$2cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1o_{15}o_5v_3 - 4cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}o_{15}v_3 - 4cs^2o_8o_{19}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5v_3 - 2cs^2o_{19}o_7o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_{15} +$
$2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23}o_{15} - 2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 - 2o_8o_{19}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 + 4o_{19}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5o_5v_3 +$
$2cs^2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1^2o_{15}o_5 + 2cs^2o_8o_{19}o_7o_{17}o_{20}o_2o_{23}v_2^2o_{15}o_5 - 2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5 - 2o_8o_7o_{16}o_{10}o_{20}v_1^2v_2^2o_{15}o_5 +$
$4o_8o_{19}o_7o_{10}o_{20}v_1v_2^2o_{15}o_5v_3 + 2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3 - 2cs^2o_8o_7o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5v_3 - 4o_8o_{19}o_7o_{16}o_{20}v_1o_{23}v_2^2o_{15}o_5o_5v_3 -$
$2o_{19}o_7o_{16}o_{10}o_{20}v_1^2v_2^2o_{15}o_5 - 2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2 - 2cs^2o_8o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5v_3 +$
$o_8o_7o_{17}o_{16}o_{10}o_{20}v_1^2v_2^2o_{15}o_5 + 2o_8o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5v_3 + 4o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_2^2o_{15}v_3 + 2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}o_5 +$
$2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5 - 2o_8o_{19}o_7o_{20}v_1^2o_{23}v_2^2o_{15}o_5 + 2o_8o_{19}o_7o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 - 4o_8o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_5v_3 -$
$cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}o_{15}o_5 + 2o_8o_{19}o_7o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 + 4cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}o_{15}v_3 + 2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_5 +$
$o_8o_{19}o_7o_{17}o_{16}o_{20}v_1^2o_{23}v_2^2o_5 - 2cs^2o_8o_{19}o_7o_{20}o_2v_2^2o_{15}o_5 + cs^2o_8o_7o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5 - 4o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5v_3 +$
$2cs^2o_8o_{19}o_7o_{16}o_{20}v_1^2o_{23}o_{15}o_5 - 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23} + cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_2^2o_{15}o_5 + 2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{15}o_5 +$
$2cs^2o_8o_{19}o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5 + 4cs^2o_8o_7o_{16}o_{10}v_1o_{23}o_{15}o_5v_3 + 2o_8o_7o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5 - 4cs^2o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5v_3 +$
$4o_8o_7o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5v_3 - 2cs^2o_8o_{19}o_7o_{10}o_{20}v_2^2o_{15}o_5 - 2cs^2o_8o_{19}o_7o_{17}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5 - 2cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}v_1v_2^2o_{15}o_5o_5v_3 +$
$2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15} + 4cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5o_5v_3 - 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{20}v_1o_{23}o_{15}o_5o_5v_3 -$
$4cs^2o_8o_{19}o_7o_7o_{20}v_1o_{23}o_{15}o_5o_5v_3 + 2o_{19}o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5 - 4cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}o_2o_{23}o_5o_5v_3 - o_8o_{19}o_7o_{17}o_{10}o_{20}v_1^2o_{23}v_2^2o_5o_5 -$
$2cs^2o_8o_{19}o_7o_{16}o_{20}v_1^2o_{23}o_5 - 4o_8o_7o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}o_5o_5v_3 + 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}o_{15}o_5o_5v_3 + 2cs^2o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1^2o_{23}o_{15} -$
$2cs^2o_8o_{19}o_7o_{16}o_{10}o_{20}o_2o_{23}v_2^2 + 2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}v_2^2o_{15}v_3 + 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{23}v_2^2o_{15}o_5 - cs^2o_8o_7o_{17}o_{16}o_{10}o_{20}o_2o_{23}v_2^2o_{15}o_5 +$
$4cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5o_5v_3 - 4cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{15}o_5o_5v_3 - 2o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}o_5 - 2o_8o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}o_5o_5v_3 -$
$4cs^2o_8o_{19}o_7o_{10}o_{20}v_1o_{23}o_{15}o_5o_5v_3 - 2cs^2o_8o_{19}o_7o_{17}o_{16}o_{10}o_{20}v_1o_{23}o_{15}o_5o_5v_3 + 4o_{19}o_7o_{17}o_{16}o_{10}v_1o_{23}v_2^2o_{15}v_3 + 4o_8o_{19}o_7o_{16}o_{20}v_1o_{23}v_2^2o_{5}o_5o_5v_3 +$
$4cs^2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1o_{15}o_5o_5v_3 - 2o_8o_7o_{16}o_{10}v_1^2o_{23}v_2^2o_{15}o_5o_5 - 2o_8o_{19}o_7o_{17}o_{10}o_{20}v_1^2o_{23}v_2^2o_{15}o_5o_5 + o_8o_{19}o_7o_{17}o_{16}o_{10}v_1^2o_{23}v_2^2o_{15} +$

$$
\begin{aligned}
&4o_8o_17o_16o_10v_1o_23v_2^2o_15o_5v_3 - 4cs^2o_19o_17o_16o_10o_2o_1o_23o_15o_5v_3 - 4cs^2o_8o_19o_17o_10o_20v_1o_23o_15o_5v_3 - 2cs^2o_8o_19o_10o_20v_1^2o_23o_15o_5 + \\
&4o_8o_19o_7o_17o_10o_20v_1o_23v_2^2o_15o_5v_3 - o_8o_19o_7o_17o_16o_10o_20v_1^2o_23v_2^2o_5 - 2cs^2o_8o_19o_7o_17o_16o_20v_1o_15o_5v_3 - 4o_8o_19o_7o_17o_10o_20v_1v_2^2o_15o_5v_3 + \\
&o_8o_7o_17o_16o_10v_1^2o_23v_2^2o_15o_5 + 2cs^2o_8o_19o_7o_17o_16o_10o_20v_1o_23o_15v_3 - 2o_8o_19o_7o_17o_20v_1^2v_2^2o_15o_5 - 2cs^2o_19o_16o_10o_20o_20o_23v_2^2o_15o_5 + \\
&2cs^2o_8o_17o_16o_10o_20o_20o_23v_2^2o_15o_5 + 4o_8o_19o_9o_7o_17o_20v_1v_2^2o_15o_5v_3 + o_8o_19o_9o_7o_17o_16o_10o_20v_1^2o_23v_2^2 - cs^2o_8o_19o_9o_7o_17o_16o_10o_20v_2^2o_15o_5 - \\
&2cs^2o_8o_17o_16o_10o_20v_1^2o_15o_5 + 2cs^2o_19o_9o_7o_16o_10o_20o_20o_23v_2^2o_15o_5 - 2cs^2o_19o_9o_7o_17o_16o_10o_20o_20o_23v_2^2o_15o_5 + 2o_8o_19o_9o_7o_17o_20v_1^2o_23v_2^2o_15o_5 - \\
&2cs^2o_8o_19o_9o_7o_16o_10o_20v_1^2o_23o_15o_5 - 4cs^2o_19o_9o_7o_16o_10o_20v_1o_23o_15o_5v_3 + 4cs^2o_19o_9o_7o_17o_16o_10o_20v_1o_23o_15o_5v_3 - \\
&cs^2o_8o_19o_9o_7o_17o_16o_20v_1^2o_23o_15o_5 - 2cs^2o_8o_19o_9o_7o_20v_1^2o_23o_15o_5 + 2o_8o_19o_9o_7o_17o_16o_10o_20v_1v_2^2o_15o_5v_3 - 2cs^2o_8o_19o_9o_17o_16o_10o_20v_1^2o_23o_15o_5 - \\
&o_8o_19o_9o_7o_17o_16o_10o_20v_1^2o_23v_2^2o_15 + 2cs^2o_19o_9o_17o_16o_10o_20o_20o_23v_2^2o_15o_5 - 4cs^2o_19o_9o_7o_17o_16o_10o_20v_1o_23o_15v_3 + \\
&4cs^2o_19o_16o_10o_20v_1o_23o_15o_5v_3 + 4cs^2o_19o_9o_7o_16o_10o_20v_1o_23o_15v_3 + 2o_19o_9o_7o_17o_16o_10v_1^2o_23v_2^2o_15o_5 - 2o_8o_19o_9o_7o_16o_20v_1^2o_23v_2^2o_5 + \\
&4cs^2o_8o_19o_9o_7o_16o_20v_1o_23o_5v_3 + 2cs^2o_8o_19o_9o_7o_17o_16o_20v_1o_23o_15o_5v_3 + 4cs^2o_8o_19o_9o_7o_20o_20v_1o_23o_15o_5v_3 + o_8o_19o_9o_7o_17o_16o_10o_20v_1^2o_23v_2^2o_15o_5 + \\
&2cs^2o_8o_19o_17o_10o_20v_1^2o_23o_15o_5 + cs^2o_8o_7o_17o_16o_10o_20v_1^2o_15o_5 + 2cs^2o_19o_9o_7o_17o_16o_10o_20o_20o_23v_2^2o_15 + 4cs^2o_8o_19o_7o_16o_10o_20o_20v_1o_23o_15o_5v_3 + \\
&4o_8o_19o_9o_17o_16o_10o_20v_1o_23v_2^2o_15o_5v_3 + 4o_19o_9o_17o_16o_10v_1o_23v_2^2o_15o_5v_3 + 2o_8o_19o_9o_7o_17o_10o_20v_1^2v_2^2o_15o_5 - 4cs^2o_8o_17o_16o_10o_20v_1o_23o_15o_5v_3 - \\
&2cs^2o_8o_19o_9o_7o_16o_20o_20o_23v_2^2o_5 + cs^2o_8o_19o_9o_7o_17o_16o_10o_20o_20o_23v_2^2o_15o_5 + 2cs^2o_8o_19o_9o_7o_10o_20o_20o_23v_2^2o_15o_5 + 2o_8o_19o_9o_7o_17o_16o_20v_1o_23v_2^2o_15o_5o_5v_3 - \\
&2cs^2o_8o_17o_16o_10v_1^2o_23o_15o_5 - 2o_8o_19o_9o_7o_17o_16o_10o_20v_1o_23v_2^2o_15o_5v_3 - 2o_8o_19o_9o_7o_17o_16o_10v_1o_23v_2^2o_15v_3 + 4o_8o_19o_9o_7o_16o_10o_20v_1o_23v_2^2v_3 + \\
&2cs^2o_19o_9o_7o_17o_16o_10v_1^2o_23o_15o_5 - cs^2o_8o_19o_9o_7o_17o_16o_10o_20v_2^2o_15o_5 + 2cs^2o_8o_19o_9o_7o_17o_20v_1^2o_23o_15o_5 + 2o_8o_19o_9o_7o_17o_16o_10o_20v_1o_23v_2^2o_5v_3 + \\
&4cs^2o_8o_19o_10o_20v_1o_23o_15o_5v_3 - 2cs^2o_19o_9o_17o_16o_10v_1^2o_23o_15o_5 + 4o_8o_19o_9o_7o_16o_10o_20v_1o_23v_2^2o_15o_5v_3 - 2cs^2o_19o_9o_7o_17o_16o_10o_20o_23v_2^2o_15 + \\
&cs^2o_8o_19o_9o_7o_17o_16o_10v_1^2o_23o_15 - 4cs^2o_8o_19o_9o_7o_17o_10o_20v_1o_15o_5v_3 + 4o_8o_19o_9o_10o_20v_1o_23v_2^2o_15o_5v_3 + 2cs^2o_8o_19o_9o_7o_17o_10o_20o_20v_2^2o_15o_5 - \\
&cs^2o_19o_9o_7o_17o_16o_10o_20v_1^2o_23o_5 - 2o_8o_19o_17o_10o_20v_1^2v_2^2o_15o_5 + cs^2o_8o_7o_17o_16o_10v_1^2o_23o_15o_5 - 2o_19o_9o_7o_16o_10o_20v_1^2o_23v_2^2o_15 + \\
&cs^2o_8o_19o_9o_7o_17o_16o_20v_1^2o_23v_2^2o_5 + 2cs^2o_8o_19o_9o_7o_16o_20o_20o_23v_2^2o_5 - 2cs^2o_8o_19o_9o_7o_20v_1^2o_15o_5 - 2cs^2o_8o_19o_9o_7o_17o_16o_10v_1o_23o_15v_3 - \\
&4o_19o_9o_7o_17o_16o_10v_1o_23v_2^2o_15o_5v_3 + 4cs^2o_8o_19o_9o_7o_16o_10o_20v_1o_23v_3 - 2cs^2o_8o_19o_17o_10o_20v_1^2o_15o_5 + 2o_8o_19o_16o_10o_20v_1^2o_23v_2^2o_15o_5 + \\
&cs^2o_8o_19o_9o_7o_17o_16o_10o_20o_20o_23v_2^2 + 2cs^2o_8o_19o_9o_7o_16o_20o_20o_23v_2^2o_15o_5 + cs^2o_8o_19o_9o_7o_17o_16o_20v_1^2o_15o_5 - 4o_8o_19o_9o_7o_17o_20v_1o_23v_2^2o_15o_5o_5v_3 + \\
&o_8o_19o_9o_7o_17o_16o_20v_1^2v_2^2o_15o_5 + 2cs^2o_8o_19o_17o_16o_10o_20v_1^2o_15o_5 + 2cs^2o_8o_19o_9o_7o_17o_16o_10o_20v_1o_23o_5o_5v_3 + 2cs^2o_8o_19o_9o_16o_10o_20v_1^2o_23o_15o_5 + \\
&4o_19o_9o_7o_17o_16o_10o_20v_1o_23v_2^2o_15o_5o_5v_3 + 2o_8o_19o_9o_17o_16o_10o_20v_1^2v_2^2o_15o_5 - 4o_8o_19o_9o_17o_16o_10v_1o_23v_2^2o_15o_5v_3 - \\
&cs^2o_8o_19o_9o_7o_17o_16o_10o_20v_1^2o_23o_15 + 2o_8o_19o_9o_7o_16o_20v_1^2o_23v_2^2o_15o_5 + 2cs^2o_8o_7o_17o_16o_10o_20v_1o_23o_15o_5o_5v_3 - \\
&4cs^2o_8o_19o_17o_16o_10v_1o_23o_15o_5v_3 - 2cs^2o_8o_19o_9o_7o_17o_10o_20v_1^2o_23o_15o_5 + 2o_19o_9o_7o_17o_16o_10o_20v_1^2o_23v_2^2o_15 - \\
&o_8o_19o_9o_7o_17o_16o_10v_1^2o_23v_2^2o_15o_5 + 4cs^2o_8o_19o_9o_7o_17o_20o_20v_1o_15o_5o_5v_3 - 2cs^2o_19o_9o_7o_16o_10o_20v_1^2o_23o_15 + 2cs^2o_8o_19o_9o_7o_16o_10o_20o_20o_23v_2^2o_15
\end{aligned}
$$

$$
\begin{aligned}
C_{24} =\ &12o_19o_7^2o_16o_10^2v_2^2 - 12o_19o_7o_16^2o_10^3v_2^2 + 18o_19o_7o_16^2o_10^2o_23v_2^2 - 6o_19o_7^2o_16o_10^3o_23v_2^2 + 12o_19o_7o_16^2o_10^3o_23 - \\
&12o_19o_16o_10^3o_23v_2^2 + 36cs^2o_19o_7^2o_16^2o_23 - 18o_19o_7^2o_16o_10^2o_23 + 18cs^2o_7^2o_16^2o_10^2o_23 + 18o_19o_7o_16o_10^3o_23v_2^2 - 6o_7^2o_16^2o_10^2o_23 - \\
&12o_19o_7^2o_16^2o_23 - 12o_7o_16^2o_10^3 - 18cs^2o_19o_7^2o_16o_10^3o_23 + 12o_19o_7^2o_16^2o_10o_23 + 54cs^2o_19o_7o_16^2o_10^2o_23 - 12o_19o_16^2o_10^2o_23v_2^2 - \\
&2o_19o_7^2o_16^2o_10^2o_23v_2^2 + 12o_19o_16o_10^3o_23 - 36cs^2o_19o_7^2o_16^2o_10o_23 + 6o_19o_7^2o_16o_10^3o_23 - 12o_19o_7o_10^3o_23v_2^2 - 18o_19o_7o_16^2o_10^2o_23 + \\
&12o_19o_7o_16^2o_10^3 - 12o_19o_7^2o_16o_10^2 - 36cs^2o_19o_7o_10^3o_23 - 12o_19o_7^2o_16o_10^3v_2^2 - 36cs^2o_19o_7o_16o_10^3 + 12o_19o_7^2o_16o_10^3 - 18cs^2o_7^2o_16^2o_10^3 - \\
&6o_7o_16^2o_10^3v_2^2 - 40cs^2o_19o_7o_16o_10^3o_23 - 12o_19o_7^2o_10^2o_23v_2^2 + 12o_19o_7o_10^3o_23 - 12o_19o_7^2o_16o_10o_23v_2^2 + 54cs^2o_19o_7^2o_16o_10^2o_23 - \\
&36cs^2o_19o_7o_16^2o_10^3 + 36cs^2o_19o_7^2o_16o_10^2 - 36cs^2o_19o_7o_16o_10^3o_23 - 6o_19o_7^2o_16o_10^3 - 36cs^2o_7o_16^2o_10^2o_23 + 12o_19o_7o_16^2o_10^3v_2^2 - \\
&o_19o_7^2o_16^2o_10^3o_23 - 36cs^2o_19o_7o_16o_10o_23 + o_19o_7^2o_16^2o_10^3o_23v_2^2 - 12o_19o_16^2o_10^3o_23 - 18cs^2o_19o_7o_16^2o_10^2 + 36cs^2o_19o_7o_16o_10^3 + \\
&6o_19o_7^2o_16^2o_10^3v_2^2 + 36cs^2o_19o_7o_10^3o_23 - 6cs^2o_19o_7o_16^2o_10^2o_23 - 12o_19o_7^2o_10^3o_23 + 18o_19o_7^2o_16o_10^2o_23v_2^2 + 6o_19o_7^2o_16^2o_10^2 + \\
&54cs^2o_19o_7o_16o_10^3o_23 - 12o_19o_7o_16o_10^3 + 36cs^2o_7o_16^2o_10^3 + 36cs^2o_19o_16^2o_10^3o_23 - 12o_19o_7o_16^2o_10^3o_23v_2^2 + 12o_7o_16^2o_10^2o_23 + \\
&18cs^2o_19o_7^2o_16^2o_10^3 + 12o_19o_7o_16o_10^3v_2^2 - 36cs^2o_19o_7^2o_10^2o_23 - 6o_19o_7^2o_16^2o_10^2v_2^2 + 12o_19o_7^2o_16^2o_23v_2^2 + 2o_19o_7^2o_16^2o_10^2o_23 + \\
&12o_19o_16^2o_10^2o_23 + 12o_19o_7^2o_10^3o_23v_2^2 + 6o_7o_16^2o_10^2o_23v_2^2 - 18o_19o_7o_16o_10^3o_23 - 12o_7o_16^2o_10^2o_23v_2^2 - 36cs^2o_19o_16^2o_10^2o_23 - \\
&12o_19o_7^2o_16^2o_10o_23v_2^2 + 12o_19o_7^2o_16o_10o_23 + 5cs^2o_19o_7^2o_16^2o_10^3o_23 + 12o_7o_16^2o_10^3v_2^2 + 6o_7^2o_16^2o_10^3 + 12o_19o_7^2o_10^2o_23
\end{aligned}
$$

$$
\begin{aligned}
C_{25} =\ &-36o_19o_7^2o_16o_10^2v_2^2 - cs^2o_19o_7^3o_16o_10^2o_23 - 36o_19o_7^2o_16o_23v_2^2 + 12cs^2o_19o_7^3o_10 + 36o_19o_7^3o_10^2o_23v_2^2 + 12cs^2o_19o_7o_10o_10^2o_23 + \\
&12o_7^2o_16o_10o_23 - 12cs^2o_19o_7o_7o_16o_10o_23 - 12o_19o_7^2o_10o_23 - 6cs^2o_7^3o_16o_10^2 + 12cs^2o_19o_7^2o_10^2 + 12cs^2o_19o_7^2o_10o_23 - 12cs^2o_19o_16o_10^2o_23 - \\
&12o_19o_7o_10o_10^2o_23 - 12cs^2o_7^2o_16o_10o_23 - 12o_7^2o_16o_10^2 + 6cs^2o_19o_7^3o_16o_23 - 12o_19o_7^3o_10^2o_23 + 12o_19o_7^2o_16o_10^2 - 36o_19o_7^3o_10v_2^2 - \\
&36o_19o_7o_16o_10o_23v_2^2 + 18o_7^3o_16o_10o_23v_2^2 + 6cs^2o_7^3o_16o_10o_23 - 6o_7^3o_16o_10o_23 + 12o_19o_7o_16o_10o_23 - 72o_19o_7^2o_10^2o_23v_2^2 + \\
&72o_19o_7^2o_16o_10o_23v_2^2 + 18o_19o_7^3o_16o_23v_2^2 - 4cs^2o_19o_7^2o_16o_10^2o_23 + 18o_19o_7^3o_16o_10^2v_2^2 + 12cs^2o_19o_7^3o_10^2o_23 - 12cs^2o_19o_7^2o_16o_10^2 - \\
&6o_19o_7^3o_16o_23 - 12cs^2o_19o_7^3o_10^2 + 6o_7^2o_16o_10^2 - 36o_7^2o_16o_10o_23v_2^2 + 24cs^2o_19o_7^2o_16o_10o_23 + 6o_19o_7^3o_16o_10 - 18o_19o_7^3o_16o_10v_2^2 - \\
&12o_19o_7^3o_10 + 6o_19o_7^3o_16o_10o_23 - 12cs^2o_19o_7^3o_10o_23 - 18o_7^3o_16o_10^2v_2^2 + 36o_19o_7^2o_10o_23v_2^2 + 12cs^2o_7^2o_16o_10^2 + 12o_19o_7^2o_10o_23 - \\
&6cs^2o_19o_7^3o_16o_10 - 18o_19o_7^3o_16o_10o_23v_2^2 + 36o_19o_7^3o_10v_2^2 - 12o_19o_7^2o_10^2 + 6cs^2o_19o_7^2o_16o_10^2 - 36o_19o_7^3o_10o_23v_2^2 - 24cs^2o_19o_7^2o_10^2o_23 + \\
&12o_19o_7^2o_16o_23 + 36o_19o_7^2o_10^2v_2^2 - 6cs^2o_19o_7^3o_16o_10o_23 + 12o_19o_7^3o_10^2 - 12cs^2o_19o_7^2o_16o_23 + 18cs^2o_19o_7o_16o_10^2o_23 + 36o_7^3o_16o_10^2v_2^2 - \\
&24o_19o_7^2o_16o_10o_23 - 6o_19o_7^3o_16o_10^2 + 36o_19o_7o_10^2o_23v_2^2 + 24o_19o_7^2o_10^2o_23
\end{aligned}
$$

$$
\begin{aligned}
C_{26} =\ &18o_19^2o_7o_16o_10o_23v_3^3 + 12o_19^2o_7^2o_11v_3^3 + 6o_19^2o_7^2o_16o_23v_3^3 - 6o_19^2o_7^2o_11o_16o_10 + 54cs^2o_19o_7o_11o_16o_10o_23 - 12o_19^2o_7o_11o_10 - \\
&12o_19^2o_7^2o_11o_10v_3^3 + 12o_7o_11o_16o_10o_23 + 6o_19o_7^2o_11o_16o_10 + 54cs^2o_19^2o_7o_16o_10o_23 - 9cs^2o_19^2o_7o_11o_16o_10o_23 - 6o_7^2o_11o_16o_10o_23 + \\
&36cs^2o_19^2o_7o_11o_10 - 12o_19o_11o_16o_10o_23v_3^3 - 3o_19o_7^2o_11o_16o_10o_23v_3^3 - 5o_19^2o_7^2o_16o_10o_23v_3^3 - 12o_19^2o_7o_10o_23v_3^3 + \\
&3cs^2o_19^2o_7^2o_11o_16o_10o_23 - 12o_19^2o_7^2o_23v_3^3 + 12o_19^2o_7o_11o_16o_10o_23v_3^3 + 18o_19o_7o_11o_16o_10o_23v_3^3 + 12o_19^2o_7o_10o_23v_3^3 - 18cs^2o_19^2o_7o_11o_16o_10 - \\
&18o_19^2o_7o_16o_10o_23 - 6o_19^2o_7^2o_16o_23 - 12o_19^2o_7^2o_11 - 36cs^2o_19^2o_16o_10o_23 + 18cs^2o_7^2o_11o_16o_10o_23 + 12o_19^2o_7o_16o_10o_23 + \\
&18cs^2o_19^2o_7^2o_11o_16o_10 - 12o_19^2o_16o_10o_23v_3^3 - 36cs^2o_19^2o_7^2o_23 + 18cs^2o_19^2o_7^2o_16o_23 - 36cs^2o_7o_11o_16o_10o_23 - \\
&36cs^2o_19^2o_7o_11o_16o_10o_23 - 36cs^2o_19^2o_7o_10o_23 - 12o_19^2o_7^2o_10o_23 - 12o_19^2o_7o_11o_16o_10o_23v_3^3 + 6o_19^2o_7^2o_11o_16o_10v_3^3 + \\
&36cs^2o_19^2o_11o_16o_10o_23 + 12o_19^2o_7o_11o_16o_10 - 18cs^2o_19^2o_7^2o_11o_16 + 12o_19^2o_7o_11o_10v_3^3 + 12o_19^2o_7o_11o_16o_10o_23 - 12o_7o_11o_16o_10o_23v_3^3 - \\
&o_19^2o_7^2o_11o_16o_10o_23 + 12o_19^2o_7^2o_10o_23v_3^3 + 6o_19^2o_7^2o_11o_16 - 12o_19^2o_7o_11o_16o_10v_3^3 - 36cs^2o_19o_11o_16o_10o_23 - 12o_19o_7o_11o_16o_10 + \\
&36cs^2o_19^2o_7^2o_10o_23 - 15cs^2o_19^2o_7^2o_16o_10o_23 - 6o_19^2o_7^2o_11o_16v_3^3 + 3o_19o_7^2o_11o_16o_10o_23 + 12o_19o_11o_16o_10o_23 + 36cs^2o_19^2o_7o_11o_16o_10 + \\
&5o_19^2o_7^2o_16o_10o_23 + 36cs^2o_19^2o_7^2o_11 + 12o_19o_7o_11o_16o_10o_23v_3^3 + 12o_19^2o_7^2o_11o_10 - 36cs^2o_19^2o_7^2o_11o_10 - 6o_19o_7^2o_11o_16o_10v_3^3 + \\
&o_19^2o_7^2o_11o_16o_10o_23v_3^3 + 12o_19^2o_7^2o_23 - 18o_19o_7o_11o_16o_10o_23 - 12o_19^2o_11o_16o_10o_23 - 36cs^2o_19^2o_7o_11o_16o_10 + 6o_7^2o_11o_16o_10o_23v_3^3
\end{aligned}
$$

$$C_{27} = 36o_7^2o_{11}o_{16}o_{10}v_3^2 - 12cs^2o_{19}o_7o_{16}o_{10}o_{23} + 18cs^2o_{19}o_7o_{11}o_{16}o_{10}o_{23} + 12o_{19}o_7^2o_{10}o_{23} - 12o_7o_{11}o_{16}o_{10}o_{23} - 12cs^2o_{19}o_7^2o_{10}o_{23} +$$
$$12o_{19}o_7^2o_{11}o_{16}o_{10} + 36o_{19}o_7^3o_{11}v_3^2 + 36o_{19}o_7^2o_{11}o_{10}v_3^2 - 5cs^2o_{19}o_7^2o_{11}o_{16}o_{10}o_{23} + 18o_7^2o_{11}o_{16}o_{10}o_{23} - 3o_{19}o_7^2o_{11}o_{16}o_{10}o_{23}v_3^2 +$$
$$6cs^2o_{19}o_7^3o_{11}o_{16}o_{10} + 18o_{19}o_7^3o_{11}o_{16}o_{10}v_3^2 - 12o_{19}o_7^2o_{11}o_{10} + 6cs^2o_{19}o_7^3o_{16}o_{23} + 18o_7^3o_{11}o_{16}o_{10}o_{23}v_3^2 - 36o_{19}o_7^3o_{11}o_{10}v_3^2 -$$
$$6o_{19}o_7^3o_{11}o_{16}o_{10} - 12cs^2o_{19}o_7^2o_{11}o_{16}o_{10} + 18o_{19}o_7^3o_{16}o_{23}v_3^2 + 54o_{19}o_7^2o_{16}o_{10}o_{23}v_3^2 + 12cs^2o_{19}o_7^3o_{11} - 18cs^2o_7^2o_{11}o_{16}o_{10}o_{23} +$$
$$12o_{19}o_7o_{16}o_{10}o_{23} - 36o_{19}o_7o_{16}o_{10}o_{23}v_3^2 + 12o_{19}o_7^2o_{23} - 36o_{19}o_7^2o_{23}v_3^2 + 12cs^2o_7o_{11}o_{16}o_{10}o_{23} + 12cs^2o_{19}o_7^2o_{11}o_{10} - 6o_{19}o_7^3o_{16}o_{23} -$$
$$6cs^2o_7^2o_{11}o_{16}o_{10} + 6cs^2o_7^2o_{11}o_{16}o_{10}o_{23} + 18cs^2o_{19}o_7^2o_{16}o_{10}o_{23} - 15o_{19}o_7^2o_{16}o_{10}o_{23}v_3^2 + 5o_{19}o_7^2o_{16}o_{10}o_{23} - 36o_{19}o_7^2o_{10}o_{23}v_3^2 +$$
$$12cs^2o_{19}o_7^2o_{10}o_{23} + 36o_7o_{11}o_{16}o_{10}o_{23}v_3^2 + 6o_{19}o_7^3o_{11}o_{16} - 18o_{19}o_7^3o_{11}o_{16}v_3^2 - 6cs^2o_{19}o_7^3o_{11}o_{16} - 12o_{19}o_7^3o_{10}o_{23} -$$
$$12cs^2o_{19}o_{11}o_{16}o_{10}o_{23} + 6o_7^3o_{11}o_{16}o_{10} - 12o_{19}o_7^3o_{11} + o_{19}o_7^2o_{11}o_{16}o_{10}o_{23} - 12cs^2o_{19}o_7^3o_{11}o_{10} - 12o_7^2o_{11}o_{16}o_{10} - 18o_7^3o_{11}o_{16}o_{10}v_3^2 -$$
$$36o_{19}o_7^2o_{11}o_{16}o_{10}v_3^2 - 5cs^2o_{19}o_7^3o_{16}o_{10}o_{23} + 12cs^2o_7^2o_{11}o_{16}o_{10} + 12o_{19}o_7^3o_{11}o_{10} - 6o_7^3o_{11}o_{16}o_{10}o_{23} - 18o_{19}o_7^2o_{16}o_{10}o_{23} +$$
$$36o_{19}o_7^3o_{10}o_{23}v_3^2 - 12cs^2o_{19}o_7^3o_{23} - cs^2o_{19}o_7^3o_{11}o_{16}o_{10}o_{23} - 54o_7^2o_{11}o_{16}o_{10}o_{23}v_3^2$$

$$C_{28} = -12o_{19}^2o_7^2v_3^4 + 24cs^2o_{19}o_7^2 + 6cs^2o_{19}^2o_7^2v_3^2 - 72o_{19}o_7^2v_3^2 + 24cs^4o_{19}o_7 + 24cs^4o_{19}^2 + 36o_7^3v_3^4 - 6cs^2o_{19}o_7^2 + 30o_{19}o_7^3v_3^2 -$$
$$12cs^2o_{19}^2o_7^2v_3^2 - 24cs^4o_{19}o_7^2 + 3o_{19}^2o_7^3v_3^2 - 24cs^2o_{19}o_7 + 72cs^2o_{19}o_7v_3^2 - 72o_7^2v_3^4 + 6cs^4o_{19}o_7^2 + 144cs^2o_{19}o_7^2v_3^2 + 12cs^2o_{19}^2o_7 -$$
$$3o_{19}^2o_7^3v_3^2 - 30o_{19}o_7^3v_3^4 - 3cs^4o_{19}^2o_7^2 + 72o_7^2v_3^2 - 36cs^2o_{19}^2o_7v_3^2 + 24cs^4o_{19}^2o_7^2 + 108cs^2o_7^3v_3^2 - 48cs^4o_{19}^2o_7 + 72o_{19}o_7v_3^4 + 12o_{19}^2o_7^2v_3^2 +$$
$$cs^2o_{19}^2o_7^3 - 72cs^2o_{19}o_7^3v_3^2 - 216cs^2o_7^2v_3^2 - 8cs^2o_{19}^2o_7^2 - 36o_7^3v_3^2$$

2.4.5 Conservation of momentum: ρv_3

attached text file: `output_d3q27_nse_clbm1_symbolic_pde_03.txt`

$$v_3\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_3}{\partial t} + \frac{v_1\delta_l v_3}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{\rho\delta_l v_3}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\rho v_1\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_1} + \frac{v_2\delta_l v_3}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{\rho\delta_l v_3}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\rho v_2\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_2} + (cs^2+v_3^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} +$$

$$\frac{2\rho\delta_l v_3}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2+o_6)\frac{cs^2\delta_l^2}{2\delta_t o_6}\frac{\partial\rho}{\partial x_1}\frac{\partial v_3}{\partial x_1} + (-2+o_6)\frac{cs^2\delta_l^2}{2\delta_t o_6}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_3} + (-2+o_7)\frac{cs^2\delta_l^2}{2o_7\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_2} + (-2+o_7)\frac{cs^2\delta_l^2}{2o_7\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_3} +$$

$$(-2-2cs^2o_{11}-3o_{11}v_3^2+4cs^2+6v_3^2+o_{11})\frac{\delta_l^2}{\delta_t o_{11}}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_3} + (2-o_{11})\frac{3\rho\delta_l^2 v_3}{\delta_t o_{11}}\left(\frac{\partial v_3}{\partial x_3}\right)^2 + (-2+o_6)\frac{cs^2\rho\delta_l^2}{2\delta_t o_6}\frac{\partial^2 v_3}{\partial x_1^2} +$$

$$(-2+o_7)\frac{cs^2\rho\delta_l^2}{2o_7\delta_t}\frac{\partial^2 v_3}{\partial x_2^2} + (-2+o_6)\frac{cs^2\rho\delta_l^2}{2\delta_t o_6}\frac{\partial^2 v_1}{\partial x_1\partial x_3} + (-2+o_7)\frac{cs^2\rho\delta_l^2}{2o_7\delta_t}\frac{\partial^2 v_2}{\partial x_2\partial x_3} +$$

$$(-2-3cs^2o_{11}-o_{11}v_3^2+6cs^2+2v_3^2+o_{11})\frac{\delta_l^2 v_3}{2\delta_t o_{11}}\frac{\partial^2\rho}{\partial x_3^2} + (-2-cs^2o_{11}-3o_{11}v_3^2+2cs^2+6v_3^2+o_{11})\frac{\rho\delta_l^2}{2\delta_t o_{11}}\frac{\partial^2 v_3}{\partial x_3^2} +$$

$$(-1+v_1^2+3cs^2)\frac{v_1\delta_l^3 v_3}{12\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + (-1+3v_1^2+cs^2)\frac{\rho\delta_l^3 v_3}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_1\frac{\rho v_1\delta_l^3}{6\delta_t o_6 o_{13}}\frac{\partial^3 v_3}{\partial x_1^3} - \frac{cs^2\rho\delta_l^3 v_3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} - \frac{cs^2\rho\delta_l^3 v_3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2}$$

$$+ (-1+3cs^2+v_2^2)\frac{v_2\delta_l^3 v_3}{12\delta_t}\frac{\partial^3\rho}{\partial x_2^3} + (-1+cs^2+3v_2^2)\frac{\rho\delta_l^3 v_3}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_2\frac{\rho v_2\delta_l^3}{6o_{16}o_7\delta_t}\frac{\partial^3 v_3}{\partial x_2^3} + (-12-o_6^2+12o_6)\frac{cs^4\delta_l^3}{6\delta_t o_6^2}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} +$$

$$- \frac{cs^2\rho\delta_l^3 v_3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} + (-12+12o_7-o_7^2)\frac{cs^4\delta_l^3}{6o_7^2\delta_t}\frac{\partial^3\rho}{\partial x_2^2\partial x_3} - \frac{cs^2\rho\delta_l^3 v_3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C_3\frac{\rho\delta_l^3 v_3}{12\delta_t o_{18}o_6 o_{11}^2}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} +$$

$$C_4\frac{\rho\delta_l^3 v_3}{12o_7\delta_t o_{19}o_{11}^2}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C_5\frac{\delta_l^3}{12\delta_t o_{11}^2}\frac{\partial^3\rho}{\partial x_3^3} +$$

$$(-24+5cs^2o_{11}^2+11o_{11}^2v_3^2-36cs^2o_{11}-60o_{11}v_3^2+36cs^2+60v_3^2+24o_{11}-4o_{11}^2)\frac{\rho\delta_l^3 v_3}{6\delta_t o_{11}^2}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$(2cs^4+6v_1^4-3o_9v_1^4-cs^4o_9-12cs^2o_9v_1^2+24cs^2v_1^2+3o_9v_1^2-6v_1^2-2cs^2+cs^2o_9)\frac{\delta_l^4 v_3}{24\delta_t o_9}\frac{\partial^4\rho}{\partial x_1^4} +$$

$$(-4-5o_9v_1^2+10v_1^2+2o_9+6cs^2-3cs^2o_9)\frac{\rho v_1\delta_l^4 v_3}{12\delta_t o_9}\frac{\partial^4 v_1}{\partial x_1^4} + C_6\frac{\rho\delta_l^4}{24\delta_t o_6^3 o_{13}3^2}\frac{\partial^4 v_3}{\partial x_1^4} +$$

$$(-o_{12}+3o_{12}cs^2+o_{12}o_9v_1^2+o_{12}v_1^2+3o_{12}cs^2o_9-3o_9v_1^2+3o_9-9cs^2o_9-o_{12}o_9)\frac{\rho v_1\delta_l^4 v_3}{12o_{12}\delta_t o_9}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} +$$

$$(-2+o_5)\frac{cs^4\delta_l^4 v_3}{6\delta_t o_5}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} + C_7\frac{cs^4\rho\delta_l^4}{2o_{16}o_7^2\delta_t o_8 o_6^2 o_{14}o_{13}o_{17}}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2^2} +$$

$$(v_2^2o_{15}+o_{10}v_2^2o_{15}-o_{10}o_{15}-9o_{10}cs^2+3o_{10}+3cs^2o_{15}+3o_{10}cs^2o_{15}-3o_{10}v_2^2-o_{15})\frac{\rho v_2\delta_l^4 v_3}{12\delta_t o_{10}o_{15}}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} +$$

$$(-12o_{10}cs^2v_2^2+24cs^2v_2^2+2cs^4+6v_2^4+o_{10}cs^2+3o_{10}v_2^2-o_{10}cs^4-3o_{10}v_2^2-2cs^2-6v_2^2)\frac{\delta_l^4 v_3}{24\delta_t o_{10}}\frac{\partial^4\rho}{\partial x_2^4} +$$

$$(-4-3o_{10}cs^2+2o_{10}-5o_{10}v_2^2+6cs^2+10v_2^2)\frac{\rho v_2\delta_l^4 v_3}{12\delta_t o_{10}}\frac{\partial^4 v_2}{\partial x_2^4} + C_8\frac{\rho\delta_l^4}{24o_{16}^2 o_7^3\delta_t}\frac{\partial^4 v_3}{\partial x_2^4} + C_9\frac{cs^2 v_1\delta_l^4}{12o_{22}\delta_t o_{18}o_6^2 o_9 o_{13}3^2 o_{11}}\frac{\partial^4\rho}{\partial x_1^3\partial x_3}$$

$$+ C_{10}\frac{cs^2\rho\delta_l^4}{12o_{22}\delta_t o_{18}o_6^3 o_9 o_{13}o_{11}}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} +$$

$$(-o_9o_{13}-3o_9v_1^2+o_{13}v_1^2+o_9o_{13}v_1^2+3o_9-o_{13}+3cs^2o_9o_{13}+3cs^2o_{13}-9cs^2o_9)\frac{\rho v_1\delta_l^4 v_3}{12\delta_t o_9 o_{13}}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$$

$$C_{11}\frac{\delta_l^4}{2o_7 o_{22}\delta_t o_8 o_{18}o_6 o_{14}o_{20}o_{13}o_{19}o_{11}}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} + C_{12}\frac{\rho\delta_l^4}{2o_7 o_{22}\delta_t o_8 o_{18}o_6 o_{14}o_{20}o_{13}o_{19}o_{11}}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C_{13}\frac{\rho\delta_l^4}{12o_7^2 o_{22}\delta_t o_8 o_{18}o_6^3 o_{14}o_5 o_{20}o_{13}o_{19}o_{11}}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} + C_{14}\frac{\rho\delta_l^4 v_3}{o_7 o_{22}\delta_t o_8 o_{18}o_6 o_{14}o_{20}o_{13}o_{19}o_{11}}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C_{15}\frac{\delta_l^4}{2o_23o_16o_7\delta_to_8o_18o_6o_2o_0o_19o_11o_17}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} \;+\; C_{16}\frac{\rho\delta_l^4}{12o_23o_16o_7^3\delta_to_8o_18o_6^2o_5o_2o_0o_19o_11o_17}\frac{\partial^4v_1}{\partial x_1\partial x_2^2\partial x_3} \;+$$

$$C_{17}\frac{\rho v_2\delta_l^4}{o_23o_16o_7\delta_to_8o_18o_6o_2o_0o_19o_11o_17}\frac{\partial^4v_2}{\partial x_1\partial x_2^2\partial x_3} \;+\; C_{18}\frac{\rho\delta_l^4}{2o_23o_16o_7\delta_to_8o_18o_6o_2o_0o_19o_11o_17}\frac{\partial^4v_3}{\partial x_1\partial x_2^2\partial x_3} \;+$$

$$C_{19}\frac{cs^2v_2\delta_l^4}{12o_23o_16^2o_7^2\delta_to_10o_19o_11}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} \;+\; C_{20}\frac{cs^2\rho\delta_l^4}{12o_23o_16o_7^3\delta_to_10o_19o_11}\frac{\partial^4v_2}{\partial x_2^3\partial x_3} \;+$$

$$(-o_16 - 9o_10cs^2 + 3o_10 - 3o_10v_2^2 - o_16o_10 + o_16v_2^2 + o_16o_10v_2^2 + 3o_16o_10cs^2 + 3o_16cs^2)\frac{\rho v_2\delta_l^4v_3}{12o_16\delta_to_10}\frac{\partial^4v_3}{\partial x_2^3\partial x_3} \;+$$

$$C_{21}\frac{cs^2\delta_l^4v_3}{12o_22\delta_to_18^2o_6^2o_13o_11^3}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} \;+\; C_{22}\frac{cs^2\rho\delta_l^4}{12o_22\delta_to_18o_8o_6^3o_13o_11^2}\frac{\partial^4v_3}{\partial x_1^2\partial x_3^2} \;+\; C_{23}\frac{cs^2\delta_l^4v_3}{12o_23o_16o_7^2\delta_to_19^2o_11^3}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} \;+$$

$$C_{24}\frac{cs^2\rho\delta_l^4}{12o_23o_16o_7^3\delta_to_19o_11^2}\frac{\partial^4v_3}{\partial x_2^2\partial x_3^2} \;+\; C_{25}\frac{\rho\delta_l^4}{12\delta_to_18^2o_6^2o_11^3}\frac{\partial^4v_1}{\partial x_1\partial x_3^3} \;+\; C_{26}\frac{\rho\delta_l^4}{12o_7^3\delta_to_19^2o_11^3}\frac{\partial^4v_2}{\partial x_2\partial x_3^3} \;+\; C_{27}\frac{\delta_l^4v_3}{12\delta_to_11^3}\frac{\partial^4\rho}{\partial x_3^4} \;+$$

$$C_{28}\frac{\rho\delta_l^4}{12\delta_to_11^3}\frac{\partial^4v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 6 - 3cs^2o_6o_13 + 3o_6v_1^2 - o_6o_13v_1^2 - 3o_6 - 6v_1^2 + 3o_13v_1^2 - 3o_13 + 9cs^2o_6 - 18cs^2 + 9cs^2o_13 + o_6o_13$

$C_2 = 6 - 3o_16o_7cs^2 - 3o_16 - o_16o_7v_2^2 - 3o_7 + o_16o_7 + 3o_16v_2^2 + 9o_16cs^2 - 18cs^2 + 3o_7v_2^2 + 9o_7cs^2 - 6v_2^2$

$C_3 =$
$-36cs^2o_11^2 - 12o_6o_11^2 + 6o_18o_6o_11 + 6o_18o_11^2v_3^2 - 11o_18cs^2o_6o_11^2 - 12o_11^2v_3^2 - 18o_18cs^2o_6o_11 + 12o_18o_6v_3^2 - 12o_6o_11v_3^2 - 3o_18o_6o_11^2v_3^2 + 3o_18o_6o_11^2 + 18o_18cs^2o_11^2 - 12o_18o_6 + 12o_6o_11 - 6o_18o_6o_11v_3^2 - 36cs^2o_6o_11 + 12o_6o_11^2v_3^2 - 6o_18o_11^2 + 36o_18cs^2o_6 + 36cs^2o_6o_11^2 + 12o_11^2$

$C_4 = -36cs^2o_11^2 - 36o_7cs^2o_11 + 12o_7o_19v_3^2 + 6o_19o_11^2v_3^2 - 6o_7o_19o_9o_11v_3^2 + 12o_7o_11^2v_3^2 + 3o_7o_19o_9o_11^2 - 18o_7cs^2o_19o_9o_11 + 6o_7o_19o_9o_11 - 12o_11^2v_3^2 - 6o_19o_9o_11^2 - 11o_7cs^2o_19o_9o_11^2 + 36o_7cs^2o_19 + 36o_7cs^2o_11^2 + 18cs^2o_19o_9o_11^2 + 12o_7o_19o_11 - 3o_7o_19o_9o_11^2v_3^2 - 12o_7o_11^2 - 12o_7o_19o_19 - 12o_7o_19o_1v_3^2 + 12o_11^2$

$C_5 = -cs^2o_11^2 + 12cs^4 + 36v_3^4 + 144cs^2v_3^2 - 7o_11^2v_3^2 - 144cs^2o_11v_3^2 + 12cs^2o_11 - 36o_11v_3^4 + 7o_11^2v_3^4 + cs^4o_11^2 + 36o_11v_3^2 + 24cs^2o_11^2v_3^2 - 12cs^2 - 36v_3^2 - 12cs^4o_11$

$C_6 = 36o_6^3v_1^4 + 24cs^4o_13^2 + 30o_6^3o_13v_1^2 - 48cs^4o_6o_13^2 + 3o_6^3o_13^2v_1^4 - 24cs^2o_6o_13 + 108cs^2o_6^3v_1^2 + 6cs^2o_6^3o_13^2v_1^2 - 36cs^2o_6o_13^2v_1^2 + 12o_6^2o_13^2v_1^2 - 72o_6^2v_1^4 + 12cs^2o_6o_13^2 - 216cs^2o_6^2v_1^2 + 24cs^4o_6o_13 + 144cs^2o_6^2o_13v_1^2 + 72o_6^2o_13v_1^4 + 72o_6^2v_1^2 - 12cs^2o_6^2o_13^2v_1^2 - 24cs^4o_6^2o_13 - 6cs^2o_6^3o_13 - 12o_6^2o_13^2v_1^4 - 72o_6^2o_13v_1^2 + 72cs^2o_6o_13v_1^2 - 3cs^4o_6^3o_13^2 - 8cs^2o_6^2o_13^2 - 30o_6^3o_13v_1^4 + 24cs^2o_6^2o_13 + 6cs^4o_6^3o_13 - 72cs^2o_6^3o_13v_1^2 - 36o_6^3v_1^2 + cs^2o_6^3o_13^2 - 3o_6^3o_13^2v_1^2 + 24cs^4o_6^2o_13^2$

$C_7 = 2o_16o_7^2o_6^2o_14o_13 - 2o_16o_7^3o_8o_6o_17 + o_16o_7o_8o_6^2o_13o_17 + o_16o_7o_8o_6^2o_14o_13o_17 - o_16o_7^2o_8o_6^2o_13o_17 + 2o_16o_7o_8o_6o_14o_17 + 2o_16o_7^2o_6o_14o_13o_17 - o_16o_7^2o_8o_6^2o_14o_13 + 2o_16o_8o_6o_14o_13o_17 - 2o_7o_8o_6^2o_14o_13 + o_7^2o_8o_6^2o_14o_13 + 2o_16o_7^2o_6^2o_13o_17 + 2o_16o_7o_8o_6^2o_14o_13 + o_16o_7^2o_8o_6o_14o_13 - o_7^2o_8o_6o_14o_13o_17 - 2o_16o_7o_6^2o_14o_13 - 2o_16o_7^2o_6o_13o_17 - 6o_16o_7o_8o_6o_14o_13o_17 - o_16o_8o_6^2o_14o_13o_17 - o_16o_7^2o_8o_14o_13o_17 - 2o_16o_7^2o_6o_14o_13 - 2o_16o_7^2o_6^2o_14o_13o_17 + o_16o_7^2o_8o_6o_14o_13o_17 + 2o_16o_7^2o_8o_6o_13o_17 + 2o_16o_7o_7^2o_6o_14o_13o_17 - 2o_16o_7o_6^2o_13o_17 - o_16o_7o_8o_6^2o_14o_17 + 2o_7o_8o_6o_14o_13o_17 + 2o_16o_7o_8o_6o_14o_13o_17 + o_16o_7^2o_8o_6^2o_17$

$C_8 = 108o_7^3cs^2v_2^2 + 12o_16^2o_7^2v_2^2 - 48o_16^2o_7cs^4 + 72o_16o_7^2v_2^4 - 24o_16o_7cs^2 + 72o_7^2v_2^2 - 24o_16^2o_7cs^4 - 36o_16^2o_7cs^2v_2^2 - 8o_16^2o_7^2cs^2 - 30o_16o_7^3v_2^4 - 3o_16^2o_7^3v_2^2 + 6o_16^2o_7^3cs^2v_2^2 + o_16^2o_7^3cs^2 + 144o_16o_7^2cs^2v_2^2 + 6o_16o_7^3cs^4 - 36o_7^3v_2^2 + 3o_16^2o_7^3v_2^2 + 24o_16^2cs^4 + 30o_16o_7^3v_2^2 + 36o_7^3v_2^4 - 6o_16o_7^3cs^2 - 216o_7^2cs^2v_2^2 + 72o_16o_7cs^2v_2^2 - 3o_16^2o_7^3cs^4 - 72o_16o_7^3v_2^2 + 24o_16o_7cs^4 - 72o_16o_7^3cs^2v_2^2 - 12o_16^2o_7^2v_2^4 + 12o_16^2o_7cs^2 - 12o_16^2o_7^2cs^2v_2^2 + 24o_16^2o_7^2cs^4 + 24o_16o_7^2cs^2 - 72o_7^2v_2^4$

$C_9 = 12o_22o_18o_6o_9o_11 - 12o_22o_6^2o_13^2o_11 - 12o_22o_18o_6o_9o_13^2v_1^2o_11 + 12o_18o_6o_9o_13v_1^2o_11 + 12o_18o_6o_9o_13^2o_11 + 3o_22o_18cs^2o_6^2o_9o_13^2o_11 + 3o_22o_18o_6^3o_9o_13o_11 - 18o_18cs^2o_6^2o_9o_13^2 - 12o_22o_6^2o_13^2v_1^2 + 12o_6^2o_9o_13^2o_11 + 18o_22o_18o_6o_13^2v_1^2o_11 + 36cs^2o_6o_9o_13^2o_11 - 12o_22o_18o_6o_9o_13^2o_11 + 36o_22cs^2o_6^2o_13^2o_11 + 6o_22o_18o_6o_13^2v_1^2 + 5o_22o_18o_6^2o_13^2o_11 + o_22o_18o_6^2o_9o_13^2v_1^2o_11 - 18o_18cs^2o_6^2o_9o_13o_11 - 6o_18o_6^2o_9o_13v_1^2o_11 + 12o_6^2o_9o_13^2v_1^2 - 15o_22o_18cs^2o_6^2o_13^2o_11 - 12o_22o_6o_13^2v_1^2o_11 + 6o_22o_18o_6^2o_9v_1^2o_11 - 36o_18cs^2o_6o_9o_13^2o_11 + 36o_22o_18cs^2o_6o_9o_13^2o_11 - 12o_22o_18o_6o_9o_13v_1^2o_11 + 12o_22o_18o_6^2o_9o_11 - 12o_6^2o_9o_13^2 - 6o_22o_18o_6^2o_13^2 + 12o_22o_18o_6o_9o_13^2o_11 - 12o_22o_18o_6^3o_13^2v_1^2o_11 + 54o_22o_18cs^2o_6o_9o_13o_11 - 36o_22o_18cs^2o_6o_9o_11 + 12o_22o_6^2o_13^2 + 6o_18o_6^2o_9o_13o_11 - 6o_18o_6^2o_9o_13^2v_1^2 - 18o_22o_18o_6o_9o_13o_11 - 36o_22o_18cs^2o_6o_9o_13^2o_11 + 54o_22o_18cs^2o_6o_13^2o_11 + 12o_22o_18cs^2o_6o_13^2v_1^2o_11 - 6o_18o_6^2o_9o_13^2o_11 - 12o_6^2o_9o_13^2v_1^2o_11 + 12o_6o_9o_13^2v_1^2o_11 + 36cs^2o_6^2o_9o_13^2 + 36o_18cs^2o_6o_9o_13o_11 - 36o_22o_18cs^2o_6o_9o_13o_11 + 6o_18o_6^2o_9o_13^2 - 12o_6o_9o_13^2o_11 - 36cs^2o_6^2o_9o_13^2o_11 - 5o_22o_18o_6^2o_13^2v_1^2o_11 + 18o_22o_18cs^2o_6^2o_9o_11 + 12o_22o_18o_9o_13o_11 - 12o_18o_6o_9o_13^2v_1^2o_11 + 18o_22o_18o_6o_9o_13v_1^2o_11 - 6o_22o_18o_6^2o_9o_11 + 12o_22o_6o_13^2o_11 + 18o_18cs^2o_6^2o_9o_13^2o_11 + 18o_22o_18cs^2o_6^2o_13^2 + 12o_22o_6^2o_13^2v_1^2o_11 - 12o_22o_18o_6o_9v_1^2o_11 - 36o_22o_18cs^2o_13^2o_11 - 36o_22cs^2o_6^2o_13^2 - 36o_22cs^2o_6o_13^2o_11 - 12o_18o_6o_9o_13o_11 - 9o_22o_18cs^2o_6^2o_9o_13o_11 - o_22o_18o_6o_9o_13^2o_11 + 6o_18o_6^2o_9o_13^2v_1^2o_11 - 3o_22o_18o_6^2o_9o_13v_1^2o_11 - 18o_22o_18o_6o_13^2o_11$

$C_{10} = -12o_22o_18o_6o_9o_11 - 18o_18o_6^3o_9o_13v_1^2 + 6o_22o_18cs^2o_6^3o_9o_11 - 5o_22o_18cs^2o_6^3o_13o_11 + o_22o_18o_6^2o_9o_13o_11 - 36o_22o_6^2o_13v_1^2o_11 + 12o_22o_18o_6o_13o_11 - 15o_22o_18o_6^3o_13v_1^2o_11 - 6o_18o_6^3o_9o_13o_11 + 36o_18o_6^2o_9v_1^2o_11 + 18o_22o_18o_6^3o_9v_1^2o_11 - 12o_18cs^2o_6^2o_9o_13o_11 - 12cs^2o_6^3o_9o_13o_11 - 36o_18o_6^2o_9o_13v_1^2o_11 - 6o_22o_18o_6^3o_13 - 54o_22o_18o_6^2o_9v_1^2o_11 - 18o_18o_6^3o_9v_1^2o_11 - 36o_22o_6^3o_13v_1^2 - 12o_22o_6^3o_13o_11 + 36o_6^2o_9o_13v_1^2o_11 + 6o_18cs^2o_6^3o_9o_13o_11 + 12cs^2o_6^2o_9o_13o_11 + 12o_22o_6^3o_13 + 5o_22o_18o_6^3o_13o_11 - 12o_22o_18cs^2o_6o_13o_11 - 6o_18cs^2o_6^3o_9o_11 + 12cs^2o_6^3o_9o_13 + 18o_22o_18cs^2o_6o_9o_13o_11 + 54o_22o_18o_6^2o_13v_1^2o_11 + 12o_22o_18cs^2o_6o_9o_11 + 12o_18o_6^2o_9o_13o_11 + 12o_22cs^2o_6^2o_13o_11 - 6o_22o_18o_6^3o_9o_11 + 36o_22o_6^2o_13v_1^2o_11 - 12o_18o_6^2o_9o_11 + 18o_22o_18o_6^3o_13v_1^2 + 6o_18o_6^3o_9o_13 - 36o_6^3o_9o_13v_1^2o_11 - o_22o_18cs^2o_6^3o_9o_13o_11 +$

$$18o_2 2o_1 8cs^2 o_6^2 o_1 3o_1 1 - 12o_6^3 o_9 o_1 3 + 12o_6^3 o_9 o_1 3o_1 1 - 12o_2 2o_1 8cs^2 o_9 o_1 3o_1 1 + 36o_6^3 o_9 o_1 3v_1^2 - 18o_2 2o_1 8cs^2 o_6^2 o_9 o_1 1 - 12o_2 2cs^2 o_6^2 o_1 3o_1 1 -$$
$$12o_6^2 o_9 o_1 3o_1 1 - 12o_2 2cs^2 o_6^3 o_1 3 + 6o_1 8o_6^3 o_9 o_1 1 + 18o_2 2o_1 8o_6^2 o_9 o_1 1 - 18o_2 2o_1 8o_6^2 o_1 3o_1 1 - 6o_1 8cs^2 o_6^3 o_9 o_1 3 + 12o_1 8cs^2 o_6^2 o_9 o_1 1 +$$
$$36o_2 2o_1 8o_6 o_9 v_1^2 o_1 1 + 18o_1 8o_6^3 o_9 o_1 3v_1^2 o_1 1 + 12o_2 2o_6^2 o_1 3o_1 1 - 36o_2 2o_1 8o_6 o_1 3v_1^2 o_1 1 - 5o_2 2o_1 8cs^2 o_6^2 o_9 o_1 3o_1 1 - 3o_2 2o_1 8o_6^2 o_9 o_1 3v_1^2 o_1 1 +$$
$$6o_2 2o_1 8cs^2 o_6^3 o_1 3$$

$C_{11} = -2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 -$
$2o_7 o_2 2o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 - 2o_7 o_8 cs^2 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 + 2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_3^2 - o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 9v_1^2 v_2 o_1 1 -$
$2o_7 o_2 2o_1 8o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_1 v_2^2 - 2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 +$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_2 o_1 1v_3^2 + 2o_7 o_2 2o_1 8cs^2 o_1 4o_1 3o_1 9v_2 o_1 1v_3^2 - 2o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_1 o_1 1v_3^2 +$
$2o_2 2o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 - 2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 o_1 1 + 2o_7 o_2 2o_8 cs^2 o_1 4o_2 0o_1 9v_1 v_2^2 o_1 1 -$
$2o_7 o_2 2o_1 8o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 v_3^2 - o_7 o_2 2o_8 o_1 8o_6 o_2 0o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 -$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_2 v_3^2 - o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 9v_1 v_2^2 o_1 1v_3^2 + o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 +$
$2o_7 o_2 2o_1 8cs^2 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_2 o_1 1v_3^2 + 2o_7 o_8 o_1 8o_1 4o_2 0o_1 9v_1^2 v_2 o_1 1v_3^2 - o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 -$
$2o_2 2o_8 o_1 8o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_1^2 v_2 o_1 1 + 2o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1 -$
$o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 9v_2 o_1 1v_3^2 - 2o_7 o_2 2o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_2 2o_1 8o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 -$
$o_7 o_2 2o_8 o_1 8o_6 o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 - o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_2 0o_1 9v_1 o_1 1v_3^2 -$
$2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_2 0o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_2 2o_8 o_1 8o_6 o_1 4o_1 3v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 +$
$2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1 + 2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_2 2o_8 o_1 8o_6 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 + 2o_7 o_8 cs^2 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 +$
$2o_7 o_2 2o_1 8cs^2 o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 + 2o_2 2o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 - o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3v_1^2 v_2 o_1 1v_3^2 - 2o_2 2o_1 8o_6 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 -$
$2o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_2 o_1 1v_3^2 + 2o_7 o_8 o_1 8o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 + o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 9v_1 v_2^2 o_1 1 - 2o_2 2o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 +$
$o_7 o_8 o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1^2 v_2 + 2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 +$
$2o_7 o_8 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + 2o_7 o_8 cs^2 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 + 2o_7 o_2 2o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1 v_2 o_1 1 - 2o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1 -$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_1 v_2^2 o_1 1 + o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_1 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_3^2 -$
$2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_1 v_3^2 - 2o_7 o_2 2o_1 8cs^2 o_1 4o_1 3o_1 9v_1 v_2 o_1 1 - o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 + 2o_7 o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 v_3^2 +$
$2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_2 0o_1 9v_2 o_1 1v_3^2 - o_7 o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 9v_2 o_1 1v_3^2 - 2o_7 o_8 o_1 8o_1 4o_2 0o_1 9v_1 v_2^2 o_1 1v_3^2 -$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 - o_7 o_2 2o_8 o_1 8o_6 v_2 v_3^2 +$
$o_7 o_2 2o_8 o_1 8o_6 o_2 0o_1 9v_1 v_2^2 o_1 1v_3^2 + 2o_7 o_2 2o_1 8o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 + o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 9v_1^2 v_2 o_1 1v_3^2 +$
$o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 + 2o_7 o_2 2o_8 cs^2 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_1 3o_1 9v_2 o_1 1v_3^2 +$
$2o_7 o_8 o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 - 2o_7 o_8 o_1 8cs^2 o_1 4o_2 0o_1 9v_1 o_1 1v_3^2 + o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 v_3^2 +$
$2o_2 2o_8 o_1 8o_6 o_1 4o_1 3o_1 9v_1 v_2 o_1 1v_3^2 + 2o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2 o_1 1v_3^2 + 2o_7 o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 + 2o_7 o_2 2o_1 8o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 -$
$2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1 + 2o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1 + 2o_7 o_2 2o_8 o_1 8o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 +$
$o_7 o_2 2o_8 cs^2 o_6 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_1 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 -$
$o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 v_3^2 - o_7 o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 9v_1^2 v_2 o_1 1 + o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 -$
$2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2 v_3^2 - o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_8 o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 -$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 9v_1 o_1 1v_3^2 - o_7 o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 - 2o_7 o_2 cs^2 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_6 o_1 4o_1 3o_1 9v_1^2 v_2 v_3^2 -$
$2o_7 o_8 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 + o_7 o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_2 2cs^2 o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 + 2o_7 o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 +$
$2o_7 o_2 2o_8 o_1 8o_6 o_1 4o_1 3v_1^2 v_2 o_1 1v_3^2 + o_7 o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 9v_1 v_2^2 o_1 1 + o_7 o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 + 2o_7 o_2 2o_1 8o_6 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 +$
$o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3v_1 v_2^2 v_3^2 + o_7 o_2 2o_8 o_1 8o_6 o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 -$
$o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 v_3^2 + 2o_7 o_2 2o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 + 2o_2 2o_1 8o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3v_1 v_2^2 o_1 1v_3^2 -$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 + 2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1 - 2o_7 o_8 o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 -$
$2o_7 o_8 o_1 8o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_1^2 v_2 + 2o_2 2o_8 o_1 8o_6 o_1 4o_1 3v_1^2 v_2 o_1 1v_3^2 + o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 v_3^2 -$
$2o_2 2o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 - 2o_7 o_2 2cs^2 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 + 2o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_2 o_1 1v_3^2 +$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 v_3^2 - 2o_2 2o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_1 8o_6 o_1 4o_1 3v_1^2 v_2 v_3^2 +$
$o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_1 v_2^2 o_1 1 + 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1 + 2o_7 o_2 2o_8 o_1 8o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 -$
$o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_1 o_1 1v_3^2 - o_7 o_8 o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 v_3^2 + 2o_7 o_2 2o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 +$
$o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 + o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 +$
$2o_7 o_2 2o_8 o_1 8o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 9v_1 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8o_2 0o_1 9v_1 v_2^2 o_1 1v_3^2 - 2o_2 2o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 +$
$2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_1 3o_1 9v_1^2 v_2 + 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_1^2 v_2 + o_2 2o_8 o_1 8o_6 o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 +$
$2o_7 o_2 2o_8 o_1 8cs^2 o_2 0o_1 3o_1 9v_1 v_2 o_1 1 + 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_3^2 + 2o_7 o_2 2o_1 8o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + 2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 -$
$2o_2 2o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 + 2o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_1 v_2 o_1 1 - 2o_7 o_2 2o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 -$
$2o_7 o_2 2o_8 o_1 8cs^2 o_2 0o_1 9v_1 v_2^2 o_1 1 - 2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 + 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_2 o_1 1v_3^2 +$
$o_7 o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3v_1^2 v_2 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 + 2o_2 2o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 -$
$2o_7 o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + o_7 o_8 o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 v_3^2 + 2o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 +$
$2o_7 o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 + 2o_2 2o_1 8o_6 o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 + 2o_7 o_2 2o_1 8o_6 o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1v_3^2 -$
$2o_7 o_2 2o_8 o_1 8o_6 o_1 4o_1 3v_1 v_2^2 v_3^2 - 2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 + o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 + 2o_7 o_2 2o_8 cs^2 o_2 0o_1 9v_2 o_1 1v_3^2 +$
$2o_7 o_2 2o_8 o_1 8o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + 2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1 -$
$o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_1^2 v_2 o_1 1 + o_7 o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_3^2 + 2o_7 o_2 2o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 + 2o_7 o_2 2o_8 o_1 8cs^2 o_2 0o_1 9v_1^2 v_2 o_1 1 +$
$2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_2 0o_1 9v_1 o_1 1o_1 1v_3^2 - 2o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 o_1 1 + 2o_2 2o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 o_1 1 -$
$o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_2 0o_1 3v_2 o_1 1v_3^2 + 2o_7 o_2 2o_8 o_1 8o_1 4o_2 0o_1 3v_2 v_3^2 + 2o_7 o_2 2o_8 o_6 o_1 4o_1 3o_1 9v_1 v_2^2 +$
$o_2 2o_8 o_1 8o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 + 2o_2 2o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_2 2o_1 8cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 -$
$2o_7 o_2 2o_8 o_1 8cs^2 o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_8 cs^2 o_1 4o_2 0o_1 3o_1 9v_1 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 8cs^2 o_1 4o_2 0o_1 3o_1 9v_1 v_2 o_1 1 + 2o_7 o_8 o_6 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 v_3^2 -$
$2o_7 o_2 2cs^2 o_6 o_1 4o_1 3o_1 9v_1^2 v_2 o_1 1 - 2o_7 o_2 2o_8 o_1 8cs^2 o_6 o_1 4o_1 3v_1^2 v_2 o_1 1 - 2o_2 2o_1 8cs^2 o_6 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 - o_2 2o_8 o_1 8cs^2 o_6 o_2 0o_1 3o_1 9v_2 o_1 1v_3^2 -$
$2o_7 o_2 2o_8 o_1 8o_6 o_1 4o_1 3o_1 9v_1^2 v_2 v_3^2 + 2o_7 o_2 2o_8 o_1 8o_2 0o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_2 v_3^2 - 2o_7 o_8 cs^2 o_6 o_1 4o_2 0o_1 3o_1 9v_1 v_2^2 +$
$2o_7 o_8 o_1 8cs^2 o_1 4o_2 0o_1 9v_2 o_1 1v_3^2 + 2o_7 o_8 o_1 8cs^2 o_1 4o_1 3o_1 9v_1 o_1 1v_3^2 - o_2 2o_8 o_1 8o_6 o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 - 2o_7 o_2 2o_8 o_1 4o_2 0o_1 3o_1 9v_1^2 v_2 o_1 1v_3^2 -$

$$o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 v_1 v_2^2 o_1 1 v_3^2 - o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_2 o_1 1 v_3^2 +$$
$$2 o_7 o_2 2 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 + o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_1 8 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 v_3^2 + o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 9 v_1 o_1 1 v_3^2 +$$
$$2 o_7 o_2 2 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 v_3^2 + 2 o_7 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 o_1 1 v_3^2 - 2 o_7 o_2 2 o_1 8 c s^2 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 -$$
$$2 o_7 o_2 2 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 + o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 v_1 v_3^2 + o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 -$$
$$o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 v_3^2 - o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 - 2 o_7 o_2 2 o_8 o_1 8 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 v_3^2 -$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 9 v_1 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_1 3 o_1 9 v_1 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_2 o_1 1 v_3^2 -$$
$$2 o_7 o_2 2 o_8 o_1 8 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 v_3^2 + 2 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 9 v_1^2 v_2 o_1 1 + 2 o_7 o_2 2 o_1 8 c s^2 o_2 o_1 3 o_1 9 v_2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 +$$
$$o_7 o_8 o_1 8 o_6 o_1 4 o_2 o_1 9 v_1 v_2^2 o_1 1 v_3^2 + o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 v_1 v_2^2 + 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_1 3 o_1 9 v_2 o_1 1 v_3^2 + o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 9 v_2 o_1 1 v_3^2 -$$
$$2 o_7 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2^2 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_1 v_2^2 o_1 1 + 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 o_6 o_1 4 o_1 3 o_1 9 v_1^2 v_2 o_1 1 v_3^2 +$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1^2 v_2 - 2 o_7 o_2 2 o_8 o_1 8 o_1 4 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2^2 v_3^2 -$$
$$o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_1 3 o_1 9 v_1^2 v_2 o_1 1 v_3^2 - 2 o_2 2 o_1 8 o_6 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 v_3^2 + o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 9 v_1^2 v_2 o_1 1 +$$
$$o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 + 2 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_1 o_1 1 v_3^2 - 2 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 9 v_1 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 o_1 4 o_1 3 o_1 9 v_1 v_2^2 o_1 1 v_3^2 +$$
$$2 o_7 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_1 8 c s^2 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 - 2 o_7 o_2 2 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2^2 o_1 1 -$$
$$2 o_7 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2^2 - o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 - o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2 v_3^2 +$$
$$2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_2 v_3^2 - 2 o_7 o_2 2 o_1 8 o_6 o_2 o_1 3 o_1 9 v_1^2 v_2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2^2 o_1 1 v_3^2$$

$C_{12} =$

$$2 o_7 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 o_1 1 v_3^2 + 4 o_7 o_2 2 o_1 8 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 v_1 v_2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_1 8 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 -$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 1 v_3^2 - 4 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 v_3^2 + 2 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 + 2 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 +$$
$$2 o_7 o_2 2 o_1 8 c s^2 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 + 4 o_7 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 v_3^2 - 4 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 -$$
$$4 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_1 v_2 o_1 1 - 2 o_7 o_8 o_1 8 o_1 4 o_2 o_1 9 v_2^2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 -$$
$$2 o_7 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 o_1 v_3^2 - 2 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 4 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 9 v_1 v_2 o_1 1 +$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 v_2^2 - 2 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 + 2 o_7 o_2 2 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 + 4 o_7 o_2 2 o_8 o_1 8 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 +$$
$$2 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 v_2^2 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 v_2^2 v_3^2 + 2 o_7 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 - 2 o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 -$$
$$2 o_7 o_8 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 + 2 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 o_1 1 v_3^2 - o_7 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 - 4 o_7 o_2 2 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 +$$
$$2 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + 2 o_7 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 - o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 9 v_2^2 o_1 1 v_3^2 + o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_3^2 +$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 v_2^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 9 v_2^2 o_1 1 +$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 9 o_1 1 v_3^2 - 2 o_7 o_8 o_1 8 o_6 o_1 4 o_2 o_1 9 v_1 v_2 o_1 1 v_3^2 - 4 o_7 o_2 2 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 - o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 o_1 1 v_3^2 +$$
$$4 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_1 8 c s^2 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_3^2 + 4 o_7 o_2 2 o_1 8 c s^2 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 +$$
$$4 o_7 o_2 2 o_8 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + 2 o_2 2 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 + o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 9 v_2^2 o_1 1 - 4 o_7 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 -$$
$$2 o_7 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 v_3^2 + 4 o_2 2 o_1 8 o_6 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 9 v_1 v_2 o_1 1 + 4 o_7 o_2 2 o_8 c s^2 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 -$$
$$2 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 - 2 o_7 o_2 2 o_8 o_1 8 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2^2 -$$
$$4 o_7 o_2 2 o_8 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_2 o_1 9 v_2^2 o_1 1 - 2 o_7 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 v_3^2 - 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 o_1 1 v_3^2 -$$
$$2 o_7 o_2 2 o_1 8 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 + 2 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 4 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 - 2 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 1 v_3^2 -$$
$$4 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 - 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 4 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 v_1 v_2 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 +$$
$$o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 3 o_1 1 v_3^2 - 4 o_7 o_2 2 o_8 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 + 2 o_7 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 +$$
$$4 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_1 v_2 o_1 1 - 4 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 + 4 o_7 o_2 2 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 - 2 o_2 2 o_1 8 o_6 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 +$$
$$4 o_7 o_2 2 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_2^2 o_1 1 + 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 - o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 +$$
$$4 o_7 o_2 2 o_8 o_1 8 o_2 o_1 9 v_1 v_2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 c s^2 o_2 o_1 9 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2^2 - 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_2^2 -$$
$$2 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 - 2 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 v_1 v_2 o_1 1 - 2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_3^2 -$$
$$2 o_7 o_2 2 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_3^2 - 2 o_7 o_2 2 o_1 8 o_6 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 - 4 o_7 o_2 2 o_1 8 o_6 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 - 2 o_2 2 o_8 c s^2 o_6 o_2 o_1 3 o_1 9 v_2^2 o_1 1 -$$
$$o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 o_1 8 o_2 o_1 9 v_2^2 o_1 1 v_3^2 - 2 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 9 o_1 1 v_3^2 +$$
$$o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 - o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 - 4 o_7 o_2 2 o_8 o_1 8 c s^2 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 +$$
$$4 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 + 4 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 v_1 v_2 - 4 o_7 o_2 2 o_8 o_1 8 o_1 4 o_2 o_1 9 v_1 v_2 o_1 1 v_3^2 - 4 o_7 o_2 2 o_8 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 +$$
$$2 o_7 o_2 2 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 4 o_2 2 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 + 4 o_7 o_2 2 o_8 o_1 8 c s^2 o_2 o_1 9 v_1 v_2 o_1 1 + 4 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 +$$
$$2 o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_3^2 - o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 - 2 o_7 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_3^2 - 4 o_2 2 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 +$$
$$o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 9 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 o_6 o_2 o_1 9 v_1 v_2 o_1 1 v_3^2 - 4 o_7 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 -$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_2^2 o_1 1 + o_7 o_2 2 o_8 c s^2 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 - 2 o_7 o_2 2 o_8 o_1 8 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 +$$
$$2 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 + o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 v_2^2 o_1 1 v_3^2 - 2 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 v_1 v_2 v_3^2 + 2 o_7 o_2 2 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 +$$
$$o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 9 v_2^2 o_1 1 - o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 9 v_1 v_2 o_1 1 - 4 o_7 o_2 2 o_8 o_1 8 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 +$$
$$4 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 + o_7 o_2 2 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 2 o_7 o_8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 v_1 v_2 -$$
$$4 o_7 o_2 2 o_1 8 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 - 4 o_7 o_2 2 o_8 o_1 8 c s^2 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 + o_7 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 v_3^2 + 2 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 +$$
$$2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 - 2 o_7 o_2 2 o_1 8 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 + 2 o_7 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 +$$
$$4 o_7 o_8 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + 4 o_7 o_8 o_1 8 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 v_3^2 - 2 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 o_1 1 v_3^2 - 4 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 -$$
$$2 o_7 o_8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_1 4 o_1 3 o_1 9 o_1 1 v_3^2 +$$
$$2 o_7 o_2 2 o_1 8 o_6 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 - 2 o_2 2 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 - o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 v_3^2 - o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_3^2 -$$
$$o_7 o_2 2 o_8 o_1 8 o_6 o_1 4 o_2 o_1 3 v_2^2 o_1 1 v_3^2 + 4 o_7 o_2 2 o_8 o_6 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 v_1 v_2 o_1 1 -$$
$$4 o_7 o_2 2 o_1 8 c s^2 o_1 4 o_2 o_1 3 o_1 9 v_1 v_2 o_1 1 - o_7 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_2^2 o_1 1 + o_2 2 o_8 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 v_2^2 o_1 1 - 2 o_7 o_2 2 o_8 o_1 4 o_1 3 o_1 9 v_2^2 o_1 1 v_3^2 -$$
$$2 o_7 o_8 o_1 8 c s^2 o_1 4 o_2 o_1 9 v_2^2 o_1 1 - 4 o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_1 3 o_1 9 v_1 v_2 + 2 o_7 o_2 2 o_8 o_1 8 c s^2 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 4 o_7 o_2 2 o_1 8 c s^2 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 -$$
$$2 o_2 2 o_1 8 c s^2 o_6 o_2 o_1 3 o_1 9 o_1 1 v_3^2 + 4 o_7 o_2 2 o_1 8 o_1 4 o_1 3 o_1 9 v_1 v_2 o_1 1 v_3^2 + o_7 o_8 o_1 8 o_6 o_1 4 o_2 o_1 9 v_2^2 o_1 1 v_3^2 - o_7 o_2 2 o_8 o_1 8 c s^2 o_6 o_1 4 o_2 o_1 3 o_1 9 v_3^2 -$$

$$2o_7o_22o_8cs^2o_6o_14o_20o_13o_19o_11v_3^2 + 2o_7o_22o_8o_18o_6o_14o_20o_19v_1v_2o_11v_3^2 - 2o_7o_22o_8o_18cs^2o_20o_19v_2^2o_11 + 4o_22o_18o_6o_14o_13o_19v_1v_2o_11v_3^2 -$$

$$o_7o_22o_8o_18cs^2o_6o_14o_20o_13o_19v_2^2 + 2o_7o_22o_8o_14o_20o_13o_19v_2^2o_11v_3^2 - 4o_7o_8o_18o_14o_20o_13o_19v_1v_2o_11v_3^2 +$$

$$4o_7o_22o_18cs^2o_6o_14o_20o_13o_19v_1v_2o_11 + 4o_22o_8o_18o_6o_14o_13v_1v_2o_11v_3^2 + 4o_7o_8cs^2o_14o_20o_13o_19v_1v_2o_11 + 2o_7o_22o_8o_18cs^2o_6o_14o_13o_11v_3^2 +$$

$$o_22o_8o_18o_6o_20o_13o_19v_2^2o_11v_3^2 + 2o_7o_22o_8cs^2o_6o_14o_13o_19o_11v_3^2 - 4o_22o_18o_6o_14o_20o_13o_19v_1v_2o_11v_3^2 - 2o_7o_22o_8o_6o_14o_13o_19v_2^2v_3^2 +$$

$$o_7o_22o_8o_18o_6o_14o_20o_13o_19v_2^2o_11v_3^2 - 4o_7o_22o_8o_18cs^2o_14o_20o_19v_1v_2o_11 + o_22o_8o_18cs^2o_6o_14o_20o_13v_2^2o_11 + 2o_7o_22o_8cs^2o_14o_20o_13o_19o_11v_3^2 +$$

$$2o_7o_22o_8o_18o_6o_20o_13o_19v_1v_2o_11v_3^2 - 2o_7o_22o_8o_18cs^2o_6o_14o_20o_13o_19v_1v_2o_11 - 2o_7o_22o_8o_18cs^2o_14o_20o_13o_19v_2^2o_11 +$$

$$2o_7o_22o_8o_18o_14o_20o_19v_2^2o_11v_3^2 + 2o_7o_22o_8o_6o_14o_13o_19v_2^2o_11v_3^2 - 2o_22o_8o_18cs^2o_6o_14o_13v_2^2o_11 + 2o_22o_18cs^2o_6o_14o_20o_13o_19v_2^2o_11 +$$

$$o_7o_22o_8o_18o_6o_14o_20o_13v_2^2v_3^2 - 4o_7o_22o_8o_6o_14o_20o_13o_19v_1v_2v_3^2 - 2o_7o_22o_18cs^2o_20o_13o_19o_11v_3^2 + 2o_7o_22o_18o_6o_20o_13o_19v_2^2o_11v_3^2 -$$

$$2o_7o_22o_8o_18cs^2o_6o_14o_13o_19v_2^2o_11 - 4o_22o_8o_18cs^2o_6o_14o_13o_19v_1v_2o_11 - 2o_7o_22o_8cs^2o_14o_13o_19o_11v_3^2 - 2o_7o_8o_18cs^2o_6o_14o_20o_13o_19v_1v_2$$

$C_{13} = -12o_7^2o_22o_8cs^2o_6^2o_14o_5o_20o_13o_19o_11v_3^2 + 12o_7o_22o_18cs^2o_6^3o_5o_20o_13o_19o_11v_3^2 + 12o_7o_22o_8o_18o_6^3o_5o_20o_13o_19v_1v_2o_11v_3^2 -$

$12o_7o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 - 24o_7^2o_8o_6^2o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 + 12o_7^2o_8o_18o_6^3o_14o_5o_20o_19v_1v_2o_11v_3^2 -$

$12o_7o_22o_18cs^4o_6^3o_14o_5o_50o_13o_19o_11 - 6o_7^2o_22o_8o_18o_6^3o_5o_20o_19v_1^2o_11v_3^2 + 12o_7^2o_22o_8o_18cs^2o_6^2o_5o_20o_19v_1^2o_11 +$

$12o_7o_22o_8cs^2o_6^2o_14o_5o_13o_19o_11v_3^2 - 24o_7^2o_22o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 + 12o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_13o_19 +$

$24o_7^2o_22o_8o_6^3o_14o_5o_20o_13o_19v_1v_2v_3^2 + 24o_7^2o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19v_1v_2o_11 - 12o_7^2o_22o_8cs^4o_6^2o_14o_5o_20o_13o_19o_11 +$

$24o_7^2o_22o_8cs^2o_6^3o_14o_5o_13o_19v_1v_2o_11 + 12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13v_3^2 - 18o_7^2o_22o_8o_18cs^4o_6^2o_14o_20o_13o_19o_11 -$

$6o_7^2o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1^2 + 12o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 - 18o_7^2o_22o_8o_18cs^4o_6^3o_14o_20o_13o_19o_11 -$

$24o_7o_22o_8o_18o_6^3o_14o_5o_20o_13v_1v_2o_11v_3^2 - 24o_7^2o_22o_8o_6^3o_5o_20o_13o_19v_1v_2o_11v_3^2 + 24o_7^2o_22o_8o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 -$

$12o_7^2o_22o_8o_18cs^2o_6^3o_5o_20o_13o_19v_1v_2o_11 + 12o_7^2o_22o_8o_18cs^4o_6^3o_14o_20o_13 - 24o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 +$

$12o_7o_22o_18cs^2o_6^3o_14o_5o_13o_19o_11v_3^2 - 12o_7o_22o_8o_18o_6^3o_14o_5o_13o_19v_1^2v_3^2 + 24o_7^2o_22o_8o_18o_6^3o_14o_5o_13o_19v_1v_2o_11v_3^2 -$

$12o_7^2o_22o_8cs^2o_6^3o_14o_5o_13o_19v_1^2o_11 + 12o_7^2o_8o_18cs^2o_6^3o_14o_5o_20o_19v_1v_2o_11 - 12o_7^2o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19v_1^2o_11 -$

$24o_7^2o_22o_8o_18cs^2o_6^2o_5o_20o_19v_1v_2o_11 - 12o_7o_22o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 + 6o_7^2o_22o_8o_18o_6^3o_5o_20o_13o_19v_1^2o_11v_3^2 -$

$12o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1v_2v_3^2 + 12o_7^2o_8cs^2o_6^2o_14o_5o_20o_13o_19o_11v_3^2 - 12o_7^2o_22o_18cs^2o_6^2o_14o_5o_20o_13o_19o_11v_3^2 -$

$24o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_13o_19v_1v_2o_11 + 12o_7^2o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19v_1v_2 + 12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19o_11v_3^2 +$

$12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19v_1v_2o_11 - 24o_7^2o_22o_8o_18o_6^3o_6o_14o_5o_13v_1v_2v_3^2 - 24o_7^2o_8o_6^3o_14o_5o_20o_13o_19v_1v_2v_3^2 +$

$12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13v_1v_2 - 12o_7^2o_22o_8cs^4o_6^3o_14o_5o_13o_19 + 6o_7^2o_22o_8cs^2o_6^2o_14o_5o_20o_13o_19 +$

$6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1^2 + 24o_7^2o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2o_11 - 24o_7^2o_22o_8o_6^2o_14o_5o_13o_19v_1v_2o_11v_3^2 +$

$6o_7o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 - 12o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_13o_11 - 24o_7^2o_22o_8o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 -$

$12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13o_11v_3^2 + 12o_7^2o_22o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1^2o_11 + 24o_7^2o_22o_8o_18cs^4o_6o_14o_5o_20o_13o_19o_11 -$

$24o_7^2o_22o_8o_18o_6^2o_5o_20o_19v_1v_2o_11v_3^2 + 12o_7o_22o_8o_18cs^4o_6^3o_14o_5o_13o_19o_11 + 12o_7^2o_22o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 -$

$12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_13v_1^2o_11 + 12o_7^2o_22o_8o_18cs^4o_6^2o_14o_5o_13o_19o_11 + 12o_7^2o_22o_18cs^2o_6^3o_14o_5o_20o_13o_19o_11v_3^2 -$

$6o_7o_8o_18o_8o_6^3o_14o_5o_20o_19v_1^2o_11v_3^2 + 12o_7^2o_8o_6^2o_14o_5o_20o_13o_19v_1^2o_11v_3^2 - 6o_7o_22o_8o_18o_6^3o_5o_20o_13o_19v_1^2o_11v_3^2 -$

$12o_7^2o_22o_8o_18cs^4o_6^2o_5o_20o_19o_11 - 24o_7^2o_22o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2o_11 - 6o_22o_8o_18cs^4o_6^3o_14o_5o_20o_13o_19o_11 +$

$6o_7o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11 - 24o_7^2o_22o_8o_6^2o_14o_5o_20o_13o_19v_1v_2o_11 + 12o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 +$

$24o_7^2o_22o_8o_6^2o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 - 12o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 - 6o_7o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_2^2 -$

$12o_7^2o_22o_18o_6^3o_14o_5o_13o_19v_1^2o_11v_3^2 + 12o_22o_8o_18cs^4o_6^3o_14o_20o_13o_19o_11 + 12o_7o_22o_8o_18o_6^3o_14o_5o_13v_1^2o_11v_3^2 +$

$12o_7^2o_22o_8o_18cs^2o_6^3o_5o_20o_19v_1v_2o_11 + 24o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2 - 6o_7o_8o_18o_8o_6^3o_14o_5o_20o_13o_19v_1^2v_3^2 +$

$12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_13v_1^2 - 12o_7o_22o_8o_18cs^2o_6^3o_14o_5o_20o_19v_1v_2o_11 + 12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19v_1^2o_11 +$

$12o_7^2o_22o_8o_6^3o_14o_5o_13o_19v_1^2v_3^2 + 12o_7o_22o_8o_18o_6^3o_14o_5o_20o_13v_1v_2o_11v_3^2 - 6o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13v_1^2v_3^2 -$

$24o_7^2o_22o_8o_6^3o_14o_5o_13o_19v_1v_2v_3^2 + 12o_7^2o_22o_8cs^4o_6^2o_14o_20o_13o_19o_11 + 12o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13v_1v_2v_3^2 +$

$12o_7o_22o_8o_18cs^4o_6o_14o_5o_20o_13o_19o_11 + 12o_7^2o_22o_8o_6^2o_14o_5o_13o_19v_1^2o_11v_3^2 + 12o_7^2o_8cs^2o_6^2o_14o_5o_20o_13o_19v_1^2o_11 +$

$12o_7^2o_22o_18cs^4o_6^3o_14o_5o_13o_11 - 12o_7o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1^2o_11 + 24o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2 +$

$12o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_13o_11 + 6o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 - 12o_7^2o_22o_8o_6^2o_14o_5o_20o_13o_19v_1^2o_11v_3^2 +$

$24o_7o_22o_8o_18o_6^3o_14o_5o_13o_19v_1v_2o_11v_3^2 + 12o_7o_22o_18cs^2o_6^3o_14o_5o_13o_19v_1^2o_11 - 12o_7o_22o_18cs^4o_6^2o_5o_20o_13o_19o_11 -$

$12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2 - 12o_7o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19o_11v_3^2 + 12o_7^2o_22o_8o_18o_6^2o_5o_20o_19v_1^2o_11v_3^2 -$

$12o_7^2o_22o_8cs^2o_6^3o_14o_5o_13o_19o_11v_3^2 + 12o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 - 24o_7^2o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2 +$

$6o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2v_3^2 + 12o_7o_22o_8o_18cs^4o_6^2o_14o_5o_20o_19o_11 + 6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_3^2 +$

$12o_7o_8o_18o_6^3o_14o_5o_20o_13o_19v_1v_2v_3^2 + 12o_7^2o_22o_8o_18cs^2o_6^3o_5o_20o_19o_11v_3^2 + 12o_7^2o_22o_8cs^2o_6^3o_14o_5o_13o_19v_1^2o_11 +$

$12o_7o_22o_18cs^4o_6^3o_14o_5o_20o_13o_19o_11 - 24o_7^2o_22o_18o_6^3o_14o_5o_13o_19v_1v_2o_11v_3^2 + 24o_7^2o_8o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 -$

$12o_7^2o_22o_8o_18o_6^3o_14o_5o_13o_19v_1^2v_3^2 + 24o_7^2o_22o_18o_6^3o_14o_5o_13v_1^2v_3^2 + 24o_7^2o_22o_8o_18cs^4o_6o_14o_20o_13o_19o_11 -$

$24o_7^2o_22o_18o_6^3o_5o_20o_13o_19v_1v_2o_11v_3^2 - 12o_7^2o_22o_8cs^2o_6^2o_14o_5o_20o_13o_19v_1^2o_11 + 24o_7^2o_22o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 +$

$12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13v_1v_2o_11 + 12o_7^2o_22o_18cs^2o_6^3o_5o_20o_13o_19v_1^2o_11 - 24o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2o_11 -$

$24o_7^2o_22o_18cs^2o_6^2o_5o_20o_13o_19v_1v_2o_11 - 12o_7^2o_22o_18o_6^3o_5o_20o_13o_19v_1^2o_11v_3^2 + 24o_7^2o_22o_8o_18o_6^2o_5o_20o_13o_19v_1v_2o_11v_3^2 -$

$6o_7^2o_22o_8o_18cs^4o_6^3o_5o_20o_13o_19o_11 - 12o_7^2o_22o_8o_6^3o_14o_5o_13o_19v_1^2o_11v_3^2 + 12o_7^2o_8o_18cs^2o_6^2o_14o_5o_20o_19o_11v_3^2 -$

$12o_7^2o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1^2o_11 - 12o_7^2o_22o_8o_18cs^2o_6^2o_5o_20o_13o_19o_11v_3^2 + 12o_7^2o_22o_8cs^4o_6^3o_14o_20o_13o_19 +$

$24o_7^2o_8o_18o_6^2o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 - 6o_7o_22o_8o_18cs^2o_6^3o_5o_20o_13o_19o_11v_3^2 + 12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13o_19v_1^2o_11 -$

$12o_7o_22o_18cs^4o_6^3o_5o_20o_13o_19o_11 + 24o_7o_22o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2o_11 + 12o_7o_22o_8o_18cs^2o_6^3o_14o_5o_13o_11v_3^2 -$

$6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1^2o_11 - 24o_7o_8cs^2o_6^2o_14o_5o_20o_13o_19v_1v_2o_11 + 24o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_19v_1v_2o_11 +$

$6o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13v_1^2o_11v_3^2 + 24o_7^2o_22o_8o_18o_6^3o_14o_5o_13o_19v_1v_2o_11v_3^2 + 12o_7^2o_22o_8o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 -$

$12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13o_19o_11v_3^2 - 24o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_20o_13o_19v_1v_2o_11 - 6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13v_1^2 -$

$12o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13v_1v_2o_11v_3^2 + 12o_7o_22o_8o_18cs^4o_6^3o_14o_20o_13o_11 + 6o_7^2o_22o_8cs^2o_6^3o_5o_20o_13o_19v_1^2o_11 -$

$6o_7o_8o_18cs^2o_6^3o_14o_5o_20o_19v_1^2o_11 + 24o_7^2o_22o_18cs^2o_6^3o_14o_5o_13o_19v_1v_2o_11 - 18o_7o_22o_8o_18cs^4o_6^3o_14o_5o_20o_13o_19o_11 -$

$12o_7^2o_22o_18cs^2o_6^2o_14o_5o_20o_13o_19o_11v_3^2 + 12o_7o_8o_18o_6^2o_14o_5o_20o_13o_19v_1^2o_11v_3^2 - o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_20o_13o_19o_11 +$

$12o_7^2o_22o_8o_18o_6^3o_5o_20o_13o_19v_1v_2o_11v_3^2 + 6o_7^2o_22o_8o_18cs^4o_6^3o_5o_20o_13o_19o_11 - 12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_13o_19o_11v_3^2 -$

$$12o_7^2o_22o_8o_18cs^4o_6^3o_14o_20o_13o_19 + 12o_7^2o_22o_18o_6^2o_5o_20o_13o_19v_1^2o_11v_3^2 - 12o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1^2 -$$
$$12o_7o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2o_11 + 12o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_3^2 + 12o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1^2o_11 +$$
$$12o_7^2o_22o_18cs^2o_6^2o_5o_20o_13o_19v_1^2o_11 + 10o_7^2o_22o_8o_18cs^4o_6^3o_14o_20o_13o_19o_11 - 6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13v_1^2o_11 -$$
$$12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_20o_19o_11v_3^2 - 24o_7^2o_22o_8o_18o_6^3o_14o_5o_13o_19v_1v_2o_11v_3^2 + 24o_7^2o_22o_18cs^2o_6^3o_5o_20o_13o_19v_1v_2o_11 -$$
$$12o_7^2o_22o_18cs^2o_6^3o_14o_5o_13o_19o_11v_3^2 + 12o_7^2o_22o_18cs^4o_6^2o_14o_5o_20o_13o_19o_11 - 24o_7^2o_22o_18o_6^2o_14o_5o_13o_19v_1v_2o_11v_3^2 -$$
$$24o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13v_1v_2 + 6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_19v_1^2o_11 - 12o_7^2o_22o_18cs^2o_6^3o_5o_20o_13o_19o_11v_3^2 +$$
$$12o_7^2o_8cs^2o_6^3o_14o_5o_20o_13o_19v_1^2 - 12o_7^2o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1v_2o_11 - 12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13o_19v_1^2 +$$
$$12o_7^2o_22o_8cs^4o_6^3o_14o_5o_13o_19o_11 + 6o_7^2o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19o_11v_3^2 + 24o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13v_1v_2o_11 -$$
$$12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13v_1v_2o_11 + 12o_7^2o_22o_18cs^2o_6^2o_14o_5o_13o_19v_1^2o_11 - 24o_7^2o_8o_18o_6^2o_14o_5o_20o_19v_1v_2o_11v_3^2 +$$
$$6o_7^2o_8o_18o_6^2o_14o_5o_20o_13o_19v_1^2o_11v_3^2 - 6o_7^2o_22o_8o_18cs^2o_6^3o_5o_20o_19v_1^2o_11 + 6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_11v_3^2 -$$
$$12o_7^2o_22o_8o_18o_6^2o_14o_5o_20o_19v_1^2o_11v_3^2 + 24o_7^2o_22o_8o_18o_6^3o_14o_5o_13o_19v_1v_2v_3^2 - 12o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_13 +$$
$$6o_7^2o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19v_1^2o_11 + 24o_7^2o_22o_8cs^2o_6^2o_14o_5o_20o_13o_19v_1v_2o_11 - 24o_7^2o_8o_18cs^2o_6^2o_14o_5o_20o_19v_1v_2o_11 -$$
$$12o_7^2o_22o_18cs^4o_6^3o_14o_5o_20o_13o_19o_11 + 12o_7^2o_22o_18cs^2o_6^2o_14o_5o_13o_19o_11v_3^2 - 24o_7o_22o_18cs^2o_6^3o_5o_20o_13o_19v_1v_2o_11 +$$
$$6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13v_1^2o_11 - 6o_7^2o_22o_8o_18cs^2o_6^3o_5o_20o_19o_11v_3^2 - 12o_7^2o_22o_8o_18o_6^3o_5o_20o_13o_19v_1v_2o_11v_3^2 -$$
$$12o_7^2o_22o_8o_18o_6^2o_14o_5o_13o_19v_1^2o_11v_3^2 + 6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_19o_11v_3^2 + 12o_7^2o_22o_8cs^4o_6^2o_5o_20o_13o_19o_11 -$$
$$12o_7^2o_22o_18cs^2o_6^3o_5o_20o_13o_19v_1^2o_11 - 12o_7^2o_22o_8o_18cs^4o_6^3o_14o_20o_13o_11 + 24o_7^2o_22o_8o_18cs^2o_6^2o_5o_20o_13o_19v_1v_2o_11 +$$
$$24o_7o_22o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 + 12o_7o_22o_18o_6^3o_5o_20o_13o_19v_1^2o_11v_3^2 - 6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13v_3^2 +$$
$$6o_7^2o_22o_8o_18cs^4o_6^3o_5o_20o_13o_19o_11 - 24o_7^2o_22o_18o_6^2o_5o_20o_13o_19v_1v_2o_11v_3^2 - 12o_7^2o_22o_18cs^2o_6^3o_14o_5o_13o_19v_1^2o_11 -$$
$$24o_7^2o_22o_22cs^2o_6^2o_14o_5o_13o_19v_1v_2o_11 + 12o_7^2o_22o_18cs^4o_6^3o_5o_20o_13o_19o_11 + 12o_7^2o_22o_8o_18o_6^3o_5o_20o_13o_19v_1v_2o_11 -$$
$$24o_7^2o_22o_8o_18cs^4o_14o_5o_20o_13o_19o_11 - 24o_7o_22o_8o_18cs^2o_6^3o_14o_5o_13v_1v_2o_11 + 12o_7^2o_22o_8o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 -$$
$$6o_7o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_11v_3^2 + 12o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19o_11v_3^2 + 12o_7^2o_22o_18cs^2o_6^2o_5o_20o_13o_19o_11v_3^2 -$$
$$12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_20o_19v_1^2o_11 - 6o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_20o_19o_11 - 12o_7o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 -$$
$$12o_7^2o_22o_18cs^2o_6^2o_14o_5o_20o_13o_19v_1^2o_11 + 24o_7o_22o_8o_18cs^2o_6^3o_14o_5o_13o_19v_1v_2o_11 - 12o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_13o_19v_1^2o_11 -$$
$$12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13o_19v_1^2o_11 - 12o_7^2o_22o_18cs^4o_6^2o_14o_5o_13o_19o_11 - 12o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_13o_19v_3^2 +$$
$$6o_7^2o_22o_8o_18cs^2o_6^3o_5o_20o_13o_19o_11v_3^2 + 12o_7^2o_8cs^2o_6^3o_14o_5o_20o_13o_19v_3^2 - 6o_7o_22o_8o_18o_6^3o_14o_5o_20o_13v_1^2o_11v_3^2 +$$
$$12o_7^2o_22o_8o_18o_6^3o_14o_5o_13v_1^2v_3^2 - 6o_7^2o_8o_18cs^2o_6^3o_14o_5o_20o_19o_11v_3^2 + 12o_7o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2v_3^2 - 12o_7^2o_22o_8cs^4o_6^3o_14o_20o_13o_19o_11 -$$
$$6o_7o_22o_8o_18cs^2o_6^3o_5o_20o_13o_19v_1^2o_11 + 24o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_20o_19v_1v_2o_11v_3^2 - 6o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 -$$
$$12o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_13o_19o_11 + 24o_7^2o_22o_8o_18o_6^2o_14o_5o_20o_19v_1v_2o_11v_3^2 - 6o_7^2o_22o_8o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 -$$
$$6o_7^2o_22o_8o_18cs^2o_6^3o_14o_5o_20o_13o_19o_11v_3^2 - 12o_7o_8o_18o_6^3o_14o_5o_20o_13o_19v_1v_2o_11v_3^2 + 12o_7o_22o_8o_18cs^2o_6^3o_14o_5o_13v_1^2o_11 -$$
$$24o_7o_22o_18cs^2o_6^3o_14o_5o_13o_19v_1v_2o_11 - 2o_7^2o_22o_8o_18cs^4o_6^2o_14o_5o_20o_13o_19o_11 - 24o_7^2o_22o_8cs^2o_6^3o_14o_5o_13o_19v_1v_2 +$$
$$12o_7^2o_8o_18cs^2o_6^2o_14o_5o_20o_19v_1^2o_11 - 12o_7^2o_22o_8o_18o_6^2o_5o_20o_13o_19v_1^2o_11v_3^2 + 6o_7^2o_22o_8o_18cs^4o_6^3o_14o_5o_20o_13o_19o_11 -$$
$$12o_7^2o_8cs^2o_6^3o_14o_5o_20o_13o_19o_11v_3^2 - 12o_7^2o_22o_18o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 + 24o_7^2o_22o_8o_18cs^2o_6^2o_14o_5o_13o_19v_1v_2o_11 -$$
$$12o_7^2o_22o_8o_18cs^2o_6^2o_5o_20o_13o_19v_1^2o_11 - 12o_7^2o_22o_8o_18o_6^3o_14o_5o_13v_1^2o_11v_3^2 - 12o_7^2o_22o_8o_6^3o_14o_5o_20o_13o_19v_1^2v_3^2 +$$
$$12o_7o_22o_18o_6^3o_14o_5o_13o_19v_1^2o_11v_3^2 - 12o_7^2o_8o_6^3o_14o_5o_20o_13o_19v_1^2o_11v_3^2 + 12o_7^2o_22o_8cs^2o_6^3o_14o_5o_13o_19v_1^2 - 12o_7^2o_22o_8cs^2o_6^3o_14o_5o_20o_13o_19v_3^2$$

$C_{14} = 2o_7o_22o_8o_14o_13o_19v_1^2v_2o_11 + 2o_7o_22o_8o_18cs^2o_20o_19v_2o_11 + o_7o_22o_8o_18cs^2o_6o_14o_20o_13o_19v_1o_11 - 2o_7o_22o_8o_18o_6o_14o_13v_1v_2^2 +$
$2o_7o_22o_18o_6o_20o_13o_19v_1v_2^2o_11 - o_22o_8o_18cs^2o_6o_14o_20o_13v_2o_11 - o_7o_8o_18o_6o_14o_20o_19v_1^2v_2o_11 + 2o_7o_22o_8o_18cs^2o_14o_20o_19v_1o_11 +$
$o_7o_8o_18cs^2o_6o_14o_20o_13o_19v_1 + 2o_7o_22o_8o_6o_14o_13o_19v_1v_2^2o_11 + 2o_7o_22o_8o_18o_14o_20o_19v_1v_2^2o_11 - 2o_22o_18cs^2o_6o_14o_20o_13o_19v_2o_11 +$
$2o_22o_8o_18cs^2o_6o_14o_13v_2o_11 - 2o_7o_22o_18cs^2o_14o_13o_19v_1o_11 + 2o_7o_22o_8o_18cs^2o_14o_20o_13o_19v_2o_11 + o_7o_22o_8o_18o_6o_14o_20o_13o_19v_1v_2^2o_11 -$
$o_7o_8o_18o_6o_14o_20o_13o_19v_1^2v_2 + o_22o_8o_18o_6o_20o_13o_19v_1v_2^2o_11 + o_7o_8o_18cs^2o_6o_14o_20o_19v_1o_11 + 2o_7o_22o_8o_14o_20o_13o_19v_1v_2^2o_11 +$
$o_7o_22o_8o_18o_6o_14o_20o_13v_1^2v_2o_11 + 2o_7o_22o_8o_18cs^2o_6o_14o_13o_19v_2o_11 + 2o_7o_22o_8o_18cs^2o_6o_14o_13o_19v_1 + o_7o_8o_18o_6o_14o_20o_19v_1v_2^2o_11 -$
$2o_7o_22o_18o_14o_20o_19v_1^2v_2o_11 - 2o_7o_8o_6o_14o_20o_13o_19v_1^2v_2o_11 - 2o_7o_8o_6o_14o_20o_13o_19v_1^2v_2o_11 -$
$2o_7o_22o_8o_14o_13o_19v_1v_2^2o_11 + 2o_7o_8o_18cs^2o_14o_20o_19v_1o_11 - 2o_7o_22o_18o_6o_20o_13o_19v_1^2v_2o_11 + 2o_7o_22o_8cs^2o_6o_14o_13o_19v_2 +$
$2o_7o_22o_8o_18cs^2o_6o_14o_13v_2 - 2o_7o_22o_18cs^2o_6o_20o_13o_19v_2o_11 - o_22o_8o_18o_6o_20o_13o_19v_1^2v_2o_11 + 2o_7o_22o_8o_18cs^2o_14o_13o_19v_1o_11 +$
$2o_7o_8o_18cs^2o_14o_20o_19v_2o_11 - 2o_7o_22o_8o_18o_6o_14o_13o_19v_1^2v_2 - 2o_7o_22o_8cs^2o_6o_14o_20o_13o_19v_2 - o_22o_8o_18cs^2o_6o_20o_13o_19v_2o_11 -$
$2o_22o_18cs^2o_6o_14o_13o_19v_1o_11 + o_7o_8o_18cs^2o_6o_14o_20o_13o_19v_2o_11 - o_7o_22o_8o_18o_6o_14o_20o_13v_1v_2^2o_11 - 2o_7o_22o_8o_14o_20o_13o_19v_1^2v_2o_11 +$
$o_7o_22o_8o_18cs^2o_6o_14o_20o_13v_1 - o_7o_22o_8o_18o_6o_14o_20o_13o_19v_1^2v_2o_11 - 2o_7o_22o_8cs^2o_6o_14o_20o_13o_19v_1o_11 -$
$o_7o_22o_8o_18o_6o_20o_13o_19v_1v_2^2o_11 - 2o_22o_18cs^2o_6o_20o_13o_19v_1o_11 + 2o_7o_8o_18o_14o_20o_13o_19v_1v_2^2o_11 - 2o_22o_8o_18cs^2o_6o_14o_13o_19v_2o_11 -$
$2o_22o_8o_6o_14o_13o_19v_1v_2^2o_11 - o_22o_8o_18o_6o_14o_20o_13v_1^2v_2o_11 + 2o_7o_22o_8o_18cs^2o_20o_13o_19v_1o_11 - 2o_22o_8o_18o_6o_14o_13v_1v_2^2o_11 +$
$2o_7o_8cs^2o_14o_20o_13o_19v_2o_11 + 2o_7o_22o_8o_18o_13o_19v_1v_2o_11 + 2o_7o_22o_8cs^2o_6o_14o_13o_19v_1 - 2o_7o_22o_8o_6o_14o_20o_13o_19v_1 -$
$2o_7o_22o_8o_6o_14o_20o_13o_19v_1^2v_2 + o_7o_22o_8o_18cs^2o_6o_14o_20o_13v_2o_11 - 2o_7o_22o_18cs^2o_14o_20o_13o_19v_2o_11 + 2o_7o_22o_8cs^2o_6o_14o_20o_13o_19v_1 -$
$2o_7o_22o_8o_6o_14o_20o_13o_19v_1v_2^2o_11 - 2o_7o_22o_8o_18o_14o_13o_19v_1^2v_2o_11 - 2o_7o_22o_18cs^2o_6o_14o_13o_19v_2o_11 - o_7o_22o_8o_18cs^2o_6o_14o_20o_13v_2 -$
$o_7o_22o_8o_18o_6o_20o_19v_1^2v_2o_11 - 2o_7o_22o_18o_14o_13o_19v_1v_2^2o_11 + 2o_7o_22o_8o_6o_14o_13o_19v_1^2v_2 - 2o_7o_22cs^2o_14o_13o_19v_1o_11 -$
$2o_7o_22o_18cs^2o_20o_13o_19v_1o_11 - o_7o_8o_18cs^2o_6o_14o_20o_13o_19v_2 + o_7o_22o_8o_18o_6o_20o_13o_19v_1^2v_2o_11 + o_7o_22o_8o_18cs^2o_6o_20o_13o_19v_2o_11 +$
$2o_22o_8o_18o_6o_14o_13v_1^2v_2o_11 - 2o_7o_8o_18o_14o_20o_13o_19v_1^2v_2o_11 + o_22o_8o_18o_6o_14o_20o_13v_1v_2^2o_11 + 2o_22o_18o_6o_14o_13o_19v_1^2v_2o_11 +$
$2o_7o_22o_8cs^2o_14o_20o_13o_19v_1o_11 + o_22o_8o_18cs^2o_6o_14o_20o_13o_19v_2o_11 + 2o_7o_22o_18o_14o_13o_19v_1^2v_2o_11 + o_7o_22o_8o_18o_6o_20o_19v_1v_2^2o_11 -$
$o_7o_22o_8o_18cs^2o_6o_20o_19v_2o_11 - o_7o_22o_8o_18o_6o_14o_20o_13o_19v_1v_2^2 - 2o_7o_22o_8o_18cs^2o_6o_14o_13v_1o_11 + 2o_7o_22o_18cs^2o_6o_14o_13o_19v_1o_11 +$
$2o_7o_22cs^2o_6o_14o_13o_19v_1o_11 + 2o_7o_22o_8o_18o_14o_13o_19v_1v_2^2o_11 - 2o_7o_8cs^2o_6o_14o_20o_13o_19v_2o_11 - 2o_7o_22o_8o_18o_6o_14o_20o_13v_2^2o_11 -$
$2o_7o_22o_8o_18cs^2o_6o_14o_13o_19v_2 - 2o_7o_22o_8cs^2o_20o_13o_19v_2o_11 + 2o_22o_18o_6o_20o_13o_19v_1^2v_2o_11 + 2o_22o_8cs^2o_6o_14o_13o_19v_1o_11 +$
$o_7o_8o_18o_6o_14o_20o_13o_19v_1v_2^2 - 2o_7o_8o_6o_14o_20o_13o_19v_1^2v_2o_11 + 2o_22o_18cs^2o_6o_20o_13o_19v_2o_11 + 2o_7o_22o_8cs^2o_6o_14o_20o_13o_19v_2o_11 +$
$2o_7o_22o_8o_18o_6o_14o_13o_19v_1^2v_2o_11 - 2o_7o_8cs^2o_14o_20o_13o_19v_1o_11 - 2o_7o_22o_18cs^2o_6o_14o_20o_13o_19v_1o_11 +$
$o_22o_8o_18o_6o_14o_20o_13o_19v_1^2v_2o_11 + 2o_7o_22o_8o_18o_6o_14o_13v_1^2v_2 + o_7o_22o_8o_18cs^2o_6o_14o_20o_13o_19v_2 + 2o_7o_22o_8o_18o_14o_20o_13o_19v_1^2v_2o_11 +$
$2o_7o_22o_18cs^2o_14o_20o_13o_19v_1o_11 - o_7o_22o_8o_18cs^2o_6o_14o_20o_13v_1o_11 + 2o_7o_22o_8o_18o_20o_13o_19v_1v_2^2o_11 - 2o_7o_22o_8o_18o_20o_19v_1v_2^2o_11 -$
$2o_7o_22o_18o_6o_14o_20o_13o_19v_1v_2^2o_11 + 2o_7o_22o_18cs^2o_6o_14o_13o_19v_1o_11 + 2o_7o_22o_18o_20o_13o_19v_1^2v_2o_11 + 2o_7o_22o_18cs^2o_20o_13o_19v_2o_11 -$

$$o_22o_8o_18o_6o_14o_2o_013o_19v_1v_2^2o_11 + 2o_7o_22o_8o_18o_6o_14o_13o_19v_1v_2^2 + 2o_7o_22o_8cs^2o_14o_13o_19v_2o_11 + 2o_7o_8o_6o_14o_2o_013o_19v_1v_2^2o_11 -$$
$$2o_22o_18o_6o_2o_013o_19v_1v_2^2o_11 - 2o_7o_22o_8o_18o_6o_14o_13o_19v_1^2o_11 - o_7o_22o_8o_18cs^2o_6o_2o_013o_19v_1o_11 - 2o_7o_8cs^2o_6o_14o_2o_013o_19v_1 +$$
$$2o_7o_22o_8o_18o_2o_019v_1^2o_2o_11 + 2o_7o_8o_6o_14o_2o_013o_19v_1^2v_2 + o_7o_22o_8o_18cs^2o_6o_2o_019v_1o_11 + 2o_7o_22o_18o_6o_14o_2o_013o_19v_1^2v_2o_11 -$$
$$2o_7o_22o_18o_2o_013o_19v_1v_2^2o_11 - 2o_7o_22o_8cs^2o_14o_2o_013o_19v_2o_11 - o_22o_8o_18cs^2o_6o_14o_2o_013o_19v_1o_11 + 2o_7o_8cs^2o_6o_14o_2o_013o_19v_1o_11 -$$
$$2o_7o_22o_8o_18o_2o_013o_19v_1^2v_2o_11 - 2o_7o_22o_8o_18cs^2o_6o_14o_13v_2o_11 - 2o_7o_22o_8cs^2o_6o_14o_13o_19v_2o_11 - 2o_7o_22o_8o_18o_4o_2o_013o_19v_1v_2^2o_11 -$$
$$2o_7o_22o_8o_18o_6o_14o_13v_1^2o_11 - 2o_7o_22o_8o_18cs^2o_2o_019v_1o_11 - o_7o_22o_8o_18cs^2o_6o_14o_2o_013o_19v_2o_11 - 2o_7o_22o_18o_6o_14o_13o_19v_1^2v_2o_11 +$$
$$2o_22o_18o_6o_14o_2o_013o_19v_1v_2^2o_11 + 2o_7o_8o_14o_2o_013o_19v_1^2v_2o_11 + o_7o_8o_18o_6o_14o_2o_013o_19v_1^2v_2o_11 - 2o_7o_22o_8o_18cs^2o_14o_2o_019v_2o_11 +$$
$$2o_7o_8cs^2o_6o_14o_2o_013o_19v_2 + o_22o_8o_18cs^2o_6o_14o_2o_013v_1o_11 - 2o_7o_22o_18o_4o_2o_013o_19v_1^2v_2o_11 - 2o_7o_22o_8o_18cs^2o_14o_2o_013o_19v_1o_11 +$$
$$2o_22o_18cs^2o_6o_14o_2o_013o_19v_1o_11 - 2o_22o_8o_18cs^2o_6o_14o_13v_1o_11 + 2o_7o_22o_18cs^2o_14o_13o_19v_2o_11 + 2o_7o_8o_18o_14o_2o_019v_1^2v_2o_11 -$$
$$o_7o_22o_8o_18o_6o_14o_2o_019v_1v_2^2o_11 - 2o_7o_22o_8cs^2o_6o_14o_13o_19v_1o_11 + 2o_7o_22o_8o_6o_2o_013o_19v_1v_2^2 - o_7o_8o_18cs^2o_6o_14o_2o_013o_19v_2o_11 -$$
$$2o_22o_8o_18o_6o_14o_13o_19v_1^2v_2o_11 - o_7o_8o_14o_2o_013o_19v_1v_2^2o_11 - o_7o_22o_8o_18cs^2o_6o_14o_2o_013o_19v_1o_11 - o_7o_8o_18o_6o_14o_2o_013o_19v_1v_2^2o_11 +$$
$$2o_7o_22o_18cs^2o_6o_2o_013o_19v_1o_11 + o_7o_22o_8o_18o_6o_14o_2o_013v_2^2 + 2o_7o_22o_18o_6o_14o_13o_19v_1v_2^2o_11 + 2o_7o_22o_8o_18o_6o_14o_13v_1v_2^2o_11 -$$
$$2o_22o_18o_6o_14o_2o_013o_19v_1^2v_2o_11 + o_7o_22o_8o_18o_6o_14o_2o_013o_19v_1^2v_2 - 2o_7o_8o_18cs^2o_14o_2o_013o_19v_2o_11 + o_7o_22o_8o_18o_6o_14o_2o_019v_1^2v_2o_11 -$$
$$o_7o_22o_8o_18cs^2o_6o_14o_2o_013o_19v_1 - o_7o_8o_18cs^2o_6o_14o_2o_013o_19v_1o_11 - 2o_7o_8o_18o_14o_2o_019v_1v_2^2o_11 + 2o_22o_18cs^2o_6o_14o_13o_19v_2o_11 +$$
$$2o_22o_8o_18o_6o_14o_13o_19v_1v_2^2o_11 - 2o_7o_22o_8o_6o_14o_13o_19v_1v_2^2 + o_22o_8o_18cs^2o_6o_2o_013o_19v_1o_11 - 2o_7o_8o_18cs^2o_14o_2o_019v_1o_11 -$$
$$2o_7o_22o_8o_18cs^2o_14o_13o_19v_2o_11 + 2o_7o_22o_18o_14o_2o_013o_19v_1v_2^2o_11$$

$$C_{15} = -o_23o_16o_7o_8o_6o_2o_019v_1^2v_2^2o_11o_17v_3 - 2o_23o_8o_18cs^2o_6o_2o_019v_1o_11o_17v_3^2 + 2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_1v_2^2o_11o_17 -$$
$$o_23o_16o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_17v_3 + 2o_23o_16o_7o_18o_6o_2o_019v_1^2v_2^2o_11v_3 - o_23o_16o_7o_8cs^2o_6o_2o_019v_1v_2^2o_17 + o_16o_7o_8o_18cs^2o_6o_2o_019v_1^2o_17v_3 -$$
$$2o_23o_16o_7o_8cs^2o_6o_19v_2^2o_17v_3 + 2o_23o_16o_8o_18o_6o_2o_0v_1^2v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18o_6v_1v_2^2o_17v_3^2 - o_23o_7o_8o_18cs^2o_6o_2o_019v_1^2o_11o_17v_3 -$$
$$2o_23o_16o_8o_18o_6o_2o_019v_1v_2^2o_11v_3^2 + 2o_16o_8o_18cs^2o_6o_2o_0v_1o_11o_17v_3^2 + 2o_23o_16o_7o_8o_18cs^2o_6v_1^2o_11o_17v_3 -$$
$$2o_23o_16o_18cs^2o_6o_2o_019v_1o_11o_1o_17v_3^2 - 2o_16o_7o_8o_18o_6o_2o_0v_1v_2^2o_11o_17v_3^2 - 2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_2^2o_11o_17v_3 +$$
$$2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_1^2o_17v_3 - 2o_23o_16o_8o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 - 2o_23o_8o_18cs^2o_6o_2o_019v_1^2o_1v_3 +$$
$$2o_23o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11 - 2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_1^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_6v_2^2o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6v_2^2o_11o_17v_3 +$$
$$o_23o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 - 2o_23o_16o_7o_8o_6o_19v_1v_2^2o_11o_17v_3 - 2o_23o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3 - 2o_23o_16o_18cs^2o_6o_2o_019v_2^2o_11v_3 -$$
$$2o_23o_16o_7o_18o_6o_2o_019v_2^2o_11o_17v_3 - o_23o_7o_8o_18cs^2o_6v_1v_2^2o_11o_17 - o_23o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 - 2o_23o_16o_8o_18o_6o_019v_1v_2^2o_17v_3^2 +$$
$$o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1o_1v_3^2 - 2o_23o_16o_7o_1o_8o_19v_1^2v_2^2o_11o_17v_3 - 2o_23o_16o_8o_6o_2o_019v_1v_2^2o_11o_17v_3^2 -$$
$$2o_16o_7o_8o_18cs^2o_6o_2o_0v_1o_11o_17v_3^2 - 2o_23o_16o_7o_8cs^2o_19v_1^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18o_1o_19v_1^2v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6v_1o_17v_3^2 -$$
$$o_7o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3^2 + 2o_23o_8o_18o_6o_2o_019v_1v_2^2o_11v_3 + 2o_23o_16o_7o_8cs^2o_6o_19v_1^2o_11o_17v_3 - o_16o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 +$$
$$o_16o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 - 2o_23o_16o_7o_18cs^2o_6o_19v_1o_11o_17v_3 + 2o_16o_8o_18o_6o_2o_0v_1v_2^2o_11o_17v_3 + 2o_23o_16o_18cs^2o_6o_2o_019v_1o_11v_3^2 +$$
$$2o_23o_16o_8o_18cs^2o_6o_19v_1^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18o_19v_1v_2^2o_11o_17v_3 - o_23o_16o_7o_8o_18cs^2o_2o_019v_1^2o_11o_17v_3 -$$
$$o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11v_3 - o_16o_7o_8o_18o_6o_2o_019v_1v_2^2o_17v_3^2 + 2o_23o_16o_8o_18cs^2o_6o_19v_2^2o_11o_17v_3 -$$
$$o_23o_16o_7o_8o_18cs^2o_2o_019v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8cs^2o_19v_1v_2^2o_11o_17 - 2o_23o_16o_7o_8o_6o_19v_1^2v_2^2o_17v_3 - 2o_23o_16o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11 +$$
$$2o_23o_16o_8o_18cs^2o_6o_2o_019v_1^2o_11o_17v_3 - o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 -$$
$$o_23o_16o_7o_8o_18o_2o_019v_1v_2^2o_11o_17v_3^2 + o_23o_16o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 + o_23o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_11v_3 -$$
$$2o_23o_16o_7o_8o_18o_6o_2o_0v_1v_2^2o_17v_3^2 + 2o_23o_16o_7o_8cs^2o_6o_19v_2^2o_11o_17v_3 - 2o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3 - o_16o_7o_8o_18cs^2o_6o_2o_019v_1^2o_11o_17v_3 +$$
$$o_23o_16o_7o_8o_18cs^2o_2o_019v_1v_2^2o_11o_17 - 2o_23o_16o_7o_8cs^2o_19v_2^2o_11o_17v_3 - 2o_23o_16o_8o_18cs^2o_6o_19v_1v_2^2o_11o_17 + 2o_16o_7o_8o_18cs^2o_6o_2o_0v_1v_2^2o_17 -$$
$$2o_23o_16o_7o_18cs^2o_2o_019v_1v_2^2o_11o_17 + o_23o_16o_7o_8o_6o_2o_019v_1v_2^2o_11o_17v_3^2 + 2o_23o_16o_7o_18cs^2o_19v_1v_2^2o_11o_17 -$$
$$2o_23o_16o_8o_18cs^2o_6v_1^2o_11o_17v_3 - 2o_23o_16o_8o_18o_6o_2o_0v_1v_2^2o_11o_17v_3 + o_23o_16o_7o_8cs^2o_6o_2o_019v_1^2o_17v_3 - o_16o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_17 +$$
$$2o_23o_16o_8o_18cs^2o_6o_2o_019v_1o_11o_17v_3^2 + 2o_23o_16o_7o_18o_2o_019v_1v_2^2o_11v_3^2 + 2o_23o_16o_7o_8o_18cs^2o_6o_19v_2^2o_17v_3 - 2o_23o_16o_18o_6o_2o_019v_1^2v_2^2o_11v_3 -$$
$$2o_23o_16o_7o_18cs^2o_2o_019v_1^2o_11v_3 + 2o_16o_7o_8o_18o_6o_2o_0v_1^2v_2^2o_11o_17v_3 + 2o_23o_16o_7o_18cs^2o_2o_019v_1v_2^2o_11 - 2o_23o_16o_7o_18cs^2o_19v_2^2o_11o_17v_3 +$$
$$2o_23o_16o_7o_8cs^2o_2o_019v_1v_2^2o_11o_17v_3 + 2o_23o_16o_8o_18o_6o_2o_0v_1v_2^2o_11o_17v_3 - o_23o_16o_7o_8o_18v_2^2o_17v_3 -$$
$$2o_23o_16o_7o_18cs^2o_19v_1^2o_11o_17v_3 + 2o_23o_16o_8o_18cs^2o_6v_1v_2^2o_11o_17 + 2o_23o_16o_7o_8cs^2o_2o_019v_1^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_1v_2^2o_17 +$$
$$2o_23o_16o_7o_18cs^2o_6o_2o_019v_2^2o_11v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_19v_1o_11o_17v_3^2 + 2o_16o_7o_8o_18o_6o_2o_0v_1v_2^2o_17v_3^2 +$$
$$o_23o_16o_7o_8cs^2o_6o_2o_019v_1o_11o_17v_3^2 + 2o_23o_8o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8o_6o_19v_1^2v_2^2o_11o_17v_3 - o_23o_7o_8o_18cs^2o_6o_2o_019v_1o_11v_3^2 -$$
$$2o_23o_16o_8o_18cs^2o_6v_1^2o_11o_17v_3 + 2o_23o_16o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 + 2o_23o_16o_7o_18o_19v_1v_2^2o_11o_17v_3 + 2o_23o_16o_8o_18o_6o_19v_1^2v_2^2o_11o_17v_3 -$$
$$o_23o_16o_7o_8cs^2o_2o_019v_1o_11o_17v_3^2 - 2o_23o_16o_7o_8o_18o_1o_19v_1v_2^2o_11o_17v_3^2 - o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1o_11o_17v_3^2 +$$
$$2o_23o_16o_18cs^2o_6o_19v_1o_11o_17v_3^2 - 2o_23o_16o_7o_18cs^2o_6o_2o_019v_1o_11v_3^2 + o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 +$$
$$2o_23o_16o_7o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 + o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1o_17v_3^2 - 2o_16o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 +$$
$$o_23o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 + 2o_16o_8o_18cs^2o_6o_2o_0v_1v_2^2o_11o_17v_3 - 2o_23o_16o_8o_18cs^2o_6o_2o_0v_1o_11o_17v_3^2 -$$
$$2o_23o_16o_7o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18v_1^2v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6v_1v_2^2o_11o_17v_3 +$$
$$2o_8o_18cs^2o_6o_2o_019v_1o_11o_17v_3^2 - 2o_23o_16o_7o_18cs^2o_6o_2o_019v_1^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_19v_2^2o_11o_17v_3 +$$
$$o_23o_16o_7o_8o_18cs^2o_2o_019v_1^2o_1v_3 - o_23o_16o_7o_8o_18cs^2o_2o_019v_1v_2^2o_11 - o_23o_16o_7o_8o_6o_2o_019v_1v_2^2o_17v_3^2 + 2o_16o_8o_18cs^2o_6o_2o_019v_1^2o_11o_17v_3 -$$
$$o_23o_16o_7o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3 + o_23o_16o_7o_8o_2o_019v_1^2v_2^2o_11o_17v_3 - o_23o_16o_7o_8o_18o_2o_019v_1v_2^2o_11v_3^2 -$$
$$2o_23o_16o_7o_8o_18cs^2o_6o_19v_1o_11o_17v_3 + 2o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3 - 2o_16o_7o_8o_18cs^2o_6o_2o_0v_1^2o_17v_3 - o_23o_16o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_11v_3 +$$
$$2o_23o_16o_7o_8o_18o_6o_19v_1^2v_2^2o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_19v_1v_2^2o_11o_17 + 2o_23o_16o_8o_18cs^2o_6o_2o_0v_1^2o_11o_17v_3 -$$
$$2o_23o_16o_7o_8o_18cs^2o_6o_19v_1v_2^2o_17 - o_16o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_19v_1o_11o_17v_3^2 -$$
$$2o_8o_18cs^2o_6o_2o_019v_1^2o_11o_17v_3 - 2o_16o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3 + o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 -$$
$$2o_23o_16o_8o_18cs^2o_6o_19v_1^2o_11o_17v_3 + o_16o_7o_8o_18cs^2o_6o_2o_019v_2^2o_17v_3 - 2o_23o_16o_7o_8cs^2o_6o_19v_1^2o_17v_3 + 2o_23o_16o_7o_18o_6o_2o_019v_1v_2^2o_11o_17v_3^2 -$$
$$2o_23o_16o_8o_18cs^2o_6o_2o_019v_1o_11v_3^2 + 2o_23o_16o_7o_8o_18o_6o_19v_1v_2^2o_11o_17v_3^2 + 2o_23o_16o_7o_18o_2o_019v_1^2v_2^2o_11o_17v_3 -$$
$$2o_23o_16o_8o_18cs^2o_6o_2o_019v_1^2o_11o_1v_3 + o_23o_16o_7o_8o_18o_6o_2o_019v_1v_2^2o_11v_3^2 - 2o_23o_16o_18cs^2o_6o_2o_019v_1^2o_11v_3 + o_23o_16o_7o_8o_18o_6o_2o_019v_1v_2^2o_11v_3^2 +$$
$$2o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 - 2o_23o_16o_7o_8o_18o_6o_19v_1v_2^2o_17v_3^2 - 2o_23o_16o_7o_8o_18o_6o_2o_0v_1^2o_11o_17v_3 + 2o_23o_16o_18cs^2o_6o_2o_019v_1v_2^2o_11 +$$
$$o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 - 2o_23o_16o_18cs^2o_6o_19v_2^2o_11o_17v_3 - o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 +$$
$$2o_23o_16o_18cs^2o_6o_19v_1v_2^2o_11o_17 + o_23o_16o_7o_8o_6o_2o_019v_1^2v_2^2o_17v_3 + 2o_23o_16o_7o_18cs^2o_6o_2o_019v_1o_11o_17v_3^2 -$$

$$2o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_6v_1^2o_17v_3 + 2o_23o_16o_8o_18cs^2o_6o_2o_0v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_2^2o_17v_3 -$$

$$2o_23o_8o_18cs^2o_6o_2o_019v_2^2o_11v_3 + o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_17 - 2o_16o_8o_18cs^2o_6o_2o_019v_1o_11o_17v_3^2 + 2o_23o_16o_18o_6o_2o_019v_1v_2^2o_11v_3^2 -$$

$$o_23o_16o_7o_8cs^2o_6o_2o_019v_2^2o_11o_17v_3 - o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1^2o_11v_3 - 2o_23o_16o_8o_18o_6v_1^2v_2^2o_11o_17v_3 +$$

$$o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11 - 2o_23o_16o_7o_8o_18cs^2o_6o_19v_2^2o_11o_17v_3 - o_23o_16o_7o_8cs^2o_2o_019v_1v_2^2o_11o_17 -$$

$$2o_23o_16o_7o_8o_18o_6v_1v_2^2o_11o_17v_3^2 + o_23o_16o_7o_8cs^2o_2o_019v_2^2o_11o_17v_3 + 2o_23o_16o_8o_18cs^2o_6v_1o_11o_17v_3 + o_23o_16o_7o_8o_18o_2o_019v_1v_2^2o_11o_17v_3^2 +$$

$$2o_23o_16o_7o_8o_18cs^2o_6o_19v_1v_2^2o_11o_17 - 2o_23o_16o_7o_18o_2o_019v_1^2v_2^2o_11v_3 - 2o_23o_16o_8o_18cs^2o_6o_2o_019v_1^2o_11o_17v_3 -$$

$$2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_1o_17v_3^2 + o_23o_16o_7o_8cs^2o_6o_2o_019v_1v_2^2o_11o_17 + 2o_23o_8o_18cs^2o_6o_2o_019v_1o_11v_3^2 -$$

$$2o_23o_16o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 + 2o_23o_16o_7o_18o_6o_19v_1^2v_2^2o_11o_17v_3 + o_23o_16o_7o_8cs^2o_2o_019v_2^2o_11o_17v_3 +$$

$$2o_23o_16o_7o_18cs^2o_19v_1v_1o_11o_17v_3^2 - 2o_23o_16o_7o_18cs^2o_2o_019v_1o_11o_17v_3^2 + 2o_23o_16o_18o_6o_019v_1v_2^2o_11o_17v_3 - o_23o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 -$$

$$o_16o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17v_3 - o_23o_16o_7o_8cs^2o_6o_2o_019v_1^2o_11o_17v_3 + 2o_23o_16o_8o_18cs^2o_6o_2o_019v_2^2o_11v_3 +$$

$$2o_23o_16o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 - 2o_23o_16o_7o_8o_18cs^2o_6o_19v_2^2o_11o_17v_3 - 2o_16o_7o_8o_18o_6o_2o_0v_1^2v_2^2o_17v_3 -$$

$$2o_23o_16o_7o_18cs^2o_2o_019v_2^2o_11v_3 + o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 + 2o_23o_16o_7o_18cs^2o_6o_19v_2^2o_11o_17v_3 + 2o_16o_7o_8o_18cs^2o_6o_2o_0v_1o_17v_3^2 +$$

$$o_23o_16o_7o_8o_18cs^2o_2o_019v_1o_11o_17v_3^2 + 2o_23o_16o_7o_8o_18cs^2o_6o_19v_1o_17v_3 - 2o_23o_16o_8o_18cs^2o_6o_19v_1o_11o_17v_3^2 +$$

$$o_16o_7o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8cs^2o_6o_19v_1v_2^2o_17 + 2o_16o_8o_18o_6o_2o_019v_2^2v_2^2o_11o_17v_3 + o_23o_16o_7o_8cs^2o_6o_2o_019v_2^2o_17v_3 +$$

$$2o_16o_7o_8o_18cs^2o_6o_2o_0v_1^2o_11o_17v_3 + 2o_23o_16o_7o_8cs^2o_19v_1o_11o_17v_3^2 - o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 - 2o_23o_16o_7o_8o_18o_6o_19v_1^2v_2^2o_11o_17v_3 -$$

$$o_23o_16o_7o_8o_18cs^2o_2o_019v_1o_11v_3 - 2o_23o_16o_7o_18o_6o_2o_019v_1^2v_2^2o_11o_17v_3 - 2o_23o_8o_18o_6o_2o_019v_1^2v_2^2o_11v_3 - 2o_23o_16o_7o_8cs^2o_6o_19v_1o_11o_17v_3 -$$

$$2o_23o_16o_7o_18cs^2o_6o_19v_1v_2^2o_11o_17 - 2o_23o_16o_7o_18o_2o_019v_1v_2^2o_11o_17v_3^2 + o_16o_7o_8o_18cs^2o_6o_2o_019v_1o_11o_17v_3 -$$

$$o_23o_7o_8o_18o_6o_2o_019v_1v_2^2o_11v_3^2 + 2o_23o_16o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_17v_3 + 2o_16o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 +$$

$$2o_23o_16o_7o_8o_6o_19v_1v_2^2o_17v_3 - 2o_16o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 + o_16o_7o_8o_18o_6o_2o_019v_1^2v_2^2o_17v_3 - o_23o_16o_7o_8o_18cs^2o_6o_2o_019v_1^2o_17v_3 -$$

$$2o_23o_16o_7o_18cs^2o_6o_2o_019v_1v_2^2o_11 + 2o_23o_16o_7o_18cs^2o_6o_2o_019v_1^2o_11v_3 + 2o_23o_16o_7o_8o_18cs^2o_6v_1v_2^2o_17 + 2o_23o_16o_7o_18cs^2o_6o_19v_2^2o_11o_17v_3 +$$

$$o_7o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 + 2o_23o_16o_8o_18o_6v_1v_2^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_6v_1o_11o_17v_3 + 2o_23o_16o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 +$$

$$o_23o_7o_8o_18cs^2o_6o_2o_019v_1^2o_11v_3 - o_23o_7o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11 + o_23o_16o_7o_8o_18o_6o_2o_019v_1v_2^2o_17v_3 + 2o_23o_16o_7o_8o_18o_6v_1^2v_2^2o_11o_17v_3 -$$

$$2o_23o_16o_7o_18o_6o_2o_019v_1v_2^2o_11v_3 + 2o_23o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18o_6v_1^2v_2^2o_17v_3 + o_23o_7o_8o_18cs^2o_6o_2o_019v_1o_11o_17v_3 -$$

$$2o_16o_8o_18cs^2o_6o_2o_0v_1^2o_11o_17v_3 - o_23o_16o_7o_8o_18o_2o_019v_1^2v_2^2o_11o_17v_3 + 2o_23o_16o_8o_18o_6o_2o_019v_2^2v_2^2o_11v_3 -$$

$$2o_23o_16o_7o_18o_6o_19v_1v_2^2o_11o_17v_3 - 2o_23o_16o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 - 2o_16o_8o_18cs^2o_6o_2o_0v_2^2o_11o_17v_3 - 2o_16o_7o_8o_18cs^2o_6o_2o_0v_2^2o_17v_3 +$$

$$2o_23o_16o_7o_18cs^2o_2o_019v_1o_11v_3 + 2o_23o_8o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3 - 2o_23o_16o_18o_6o_19v_1^2v_2^2o_11o_17v_3 - 2o_23o_8o_18cs^2o_6o_2o_019v_1v_2^2o_11o_17 +$$

$$2o_23o_16o_7o_8o_18cs^2o_6o_2o_0v_1o_11o_17v_3 - o_23o_16o_7o_8cs^2o_6o_2o_019v_1o_17v_3 + o_23o_7o_8o_18o_6o_2o_019v_1v_2^2o_11o_17v_3 +$$

$$o_23o_16o_7o_8o_18cs^2o_2o_019v_2^2o_11v_3 + 2o_16o_8o_18cs^2o_6o_2o_0v_1v_2^2o_11o_17 + 2o_23o_16o_18cs^2o_6o_2o_019v_2^2o_11o_17v_3$$

$$C_{16} = -24o_23o_7^2o_8o_18o_6^2o_5o_2o_019v_1v_2^2o_11v_3 - 12o_23o_16o_7^3o_18cs^2o_6^2o_5o_19v_2^2o_11o_17 + 12o_23o_16o_7^3o_8cs^4o_6^2o_2o_019o_17 -$$

$$24o_23o_16o_7^3o_8o_6^2o_5o_19v_1v_2^2o_17v_3 - 6o_16o_7^3o_8o_18o_6^2o_5o_2o_019v_2^2o_17v_3 - 18o_23o_16o_7^3o_8o_18cs^4o_6o_2o_019o_11o_17 -$$

$$18o_23o_16o_7^2o_8o_18cs^4o_6o_5o_2o_019o_11o_17 - 12o_23o_16o_7^3o_18o_6o_5o_2o_019v_2^2o_11o_17v_3 - 12o_23o_16o_7^3o_8o_6^2o_5o_19v_2^2o_11o_17v_3 -$$

$$12o_23o_7^3o_8o_18o_6^2o_5o_2o_019v_1v_2^2o_11o_17v_3 + 12o_23o_7^2o_8o_18cs^2o_6^2o_5o_2o_019o_11v_3 - 12o_23o_16o_7^3o_8o_18o_6^2o_5o_2o_019v_1v_2^2o_17v_3 -$$

$$24o_23o_16o_7^3o_8o_6^2o_5o_2o_019v_1v_2^2o_17 + 12o_23o_16o_7^3o_8cs^2o_6^2o_5o_2o_019v_1v_2^2o_17 - 24o_23o_16o_7^3o_8o_18cs^2o_6^2o_5v_1v_2^2o_17v_3 +$$

$$12o_23o_16o_7^3o_8o_18o_6^2o_5o_2o_019v_1v_2^2o_11o_17v_3 + 12o_23o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_1v_1v_3 - 12o_23o_16o_7^3o_8o_18o_6^2o_5v_2^2o_11o_17v_3^2 +$$

$$24o_23o_16o_7^3o_8o_18cs^2o_6o_5o_19v_1o_11o_17v_3 + 24o_23o_16o_7^2o_18cs^2o_6^2o_5o_2o_019v_1o_11v_3 - 24o_23o_16o_7^2o_8o_18cs^2o_6^2o_5v_1o_11o_17v_3 +$$

$$6o_23o_16o_7^3o_8o_18cs^2o_6o_5o_2o_019v_2^2o_11o_17 - 12o_23o_16o_7^3o_8o_18cs^4o_6^2o_2o_011o_17 - 6o_23o_16o_7^3o_8o_18o_6^2o_5o_2o_019v_2^2o_11o_17v_3^2 -$$

$$o_23o_16o_7^3o_8o_18cs^4o_6^2o_5o_2o_019o_11o_17 - 12o_23o_16o_7^3o_8o_18cs^2o_6^2o_5v_2^2o_11o_17 + 24o_23o_16o_7^3o_8o_18o_6^2o_5v_1v_2^2o_11o_17v_3 +$$

$$24o_23o_16o_7^2o_18cs^2o_6^2o_5o_2o_019v_1o_11o_17v_3 - 12o_23o_16o_7^3o_8cs^2o_6^2o_5o_19o_11o_17v_3 + 12o_23o_16o_7^3o_8cs^2o_6^2o_5o_19v_2^2o_17 -$$

$$24o_23o_16o_7^2o_18cs^2o_6^2o_5o_19v_1o_11o_17v_3 + 24o_23o_7^2o_8o_18cs^2o_6^2o_5o_2o_019v_1o_11o_17v_3 + 24o_23o_16o_7^3o_8o_18o_6^2o_5o_19v_1v_2^2o_17v_3 +$$

$$12o_23o_16o_7^3o_18cs^2o_6o_5o_2o_019v_2^2o_11 + 12o_23o_16o_7^3o_18o_6o_5o_19v_2^2o_11o_17v_3^2 - 12o_23o_16o_7^3o_18cs^2o_6^2o_5o_2o_019v_2^2o_11o_17 +$$

$$24o_23o_7^3o_8o_18cs^2o_6^2o_5o_2o_0v_2^2o_11o_17v_3 + 12o_16o_7^3o_8o_18cs^2o_6^2o_5o_19v_1o_17v_3 +$$

$$12o_23o_16o_7^3o_8o_18o_6^2o_5o_19v_2^2o_11o_17v_3^2 - 24o_23o_16o_7^3o_8o_18o_6^2o_5o_2o_0v_1o_11o_17v_3 - 6o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019o_11o_17v_3^2 -$$

$$24o_16o_7^2o_8o_18cs^2o_6^2o_5o_2o_0v_1o_11o_17v_3 + 24o_23o_16o_7^2o_8o_18cs^2o_6^2o_5o_19v_1o_11o_17v_3 + 24o_23o_16o_7o_8o_18cs^4o_6^2o_5o_2o_019o_11o_17 +$$

$$12o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_0v_2^2o_17 + 12o_23o_16o_7^2o_8o_18cs^2o_6^2o_5o_2o_019v_2^2o_11o_17 + 10o_23o_16o_7^3o_8o_18cs^4o_6^2o_2o_019o_11o_17 -$$

$$12o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_011o_17v_3^2 + 6o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019o_11v_3 - 24o_23o_16o_7^2o_8o_18cs^2o_6^2o_5o_2o_019v_1o_11o_17v_3 +$$

$$12o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_19o_11o_17v_3^2 + 24o_23o_16o_7^3o_18o_6o_5o_2o_019v_1v_2^2o_11o_17v_3 - 12o_23o_16o_7^3o_8o_18o_6o_5o_2o_019v_1v_2^2o_11o_17v_3 +$$

$$24o_23o_16o_7^3o_8o_6^2o_5o_19v_1v_2^2o_11o_17v_3 - 6o_23o_7^3o_8o_18cs^4o_6o_5o_2o_019o_11o_17 + 6o_23o_7^3o_8o_18cs^4o_6^2o_5o_2o_019o_11 +$$

$$12o_23o_16o_7^2o_18cs^2o_6^2o_5o_2o_019o_11v_3^2 - 12o_23o_7^2o_8o_18cs^2o_6^2o_5o_2o_019o_11o_17v_3^2 + 12o_23o_16o_7^2o_18cs^2o_6^2o_5o_19o_11o_17v_3^2 +$$

$$6o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_1v_2^2v_3 - 12o_23o_16o_7^2o_8o_18o_6^2o_5o_2o_019v_2^2o_11o_17v_3 + 12o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019o_11o_17v_3^2 -$$

$$12o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_2^2o_11 - 12o_23o_16o_7^2o_8o_18cs^2o_6^2o_5o_2o_019o_11o_17v_3 - 6o_16o_7^3o_8o_18o_6^2o_5o_2o_019v_2^2o_11o_17v_3^2 -$$

$$12o_23o_16o_7^2o_8o_18cs^2o_6^2o_5o_2o_019o_11v_3 + 12o_23o_7^2o_8o_18cs^4o_6o_5o_2o_019o_11o_17 - 12o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_19o_17v_3^2 -$$

$$12o_16o_7^2o_8o_18o_6^2o_5o_2o_019v_2^2o_11o_17v_3^2 + 6o_23o_16o_7^3o_8o_6^2o_5o_2o_019v_2^2o_11o_17v_3 + 24o_23o_16o_7^2o_18cs^2o_6^2o_5o_19v_1o_11o_17v_3 +$$

$$12o_23o_16o_7o_8o_18cs^4o_6o_5o_2o_019o_11o_17 + 12o_23o_16o_7^3o_8o_18cs^4o_6o_5o_19o_11o_17 - 6o_23o_16o_7^3o_8cs^2o_6o_5o_2o_019v_2^2o_11o_17 +$$

$$12o_23o_16o_7^3o_8o_18cs^2o_6o_5o_2o_019v_1o_11v_3 + 6o_23o_16o_7^3o_8o_18cs^4o_6o_5o_2o_019o_11 + 12o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_1o_11o_17v_3 +$$

$$12o_23o_16o_7^2o_18o_6^2o_5o_19v_2^2o_11o_17v_3^2 + 12o_23o_16o_7^3o_18cs^2o_6^2o_5o_2o_019v_2^2o_11o_17 - 24o_16o_7^3o_8o_18o_6^2o_5o_2o_0v_1v_2^2o_17v_3 +$$

$$12o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_1o_17v_3 - 24o_23o_16o_7^3o_8cs^2o_6^2o_5o_19v_1o_11o_17v_3 - 12o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_0v_2^2o_17 -$$

$$12o_16o_7^3o_8o_18o_6^2o_5o_2o_0v_2^2o_11o_17v_3^2 + 6o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_2^2o_11o_17 + 24o_16o_7^3o_8o_18o_6^2o_5o_2o_019v_1o_11o_17v_3 +$$

$$12o_23o_16o_7^3o_8o_18cs^2o_6^2o_5o_11o_17v_3^2 - 12o_23o_16o_7^3o_8o_18o_6^2o_5o_19v_2^2o_11o_17v_3 - 12o_23o_16o_7^2o_8o_18cs^2o_6o_5o_19o_11o_17v_3^2 +$$

$$12o_23o_16o_7^3o_8o_18cs^2o_6^2o_5v_2^2o_17 + 12o_23o_16o_7^3o_8cs^4o_6^2o_2o_017 - 6o_23o_16o_7^3o_8o_18cs^2o_6o_5o_2o_019o_11v_3 - 12o_23o_16o_7^2o_18cs^4o_6^2o_5o_2o_019o_11 +$$

$$12o_23o_16o_7^3o_8o_6^2o_5o_2o_019v_1v_2^2o_17v_3 - 12o_23o_16o_7^2o_18cs^4o_6^2o_5o_19o_11o_17 - 24o_23o_16o_7^3o_18o_6o_5o_19v_1v_2^2o_11o_17v_3 -$$

$$6o_16o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_2^2o_17 - 12o_23o_16o_7^3o_18o_6^2o_5o_2o_019v_2^2o_11v_3 + 12o_7^3o_8o_18cs^2o_6^2o_5o_2o_019v_2^2o_11o_17 +$$

$$12o_23o_16o_7^3o_8o_18cs^4o_6^2o_5o_19o_17 - 6o_23o_16o_7^3o_8o_18cs^4o_6^2o_5o_2o_019o_11o_17 - 6o_23o_16o_7^3o_8cs^2o_6^2o_5o_2o_019o_17v_3^2 -$$

$$6o_23o_16o_7^3o_8o_18cs^4o_6^2o_5o_2o_019o_11 + 6o_23o_16o_7^3o_8cs^2o_6^2o_5o_2o_019o_11o_17v_3^2 - 12o_23o_16o_7^3o_8o_18cs^4o_6^2o_5o_19o_11o_17 -$$

$$12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 - 12o_2 3o_1 6o_7^3 o_8 cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6 o_5 o_1 9v_2^2 o_1 1o_1 7 +$$
$$12o_2 3o_1 6o_7^2 o_1 8cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7 + 6o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7 - 12o_2 3o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0v_2^2 o_1 1o_1 7 -$$
$$12o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 + 24o_2 3o_1 6o_7^3 o_1 8cs^2 o_6^2 o_5 v_1 o_1 1o_1 7v_3 - 24o_2 3o_1 6o_7^2 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1v_3 -$$
$$6o_2 3o_1 6o_7^3 o_8 o_1 8o_6 o_5 o_2 0o_1 9v_2^2 o_1 1v_3^2 + 24o_2 3o_1 6o_7^3 o_1 8cs^2 o_6 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 - 12o_2 3o_1 6o_7^2 o_8 o_1 8cs^4 o_6^2 o_5 o_1 1o_1 7 -$$
$$2o_2 3o_1 6o_7^2 o_8 o_1 8cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7 - 12o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1v_3 - 24o_2 3o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 v_1 v_2^2 o_1 1o_1 7v_3 -$$
$$12o_2 3o_2^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 - 12o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 - 24o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_1 9v_1 v_2^2 o_1 1o_1 7v_3 +$$
$$6o_2 3o_1 6o_7^3 o_8 o_1 8cs^4 o_6 o_5 o_2 0o_1 9o_1 1o_1 7 - 24o_2 3o_1 6o_7^3 o_1 8o_6 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1v_3 + 24o_2 3o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1v_3 +$$
$$12o_2 3o_1 6o_7^3 o_8 cs^2 o_6 o_5 o_1 9o_1 1o_1 7v_3^2 - 24o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 - 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 -$$
$$24o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0v_1 v_2^2 o_1 1o_1 7v_3 - 12o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 - 24o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0v_1 o_1 1o_1 7 -$$
$$6o_2 3o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1v_3^2 + 12o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 - 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7 +$$
$$12o_2 3o_1 6o_7^3 o_1 8cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1 + 12o_2 3o_1 6o_7^3 o_8 cs^2 o_6 o_5 o_1 9v_2^2 o_1 1o_1 7 + 12o_2 3o_1 6o_7^3 o_1 8cs^4 o_6^2 o_5 o_1 9o_1 1o_1 7 -$$
$$12o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7 + 6o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1 - 24o_2 3o_1 6o_7^2 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 -$$
$$12o_2 3o_1 6o_7^3 o_8 o_1 8cs^4 o_6^2 o_5 o_1 7 + 12o_2 3o_1 6o_7^3 o_8 o_1 8cs^4 o_2 0o_1 9o_1 1o_1 7 + 6o_2 3o_1 6o_7^3 o_8 o_1 8o_6 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 -$$
$$12o_2 3o_1 6o_7^3 o_8 o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 + 24o_2 3o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1v_3 - 18o_2 3o_1 6o_7^2 o_8 o_1 8cs^4 o_6^2 o_2 0o_1 9o_1 1o_1 7 +$$
$$24o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0v_1 v_2^2 o_1 7v_3 + 6o_2 3o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 - 24o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 -$$
$$12o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0v_2^2 o_1 7v_3^2 + 24o_2 3o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 o_1 9v_1 v_2^2 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7^3 o_8 cs^4 o_6 o_2 0o_1 9o_1 1o_1 7 +$$
$$12o_2 3o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1v_3 + 12o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 + 6o_2 3o_1 6o_7^3 o_8 cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7 -$$
$$12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1v_3 - 24o_2 3o_1 6o_7^2 o_1 8cs^2 o_6 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6 o_5 o_1 9v_1 o_1 1o_1 7v_3 -$$
$$6o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 7v_3^2 - 12o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 + 24o_2 3o_1 6o_7^3 o_8 cs^2 o_6^2 o_5 o_1 9v_1 o_1 1o_1 7v_3 +$$
$$12o_2 3o_1 6o_7^3 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 + 12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6 o_5 o_2 0o_1 9o_1 1v_3^2 - 12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7 -$$
$$24o_2 3o_1 6o_7^2 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1v_3 - 12o_2 3o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 1o_1 7v_3^2 + 24o_2 3o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0v_1 o_1 1o_1 7v_3 -$$
$$6o_2 3o_1 6o_7^3 o_8 cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 7 + 24o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0v_1 v_2^2 o_1 1o_1 7v_3 + 6o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 +$$
$$12o_2 3o_1 6o_7^3 o_8 o_6 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7 o_8 o_1 8cs^4 o_6^2 o_2 0o_1 9o_1 1o_1 7 + 12o_2 3o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 v_2^2 o_1 1o_1 7v_3^2 +$$
$$6o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1v_3^2 + 12o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_1 7v_3^2 + 6o_2 3o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 +$$
$$12o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 7v_3 - 12o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 7v_3^2 + 12o_2 3o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 v_2^2 o_1 1o_1 7 -$$
$$12o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6 o_5 o_1 9v_2^2 o_1 1o_1 7 - 12o_2 3o_1 6o_7^3 o_8 cs^4 o_6^2 o_2 0o_1 9o_1 1o_1 7 - 24o_1 6o_3 o_8 o_1 8cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7 -$$
$$6o_2 3o_1 6o_7^3 o_8 cs^2 o_6 o_5 o_2 0o_1 9o_1 1v_3^2 + 12o_2 3o_1 6o_7^3 o_1 8o_6 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3 -$$
$$12o_2 3o_1 6o_7^3 o_8 cs^4 o_6^2 o_5 o_1 9o_1 7 + 12o_2 3o_1 6o_7^3 o_8 cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 7v_3 + 6o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 -$$
$$24o_2 3o_1 6o_7^3 o_8 o_6 o_5 o_1 9v_1 v_2^2 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 - 12o_2 3o_1 6o_7^3 o_1 8cs^4 o_6 o_5 o_1 9o_1 1o_1 7 +$$
$$12o_2 3o_2^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1 - 12o_2 3o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_1 9v_2^2 o_1 1o_1 7 - 12o_2 3o_1 6o_7^3 o_1 8cs^4 o_6 o_5 o_2 0o_1 9o_1 1 +$$
$$24o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 - 12o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_1 9v_2^2 o_1 7 + 12o_2 3o_1 6o_7^3 o_8 o_1 8cs^4 o_6^2 o_5 o_1 1o_1 7 +$$
$$12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6^2 o_5 o_1 9v_2^2 o_1 1o_1 7 + 6o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 7 + 12o_2 3o_1 6o_7^3 o_1 8cs^4 o_6 o_5 o_2 0o_1 9o_1 1o_1 7 -$$
$$12o_2 3o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7 + 12o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 + 12o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0v_2^2 o_1 1o_1 7 +$$
$$12o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6 o_5 o_1 9v_2^2 o_1 1o_1 7 + 12o_2 3o_1 6o_7^3 o_8 o_6 o_5 o_1 9v_2^2 o_1 1o_1 7v_3 - 6o_2 3o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1 +$$
$$12o_2 3o_1 6o_7^2 o_8 o_1 8cs^4 o_6^2 o_2 0o_1 1o_1 7 - 12o_2 3o_1 6o_7^3 o_8 cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7 - 6o_2 3o_1 6o_7^3 o_8 o_1 8o_6 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 + 12o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 7v_3^2 -$$
$$12o_2 3o_1 6o_7^3 o_8 cs^4 o_6^2 o_2 0o_1 9o_1 7 + 24o_2 3o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 + 24o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0v_1 o_1 1o_1 7v_3 +$$
$$24o_2 3o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0v_1 v_2^2 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7^2 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7 - 12o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0v_2^2 o_1 1o_1 7 -$$
$$12o_2 3o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1v_3^2 - 24o_2 3o_1 6o_7^3 o_1 8cs^2 o_6 o_5 o_2 0o_1 9v_1 o_1 1v_3 - 24o_2 3o_1 6o_7^2 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1o_1 7v_3 -$$
$$24o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_1 9v_1 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7^3 o_8 o_6^2 o_5 o_1 9v_2^2 o_1 7v_3^2 - 6o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7 -$$
$$24o_2 3o_1 6o_7^3 o_8 cs^2 o_6^2 o_5 o_1 9v_1 o_1 7v_3 + 12o_2 3o_1 6o_7^3 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1v_3^2 + 12o_2 3o_1 6o_7^2 o_8 o_1 8cs^4 o_6^2 o_5 o_1 9o_1 1o_1 7 +$$
$$12o_2 3o_1 6o_7^3 o_8 o_1 8cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1 + 12o_2 3o_1 6o_7^3 o_8 cs^2 o_6^2 o_5 o_1 9o_1 7v_3^2 - 12o_2 3o_1 6o_7^3 o_1 8cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7 +$$
$$6o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 7v_3^2 - 12o_2 3o_1 6o_7^2 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1o_1 7v_3^2 + 12o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 v_2^2 o_1 7v_3^2 +$$
$$24o_2 3o_1 6o_7^3 o_8 o_1 8o_6 o_5 o_2 0o_1 9v_2^2 o_1 7v_3 - 6o_2 3o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1 + 12o_2 3o_7^3 o_8 o_1 8o_6 o_5 o_2 0o_1 9v_1 v_2^2 o_1 1v_3 -$$
$$12o_2 3o_1 6o_7^3 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9o_1 1v_3^2 - 12o_2 3o_7^3 o_8 o_1 8cs^4 o_6^2 o_5 o_2 0o_1 9o_1 1 - 6o_2 3o_1 6o_7^3 o_8 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 7v_3^2 -$$
$$24o_2 3o_1 6o_7^3 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 + 12o_2 3o_1 6o_7^2 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1 + 12o_2 3o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0o_1 9v_2^2 o_1 1o_1 7v_3^2 +$$
$$12o_2 3o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0o_1 9v_1 o_1 1o_1 7v_3 + 12o_1 6o_7^3 o_8 o_1 8o_6^2 o_5 o_2 0v_2^2 o_1 7v_3^2 - 24o_1 6o_7^3 o_8 o_1 8cs^2 o_6^2 o_5 o_2 0v_1 o_1 7v_3$$

$C_{17} = 2o_1 6o_8 o_1 8o_6 o_2 0o_1 9v_1^2 o_1 1o_1 7v_3 - 2o_2 3o_1 6o_7 o_8 o_1 8cs^2 o_6 o_2 0v_1 o_1 7 - o_2 3o_7 o_8 o_1 8o_6 o_2 0o_1 9v_1 o_1 1v_3^2 + 2o_2 3o_1 6o_7 o_8 o_1 9v_1 o_1 1o_1 7v_3^2 +$
$2o_2 3o_1 6o_8 o_1 8cs^2 o_6 v_1 o_1 1o_1 7 + 2o_1 6o_7 o_8 o_1 8cs^2 o_6 o_2 0o_1 1o_1 7v_3 + 2o_2 3o_1 6o_7 o_8 o_1 8o_6 o_2 0v_1^2 o_1 7v_3 - o_1 6o_7 o_8 o_1 8cs^2 o_6 o_2 0o_1 9v_1 o_1 7 -$
$2o_2 3o_1 6o_7 o_8 o_1 8cs^2 o_1 9v_1 o_1 1o_1 7 - o_2 3o_1 6o_7 o_8 o_1 8o_6 o_2 0o_1 9v_1 o_1 1o_1 7v_3^2 + 2o_2 3o_1 6o_7 o_8 o_1 8o_6 v_1^2 o_1 1o_1 7v_3 - 2o_2 3o_1 6o_8 o_1 8cs^2 o_6 o_2 0o_1 9v_1 o_1 1 -$
$o_2 3o_1 6o_7 o_8 o_1 8o_6 o_2 0o_1 9v_1^2 o_1 1o_1 7v_3 - o_2 3o_1 6o_7 o_8 o_6 o_2 0o_1 9v_1 o_1 7v_3^2 - 2o_1 6o_8 o_1 8cs^2 o_6 o_2 0o_1 1o_1 7v_3 - 2o_2 3o_1 6o_7 o_1 8o_6 o_2 0o_1 9v_1 o_1 1v_3^2 +$
$2o_2 3o_8 o_1 8cs^2 o_6 o_2 0o_1 1o_1 7v_3 + 2o_2 3o_1 6o_7 o_1 8cs^2 o_6 o_2 0o_1 9v_1 o_1 1o_1 7 - 2o_2 3o_1 6o_7 o_8 o_6 o_2 0o_1 9v_1 o_1 1o_1 7v_3^2 - 2o_2 3o_1 6o_7 o_8 o_1 8cs^2 o_6 v_1 o_1 1o_1 7 -$
$o_1 6o_7 o_8 o_1 8o_6 o_2 0o_1 9v_1^2 o_1 1o_1 7v_3 - 2o_2 3o_1 6o_1 8o_6 o_2 0o_1 9v_1 o_1 1o_1 7v_3^2 + o_2 3o_7 o_8 o_1 8cs^2 o_6 o_2 0o_1 9v_1 o_1 1o_1 7 - 2o_2 3o_1 6o_8 o_1 8o_6 o_1 9v_1 o_1 1o_1 7v_3^2 +$
$o_2 3o_1 6o_7 o_8 o_1 8o_6 o_2 0o_1 9v_1 o_1 1v_3^2 + 2o_2 3o_1 6o_7 o_1 8o_2 0o_1 9v_1^2 o_1 1o_1 7v_3 - 2o_2 3o_1 6o_7 o_8 o_1 8o_6 o_2 0v_1^2 o_1 1o_1 7v_3 + 2o_2 3o_1 6o_7 o_8 o_6 v_1 o_1 7v_3^2 -$
$2o_8 o_1 8cs^2 o_6 o_2 0o_1 9o_1 1o_1 7v_3 + 2o_2 3o_1 6o_8 o_1 8cs^2 o_6 o_2 0o_1 1o_1 7v_3 - o_2 3o_1 6o_7 o_8 cs^2 o_6 o_2 0o_1 9v_1 o_1 7 - o_2 3o_1 6o_7 o_8 cs^2 o_6 o_2 0o_1 9o_1 1o_1 7v_3 -$
$2o_2 3o_1 6o_8 o_1 8cs^2 o_6 v_1 o_1 9v_1 o_1 1o_1 7 - 2o_2 3o_1 6o_8 o_1 8o_6 v_1^2 o_1 1o_1 7v_3 + 2o_1 6o_7 o_8 o_1 8cs^2 o_6 o_2 0v_1 o_1 7 - 2o_2 3o_1 6o_7 o_8 cs^2 o_6 o_1 9v_1 o_1 1o_1 7 +$
$o_2 3o_1 6o_7 o_7 o_8 cs^2 o_2 0o_1 9o_1 1o_1 7v_3 - o_2 3o_1 6o_7 o_8 o_1 8cs^2 o_2 0o_1 9v_1 o_1 1 + 2o_2 3o_1 6o_7 o_8 cs^2 o_1 9v_1 o_1 1o_1 7 - o_1 6o_7 o_8 o_1 8o_6 o_2 0o_1 9v_1 o_1 7v_3^2 -$

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$$2o_23o_16o_8o_18cs^2o_6o_20o_19o_11o_17v_3 - 2o_16o_7o_8o_18o_6o_20v_1^2o_17v_3 - o_7o_8o_18o_6o_20o_19v_1o_11o_17v_3^2 + 2o_23o_16o_18o_6o_20o_19v_1o_11v_3^2 -$$
$$2o_23o_8o_18o_6o_20o_19v_1^2o_11v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_19o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6v_1o_17 + 2o_23o_16o_7o_8o_6o_19v_1o_17v_3^2 +$$
$$2o_23o_16o_18cs^2o_6o_20o_19v_1o_11 - 2o_23o_16o_7o_18cs^2o_2o_19o_11v_3 + 2o_16o_7o_8o_18o_6o_20v_1^2o_11o_17v_3 - 2o_23o_16o_7o_18cs^2o_6o_19v_1o_11o_17 -$$
$$2o_23o_16o_7o_18cs^2o_19o_11o_17v_3 + 2o_23o_16o_7o_18cs^2o_2o_19o_11o_17v_3 - o_7o_8o_18cs^2o_6o_20o_19v_1o_11o_17 + 2o_23o_8o_18o_6o_20o_19v_1^2o_11o_17v_3 +$$
$$2o_23o_16o_7o_18o_20o_19v_1o_11v_3^2 - 2o_23o_16o_7o_18o_6o_19v_1o_11o_17v_3^2 + 2o_16o_8o_18cs^2o_6o_20o_19o_11o_17v_3 - 2o_16o_8o_18o_6o_20v_1^2o_11o_17v_3 -$$
$$2o_23o_16o_7o_8o_19v_1^2o_11o_17v_3 - 2o_23o_16o_18cs^2o_6o_20o_19v_1o_11o_17 + o_23o_7o_8o_18o_6o_20o_19v_1o_11o_17v_3^2 + o_23o_16o_7o_8o_20o_19v_1^2o_11o_17v_3 +$$
$$o_23o_16o_7o_8o_18o_6o_20o_19v_1o_17v_3^2 + o_23o_16o_7o_8o_18cs^2o_6o_20o_19v_1o_11 - 2o_23o_16o_7o_8o_6o_20o_19v_1^2o_11o_17v_3 + o_23o_16o_7o_8o_18cs^2o_6o_20o_19v_1o_17 -$$
$$2o_23o_16o_7o_18cs^2o_6o_20o_19v_1o_11 + 2o_23o_16o_8o_18o_6o_20v_1^2o_11o_17v_3 + 2o_23o_16o_18cs^2o_6o_19v_1o_11o_17 - o_23o_16o_7o_8o_18cs^2o_6o_20o_19v_1o_11o_17 -$$
$$2o_23o_16o_7o_8o_18o_6o_19v_1o_17v_3^2 - 2o_23o_16o_7o_8cs^2o_6o_19o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_6o_20o_11o_17v_3 - 2o_23o_8o_18cs^2o_6o_20o_19o_11v_3 -$$
$$2o_23o_16o_8o_18o_6o_20o_19v_1^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18o_6o_19v_1o_11o_17v_3^2 + 2o_23o_16o_7o_18o_6o_20o_19v_1o_11o_17v_3^2 -$$
$$2o_23o_16o_18o_6o_20o_19v_1o_11v_3^2 + o_23o_16o_7o_8o_18o_20o_19v_1^2o_11v_3 + 2o_23o_16o_7o_8o_18o_19v_1^2o_11o_17v_3 - o_16o_7o_8o_18cs^2o_6o_20o_19o_11o_17v_3 +$$
$$2o_23o_16o_18o_6o_19v_1o_11o_17v_3^2 - o_23o_16o_7o_8o_18cs^2o_2o_19o_11o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_19v_1o_11o_17 - 2o_8o_18o_6o_20o_19v_1^2o_11o_17v_3 -$$
$$o_23o_7o_8o_18cs^2o_6o_20o_19v_1o_11 + o_23o_16o_7o_8cs^2o_6o_20o_19o_17v_3 + o_7o_8o_18cs^2o_6o_20o_19o_11o_17v_3 + 2o_23o_16o_8o_18o_6o_20o_19v_1o_11o_17v_3^2 -$$
$$2o_23o_16o_18o_6o_20o_19v_1^2o_11v_3 + 2o_23o_8o_18cs^2o_6o_20o_19v_1o_11 + 2o_16o_7o_8o_18o_6o_20v_1o_17v_3^2 - 2o_23o_16o_7o_8o_18o_6o_19v_1^2o_11o_17v_3 -$$
$$2o_23o_16o_7o_18o_6o_20o_19v_1^2o_11o_17v_3 + o_16o_7o_8o_18o_6o_20o_19v_1^2o_17v_3 - 2o_23o_16o_8o_18o_6o_20v_1o_11o_17v_3^2 + o_23o_16o_7o_8o_6o_20o_19v_1o_11o_17v_3^2 +$$
$$2o_23o_16o_7o_18cs^2o_6o_20o_19o_11v_3 - 2o_23o_16o_7o_18cs^2o_2o_19v_1o_11o_17 + 2o_23o_16o_7o_18cs^2o_6o_19o_11o_17v_3 + 2o_23o_16o_7o_18cs^2o_19v_1o_11o_17 -$$
$$2o_23o_16o_7o_8o_18o_6v_1^2o_17v_3 + o_23o_16o_7o_18cs^2o_6o_20o_19o_11v_3 + 2o_8o_18o_6o_20o_19v_1o_11o_17v_3^2 - o_23o_16o_7o_8o_18o_6o_20o_19v_1^2o_11v_3 -$$
$$2o_23o_16o_7o_8o_18o_19v_1o_11o_17v_3^2 - 2o_16o_8o_18cs^2o_6o_20o_19v_1o_11o_17 - 2o_23o_16o_18o_6o_20v_1^2o_17v_3 - 2o_16o_8o_18cs^2o_6o_20o_17v_3 +$$
$$2o_23o_16o_18cs^2o_6o_20o_19o_11o_17v_3 + o_16o_7o_8o_18cs^2o_6o_20o_19o_17v_3 - 2o_23o_8o_18o_6o_20o_19v_1o_11o_17v_3^2 + 2o_23o_16o_7o_18o_6o_20o_19v_1^2o_11v_3 +$$
$$o_23o_16o_7o_8o_6o_20o_19v_1^2o_17v_3 + 2o_23o_16o_7o_18cs^2o_2o_19v_1o_11 - 2o_23o_16o_18cs^2o_6o_20o_19o_11v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_20o_17v_3 -$$
$$2o_23o_16o_18cs^2o_6o_19o_11o_17v_3 + o_23o_16o_7o_8o_18cs^2o_6o_20o_19o_11o_17v_3 - 2o_16o_7o_8o_18o_6o_20v_1o_11o_17v_3^2 + 2o_23o_16o_7o_8o_18cs^2o_6o_20v_1o_11o_17 -$$
$$o_23o_16o_7o_8o_18cs^2o_6o_20o_19o_11v_3 - 2o_23o_16o_7o_8o_18cs^2o_6o_19o_11o_17v_3 - o_23o_16o_7o_8o_20o_19v_1o_11o_17v_3^2 +$$
$$o_23o_16o_7o_8o_18cs^2o_2o_19v_1o_11o_17 - 2o_23o_16o_7o_18o_6o_20v_1o_17v_3^2 + 2o_23o_16o_7o_18o_6o_19v_1^2o_11o_17v_3 + o_16o_7o_8o_18cs^2o_6o_20o_19v_1o_11o_17 +$$
$$o_23o_7o_8o_18o_6o_20o_19v_1^2o_11v_3 + 2o_23o_16o_7o_8o_19v_1o_11o_17v_3^2 - o_23o_7o_8o_18o_6o_20o_19v_1^2o_11o_17v_3 + 2o_16o_8o_18o_6o_20v_1o_11o_17v_3^2 +$$
$$2o_23o_16o_7o_8o_18o_6o_20v_1o_11o_17v_3^2 - 2o_23o_16o_7o_18o_20o_19v_1o_11o_17v_3^2 - 2o_16o_7o_8o_18cs^2o_6o_20v_1o_11o_17 + o_16o_7o_8o_18o_6o_20o_19v_1o_11o_17v_3^2 +$$
$$2o_23o_16o_7o_8cs^2o_6o_19v_1o_17 + 2o_23o_16o_7o_8o_18o_6o_19v_1^2o_17v_3 - o_23o_16o_7o_8o_18cs^2o_6o_20o_19o_17v_3 - 2o_23o_16o_8o_18cs^2o_6o_19o_11o_17v_3 +$$
$$2o_23o_16o_8o_18o_6o_20o_19v_1^2o_11o_17v_3 + 2o_23o_16o_8o_18o_6o_19v_1^2o_11o_17v_3 + 2o_16o_8o_18cs^2o_6o_20o_19o_11o_17 - o_23o_16o_7o_8o_20o_19v_1o_11v_3^2 +$$
$$o_7o_8o_18o_6o_20o_19v_1^2o_11o_17v_3 + 2o_23o_16o_8o_18o_6o_20o_19v_1^2o_11v_3 - 2o_23o_8o_18cs^2o_6o_20o_19v_1o_11o_17 - 2o_23o_16o_7o_18cs^2o_6o_20o_19o_11o_17v_3 +$$
$$2o_23o_16o_7o_8o_18cs^2o_19o_11o_17v_3 + o_23o_16o_7o_8o_18cs^2o_2o_19o_11v_3 + 2o_23o_16o_7o_8o_18o_6o_19v_1^2o_17v_3 + 2o_23o_16o_8o_18o_6v_1o_11o_17v_3^2 -$$
$$o_23o_16o_7o_8o_18o_6o_20o_19v_1^2o_17v_3 + 2o_8o_18cs^2o_6o_20o_19v_1o_11o_17 - 2o_23o_16o_8o_18cs^2o_6o_20v_1o_11o_17 + 2o_23o_16o_7o_8o_18cs^2o_6o_11o_17v_3 -$$
$$2o_23o_16o_7o_8o_18cs^2o_6o_17v_3 - o_23o_7o_8o_18cs^2o_6o_20o_19o_11o_17v_3 - 2o_16o_8o_18o_6o_20o_19v_1o_11o_17v_3^2 - 2o_23o_16o_7o_8o_18cs^2o_6o_19v_1o_17 -$$
$$2o_23o_16o_7o_18o_19v_1^2o_11o_17v_3 + 2o_23o_16o_8o_18cs^2o_6o_20o_19v_1o_11o_17 - 2o_23o_16o_7o_18o_20o_19v_1^2o_11v_3 + o_23o_16o_7o_8cs^2o_6o_20o_19v_1o_11o_17 +$$
$$2o_23o_16o_8o_18cs^2o_6o_19o_11o_17v_3 + 2o_23o_16o_8o_18cs^2o_6o_20o_19o_11v_3 + o_23o_16o_7o_8o_18o_6o_20o_19v_1^2o_11o_17v_3 - o_23o_16o_7o_8cs^2o_2o_19v_1o_11o_17 +$$
$$2o_23o_16o_7o_8cs^2o_6o_19o_11o_17v_3 + o_23o_16o_7o_8o_18o_20o_19v_1o_11o_17v_3^2 - 2o_23o_16o_7o_8o_6o_19v_1^2o_17v_3 - 2o_23o_16o_7o_8o_18o_6v_1o_11o_17v_3^2 -$$
$$2o_23o_16o_7o_8cs^2o_19o_11o_17v_3 + 2o_23o_8o_18o_6o_20o_19v_1o_11v_3^2$$

$C_{18} = -2o_23o_16o_7o_8o_6o_20o_19v_1v_2^2o_17v_3 - 2o_23o_16o_7o_8o_18o_6o_20o_19v_1v_2^2o_11o_17v_3 + 2o_23o_16o_7o_18cs^2o_6o_19v_2^2o_11o_17 +$
$o_16o_7o_8o_18o_6o_20o_19v_1^2v_2^2o_17 + 4o_8o_18o_6o_20o_19v_1v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_19v_2^2o_17 - 2o_23o_16o_7o_8o_18o_20o_19v_1v_2^2o_11v_3 -$
$4o_23o_16o_7o_8o_18cs^2o_6o_19v_1o_17v_3 + o_7o_8o_18cs^2o_6o_20o_19v_2^2o_11o_17 - 2o_23o_16o_7o_8o_18o_6o_19v_1^2v_2^2o_11o_17 - 2o_23o_16o_7o_18o_6o_20o_19v_1^2v_2^2o_11o_17 +$
$o_23o_16o_7o_8cs^2o_6o_20o_19v_2^2o_17 + 2o_16o_7o_8o_18cs^2o_6o_20v_1^2o_11o_17 + 2o_23o_16o_7o_8o_18cs^2o_6o_20o_19v_1o_17v_3 - 4o_23o_16o_7o_18cs^2o_6o_20o_19v_1o_11v_3 -$
$4o_23o_16o_7o_8o_18o_19v_1v_2^2o_11o_17v_3 - 2o_23o_16o_7o_8o_18cs^2o_6o_20o_19v_2^2o_17 +$
$4o_23o_16o_18cs^2o_6o_19v_1o_11o_17v_3 + o_23o_16o_7o_8o_18cs^2o_2o_19v_2^2o_1 + 2o_23o_16o_18cs^2o_6o_20o_19v_2^2o_11o_17 - 2o_23o_16o_18o_6o_19v_1^2v_2^2o_11o_17 -$
$4o_23o_16o_8o_18cs^2o_6o_20v_1o_11o_17v_3 + 2o_23o_16o_8o_18o_6o_20o_19v_1^2v_2^2o_1 - 2o_16o_8o_18cs^2o_6o_20v_1^2o_11o_17 - 2o_23o_16o_7o_8o_18o_6v_1^2v_2^2o_17 +$
$4o_8o_18cs^2o_6o_20o_19v_1o_11o_17v_3 + 2o_23o_8o_18cs^2o_6o_20o_19v_1^2o_11o_17 - 2o_23o_16o_18cs^2o_6o_19v_2^2o_11o_17 + o_23o_16o_7o_8o_18cs^2o_6o_20o_19v_2^2o_11o_17 +$
$4o_23o_16o_8o_18o_6o_20o_19v_1v_2^2o_11o_17v_3 + 2o_23o_16o_7o_8o_18cs^2o_6o_20v_2^2o_17 + 2o_23o_16o_7o_8cs^2o_6o_20o_19v_1o_11o_17v_3 + 4o_16o_7o_8o_18o_6o_20v_1v_2^2o_17v_3 +$
$o_23o_16o_7o_8o_6o_20o_19v_1^2v_2^2o_17 + 4o_23o_16o_7o_8o_18cs^2o_6o_19v_1o_11o_17v_3 - 2o_8o_18cs^2o_6o_20o_19v_1^2o_11o_17 + 2o_23o_16o_8o_18cs^2o_6o_20v_1^2o_11o_17 -$
$2o_23o_7o_8o_18cs^2o_6o_20o_19v_1o_11v_3 - 2o_23o_16o_7o_8cs^2o_2o_19v_1o_11o_17v_3 + 4o_23o_16o_7o_18o_6o_19v_1v_2^2o_11o_17v_3 + o_16o_7o_8o_18cs^2o_6o_20o_19v_2^2o_17 -$
$2o_23o_16o_7o_8cs^2o_6o_19v_2^2o_17 + o_23o_16o_7o_8cs^2o_2o_19v_2^2o_11o_17 + 2o_23o_16o_7o_18o_6o_19v_1^2v_2^2o_11o_17 + 2o_23o_16o_7o_8o_6o_20o_19v_1v_2^2o_11o_17v_3 -$
$o_23o_16o_7o_8cs^2o_6o_20o_19v_1^2o_17 - 4o_23o_16o_8o_18o_6o_20v_1v_2^2o_11o_17v_3 + 4o_23o_16o_8o_18cs^2o_6o_20o_19v_1o_11o_17v_3 -$
$4o_23o_16o_7o_18o_20o_19v_1v_2^2o_11v_3 + 2o_23o_16o_8o_18cs^2o_6o_20o_19v_2^2o_1 - o_23o_16o_18o_6o_20o_19v_1^2v_2^2o_11o_17 - 2o_23o_16o_7o_8o_18cs^2o_6o_19v_2^2o_11o_17 -$
$2o_23o_16o_8o_18cs^2o_6o_20o_19v_1^2o_11o_17 - 2o_23o_16o_7o_18o_20o_19v_1^2v_2^2o_1 + 2o_23o_16o_7o_8o_6o_19v_1^2v_2^2o_11o_17 - 2o_16o_7o_8o_18o_6o_20o_19v_1v_2^2o_17v_3 -$
$2o_23o_16o_7o_18cs^2o_19v_2^2o_11o_17 - o_23o_16o_7o_8o_18cs^2o_6o_20o_19v_2^2o_17 + 2o_23o_16o_7o_18cs^2o_6o_20o_19v_2^2o_1 + 2o_23o_16o_7o_18cs^2o_2o_19v_1^2o_11o_17 -$
$2o_23o_16o_7o_8o_20o_19v_1v_2^2o_11o_17v_3 - 2o_23o_16o_8o_18cs^2o_6v_2^2o_11o_17 + 2o_23o_16o_18o_6o_20o_19v_1^2v_2^2o_11o_17 + 2o_23o_16o_8o_18o_6o_19v_1^2v_2^2o_11o_17 -$
$2o_7o_8o_18cs^2o_6o_20o_19v_1o_11o_17v_3 + 4o_23o_16o_7o_8cs^2o_6o_19v_1o_17v_3 - 4o_23o_16o_7o_8o_18o_6o_20v_1v_2^2o_17v_3 - 2o_23o_16o_7o_18cs^2o_2o_19v_2^2o_1 -$
$2o_23o_16o_18o_6o_20o_19v_1^2v_2^2o_1 - 2o_7o_8o_18o_6o_20o_19v_1v_2^2o_11o_17v_3 + 2o_16o_8o_18cs^2o_6o_20o_19v_2^2o_11o_17 + 4o_23o_16o_7o_8o_18cs^2o_6v_1o_17v_3 +$
$2o_23o_16o_7o_8o_18cs^2o_19v_2^2o_11o_17 - 4o_16o_7o_8o_18cs^2o_6o_20v_1o_11o_17v_3 - o_23o_16o_7o_8o_18o_6o_20o_19v_1^2v_2^2o_1 + 2o_23o_16o_7o_8o_18o_6o_19v_1^2v_2^2o_17 +$
$4o_23o_8o_18o_6o_20o_19v_1v_2^2o_11v_3 + 4o_16o_8o_18o_6o_20v_1v_2^2o_11o_17v_3 + 4o_23o_16o_8cs^2o_6o_20o_19v_1o_11o_17v_3 - 4o_23o_16o_7o_18cs^2o_6o_19v_1o_11o_17v_3 +$
$o_7o_8o_18o_6o_20o_19v_1^2v_2^2o_17 - 2o_23o_16o_7o_18o_6o_20o_19v_2^2o_11o_17 + o_23o_16o_7o_8cs^2o_6o_20o_19v_2^2o_1 + 4o_23o_16o_7o_8o_19v_1v_2^2o_11o_17v_3 +$
$2o_23o_16o_7o_8o_18cs^2o_6v_2^2o_11o_17 - 2o_23o_8o_18cs^2o_6o_20o_19v_2^2o_11 - 2o_23o_16o_7o_8o_18cs^2o_6o_20v_2^2o_11o_17 - 2o_23o_16o_7o_8o_18cs^2o_6v_2^2o_17 -$
$4o_23o_8o_18o_6o_20o_19v_1v_2^2o_11o_17v_3 - 4o_23o_16o_7o_8o_6o_19v_1v_2^2o_11o_17v_3 - 2o_23o_16o_7o_18o_19v_1^2v_2^2o_11o_17 - 2o_23o_16o_18cs^2o_6o_20o_19v_2^2o_1 -$
$o_23o_7o_8o_18cs^2o_6o_20o_19v_2^2o_11o_17 - o_23o_16o_7o_8o_18o_6o_20o_19v_1^2v_2^2o_17 + 2o_23o_16o_7o_18o_6o_20o_19v_1^2v_2^2o_1 + 2o_23o_16o_7o_8cs^2o_6o_20o_19v_1o_11v_3 -$
$4o_23o_16o_18o_6o_20o_19v_1v_2^2o_11o_17v_3 - 4o_23o_16o_8o_18o_6o_19v_1v_2^2o_11o_17v_3 + o_23o_16o_7o_8o_18o_6o_20o_19v_1^2v_2^2o_11o_17 -$
$4o_23o_8o_18cs^2o_6o_20o_19v_1o_11o_17v_3 + 2o_23o_16o_8o_18cs^2o_6o_19v_2^2o_11o_17 - 2o_23o_16o_7o_8o_8o_6o_19v_1^2v_2^2o_17 + 4o_23o_16o_7o_8o_18o_6v_1v_2^2o_17v_3 -$
$4o_23o_16o_8o_18o_6o_20o_19v_1v_2^2o_11v_3 + 4o_16o_8o_18cs^2o_6o_20v_1o_11o_17v_3 - 2o_23o_16o_7o_8cs^2o_19v_2^2o_11o_17 + o_23o_7o_8o_18o_6o_20o_19v_1^2v_2^2o_11 +$

$2o_2o_3o_1o_6o_7o_8cs^2o_6o_1o_9v_2^2o_1o_17 - o_1o_6o_7o_8o_18cs^2o_6o_2o_1o_9v_1^2o_1o_17 - 4o_2o_3o_1o_6o_18cs^2o_6o_2o_1o_9v_1o_1o_17v_3 - o_2o_3o_1o_6o_7o_8o_18cs^2o_6o_2o_1o_9v_2^2o_1 -$
$o_2o_3o_1o_6o_7o_8o_18cs^2o_2o_1o_9v_1^2o_1o_1o_17 - 4o_1o_6o_7o_8o_1o_8o_6o_2o_1v_1v_2^2o_1o_17v_3 + 4o_2o_3o_1o_6o_7o_1o_8cs^2o_2o_1o_9v_1o_1o_1v_3 + 2o_1o_6o_7o_8o_18cs^2o_6o_2o_1v_2^2o_1o_17 -$
$4o_2o_3o_1o_6o_7o_1o_8o_6o_1v_1v_2^2o_1o_17v_3 + 2o_2o_3o_1o_6o_7o_8o_1o_8o_6o_2o_1v_1^2v_2^2o_17 - o_2o_3o_1o_6o_7o_8o_18cs^2o_6o_2o_1o_9v_2^2o_17 + 2o_2o_3o_1o_6o_7o_18cs^2o_6o_2o_1o_9v_2^2o_1 +$
$o_7o_8o_18cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 + 2o_2o_3o_7o_8o_1o_8o_6o_2o_1o_9v_1v_2^2o_1o_17v_3 + 4o_2o_3o_1o_6o_7o_8o_18cs^2o_6o_2o_1v_1o_1o_17v_3 - 2o_2o_3o_1o_6o_7o_18cs^2o_2o_1o_9v_2^2o_1 +$
$2o_2o_3o_1o_6o_7o_18cs^2o_6o_1o_9v_2^2o_1o_1o_17 - 2o_2o_3o_1o_6o_7o_8cs^2o_6o_2o_1o_9v_1o_17v_3 - 2o_2o_3o_8o_1o_8o_6o_2o_1o_9v_1^2v_2^2o_1 + 2o_1o_6o_8o_1o_8o_6o_2o_1o_9v_1^2v_2^2o_1o_17 -$
$4o_2o_3o_1o_6o_7o_8o_18cs^2o_6v_1o_1o_17v_3 + 2o_2o_3o_8o_18cs^2o_6o_2o_1o_9v_2^2o_1o_17 - 2o_1o_6o_8o_18cs^2o_6o_2o_1v_2^2o_1o_17 + 4o_2o_3o_1o_6o_8o_1o_8o_6v_1v_2^2o_1o_17v_3 +$
$o_2o_3o_7o_8o_18cs^2o_6o_2o_1o_9v_1^2o_1 - 4o_2o_3o_1o_6o_7o_1o_8o_6o_2o_1o_9v_1v_2^2o_1v_3 + 2o_2o_3o_1o_6o_7o_8o_1o_8o_6o_2o_1o_9v_1v_2^2o_17v_3 + 2o_2o_3o_1o_6o_18cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 -$
$o_2o_3o_1o_6o_7o_8o_1o_8o_2o_1o_9v_1^2v_2^2o_1o_17 + 2o_2o_3o_1o_6o_7o_8o_1o_8o_6v_1^2v_2^2o_1o_17 + 2o_2o_3o_7o_8o_18cs^2o_6o_2o_1o_9v_1o_1o_1o_17v_3 - 2o_2o_3o_1o_6o_18cs^2o_6o_2o_1o_9v_2^2o_1 -$
$2o_2o_3o_1o_6o_7o_8o_1o_8o_6o_2o_1v_1^2v_2^2o_1o_17 - 2o_2o_3o_7o_8o_1o_8o_6o_2o_1o_9v_1v_2^2o_1v_3 + 2o_2o_3o_1o_6o_7o_1o_8o_2o_1o_9v_1^2v_2^2o_1o_17 - 4o_2o_3o_1o_6o_7o_1o_8o_2o_1o_9v_1v_2^2o_1o_17v_3 +$
$2o_1o_6o_7o_8o_18cs^2o_6o_2o_1o_9v_1o_1o_1o_17v_3 + o_2o_3o_1o_6o_7o_8o_1o_8o_2o_1o_9v_1^2v_2^2o_1 - 2o_2o_3o_1o_6o_7o_8o_18cs^2o_6v_1^2o_17 -$
$2o_2o_3o_8o_18cs^2o_6o_2o_1o_9v_2^2o_1 + 4o_2o_3o_1o_6o_7o_8o_1o_8o_6o_2o_1v_1v_2^2o_1o_17v_3 - 2o_8o_18cs^2o_6o_2o_1o_9v_2^2o_1o_17 - o_1o_6o_7o_8o_1o_8o_6o_2o_1o_9v_1^2v_2^2o_1o_1o_17 +$
$4o_2o_3o_1o_6o_7o_8o_6o_1v_1v_2^2o_17v_3 - 2o_2o_3o_1o_6o_1o_8cs^2o_6o_1v_2^2o_1o_1o_17 + o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 + 4o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1v_1o_1o_17v_3 -$
$2o_2o_3o_1o_6o_8o_18cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 - 4o_2o_3o_1o_6o_8o_1o_8cs^2o_6o_1v_1o_1o_1o_17v_3 + 2o_1o_6o_7o_8o_1o_8o_6o_2o_1o_9v_1v_2^2o_1o_1o_17v_3 -$
$2o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_6o_1v_2^2o_1o_1o_17 - 2o_1o_6o_7o_8o_1o_8o_6o_2o_1v_1^2v_2^2o_17 + 2o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_2o_1o_9v_1o_1o_1o_17v_3 + 4o_2o_3o_1o_6o_7o_8cs^2o_1o_9v_1o_1o_1o_17v_3 -$
$o_2o_3o_1o_6o_7o_8cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 - o_2o_3o_1o_6o_7o_8o_18cs^2o_6o_2o_1o_9v_1^2o_1 - 2o_2o_3o_1o_6o_8o_1o_8o_6v_1^2v_2^2o_1o_1o_17 - 4o_2o_3o_1o_6o_7o_8cs^2o_6o_1v_1o_1o_1o_17v_3 -$
$2o_2o_3o_1o_6o_7o_8o_18cs^2o_2o_1o_9v_1o_1o_1v_3 + o_2o_3o_1o_6o_7o_8cs^2o_2o_1o_9v_2^2o_1o_1o_17 + 2o_2o_3o_8o_1o_8o_6o_2o_1o_9v_1^2v_2^2o_1o_1o_17 - 2o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1o_9v_1o_1o_17v_3 +$
$o_2o_3o_1o_6o_7o_8cs^2o_6o_2o_1o_9v_1^2o_17 - 4o_2o_3o_1o_6o_7o_1o_8cs^2o_2o_1o_9v_1o_1o_1o_17v_3 - 2o_2o_3o_1o_6o_8o_1o_8cs^2o_6v_1^2o_1o_1o_17 + 4o_2o_3o_1o_6o_1o_8o_6o_1v_1v_2^2o_1o_17v_3 +$
$4o_2o_3o_1o_6o_7o_1o_8cs^2o_1o_9v_1o_1o_1o_17v_3 + 2o_1o_6o_7o_8o_1o_8o_6o_2o_1v_1^2v_2^2o_1o_17 - 2o_2o_3o_1o_6o_7o_1o_8cs^2o_1o_9v_2^2o_1o_1o_17 + 2o_2o_3o_1o_6o_7o_1o_8cs^2o_2o_1o_9v_2^2o_1o_1o_17 +$
$2o_2o_3o_1o_6o_7o_8o_1o_8o_6o_1o_9v_2^2o_17 + o_2o_3o_1o_6o_7o_8o_2o_1o_9v_1^2v_2^2o_1o_1o_17 - 2o_2o_3o_1o_6o_7o_8o_18cs^2o_6o_2o_1o_9v_1^2o_1 + o_2o_3o_1o_6o_7o_8o_1o_8o_6o_2o_1o_9v_2^2o_1 +$
$4o_2o_3o_1o_6o_1o_8o_6o_2o_1o_9v_1v_2^2o_1v_3 - 2o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1v_1^2o_17 + 4o_2o_3o_1o_6o_8o_1o_8cs^2o_6v_1o_1o_1o_17v_3 - 4o_2o_3o_1o_6o_7o_8o_1o_8o_6v_1v_2^2o_1o_17v_3 +$
$2o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_1o_9v_2^2o_1o_1o_17 - 2o_2o_3o_1o_6o_7o_8o_1o_9v_1^2v_2^2o_1o_1o_17 - 4o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1v_1o_1o_17v_3 + 4o_2o_3o_8o_18cs^2o_6o_2o_1o_9v_1o_1o_1v_3 +$
$2o_1o_6o_8o_18cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 + 2o_2o_3o_1o_6o_7o_8o_1o_8o_2o_1o_9v_1v_2^2o_1o_1o_17v_3 - 2o_1o_6o_8o_1o_8o_6o_2o_1v_1^2v_2^2o_1o_1o_17 - 2o_2o_3o_1o_6o_8o_1o_8o_6o_2o_1o_9v_1^2v_2^2o_1o_1o_17 +$
$2o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1v_2^2o_1o_17 - 4o_2o_3o_1o_6o_7o_8o_1o_8o_6o_1v_1v_2^2o_17v_3 + 2o_2o_3o_1o_6o_7o_8o_1o_8o_6o_2o_1o_9v_1v_2^2o_1v_3 + o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1o_9v_2^2o_17 -$
$2o_2o_3o_1o_6o_7o_8cs^2o_6o_1o_9v_2^2o_17 + 4o_2o_3o_1o_6o_7o_1o_8cs^2o_6o_2o_1o_9v_1o_1o_1o_17v_3 + 2o_2o_3o_1o_6o_8o_1o_8o_6o_2o_1v_1^2v_2^2o_1o_17 - o_2o_3o_7o_8o_1o_8cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 -$
$o_2o_3o_1o_6o_7o_8o_6o_2o_1o_9v_1^2v_2^2o_1o_1o_17 - 4o_1o_6o_8o_18cs^2o_6o_2o_1o_9v_1o_1o_1o_17v_3 - 2o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1v_2^2o_1o_1o_17 +$
$2o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_6v_1^2o_1o_1o_17 - o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_2o_1o_9v_2^2o_1o_1o_17 + 2o_2o_3o_1o_6o_8o_1o_8cs^2o_6o_2o_1o_9v_1^2o_1 -$
$4o_2o_3o_1o_6o_7o_8o_1o_8cs^2o_1o_9v_1o_1o_1o_17v_3 - 2o_8o_1o_8o_6o_2o_1o_9v_1^2v_2^2o_1o_1o_17 - o_1o_6o_7o_8o_1o_8cs^2o_6o_2o_1o_9v_2^2o_1o_1o_17 -$
$4o_1o_6o_8o_1o_8o_6o_2o_1o_9v_1v_2^2o_1o_1o_17v_3 + 2o_2o_3o_1o_6o_7o_8o_1o_8o_6v_2^2o_1o_1o_17 - 2o_2o_3o_1o_6o_7o_8cs^2o_1o_9v_1^2o_1o_1o_17 + 2o_2o_3o_1o_6o_8o_1o_8cs^2o_6o_1v_1^2o_1o_1o_17 +$
$4o_2o_3o_1o_6o_7o_1o_8o_6o_2o_1o_9v_1v_2^2o_1o_1o_17v_3 + 4o_2o_3o_1o_6o_7o_1o_8o_6o_2o_1o_9v_1v_1o_1o_1v_3 - 4o_2o_3o_1o_6o_8o_1o_8cs^2o_6o_2o_1o_9v_1o_1o_1v_3$

$C_{19} = -36o_2o_3o_1o_6^2o_7^2cs^2 - 12o_1o_6^2o_7^2o_1o_10 - 18o_1o_6^2o_7o_1o_10cs^2o_1o_9o_1o_11 - 12o_2o_3o_1o_6^2o_7o_1o_10o_1o_9v_2^2o_1o_11 - 12o_2o_3o_1o_6o_1o_10o_1o_9v_2^2o_1o_11 -$
$12o_2o_3o_1o_6^2o_1o_10o_1o_9o_1o_11 - o_2o_3o_1o_6^2o_7^2o_1o_10o_1o_9o_1o_11 - 6o_2o_3o_1o_6^2o_7^2o_1o_19 - 12o_1o_6^2o_7o_1o_10o_1o_11 + 12o_2o_3o_1o_6^2o_1o_9o_1o_11 + o_2o_3o_1o_6^2o_7^2o_1o_10o_1o_9v_2^2o_1o_11 +$
$12o_2o_3o_1o_6^2o_1o_10o_1o_9v_2^2o_1o_11 - 36o_2o_3o_1o_6^2o_7cs^2o_1o_11 + 3o_2o_3o_1o_6^2o_7o_1o_10o_1o_9o_1o_11 - 6o_2o_3o_7^2o_1o_10o_1o_9o_1o_11 - 12o_2o_3o_1o_6^2o_7^2v_2^2 + 36o_1o_6^2o_7o_1o_10cs^2o_1o_11 +$
$36o_1o_6o_7o_1o_10cs^2o_1o_9o_1o_11 - 12o_2o_3o_7o_1o_10o_1o_9v_2^2o_1o_11 - 12o_2o_3o_7o_1o_10o_1o_9v_2^2o_1o_11 - 12o_1o_6o_7o_1o_10o_1o_9o_1o_11 - 12o_2o_3o_1o_6^2o_7^2o_1o_11 -$
$5o_2o_3o_1o_6^2o_7^2o_1o_9v_2^2o_1o_11 - 12o_2o_3o_1o_6^2o_1o_9v_2^2o_1o_11 + 12o_2o_3o_1o_6^2o_7^2 + 12o_1o_6^2o_7o_1o_10o_1v_2^2o_1o_11 - 36o_1o_6^2o_7o_1o_10cs^2o_1o_9o_1o_11 + 54o_2o_3o_1o_6^2o_7cs^2o_1o_9o_1o_11 -$
$18o_2o_3o_1o_6^2o_7o_1o_10o_1o_9o_1o_11 + 18o_1o_6^2o_7^2o_1o_10cs^2o_1o_9o_1o_11 + 18o_2o_3o_1o_6o_7o_1o_10o_1o_9v_2^2o_1o_11 + 6o_2o_3o_7^2o_1o_10o_1o_9v_2^2o_1o_11 + 12o_1o_6^2o_7o_1o_10o_1o_9o_1o_11 + 6o_1o_6^2o_7^2o_1o_10o_1o_19 +$
$12o_2o_3o_1o_6o_1o_10o_1o_9o_1o_11 + 12o_2o_3o_1o_6^2o_7o_1o_10o_1o_9o_1o_11 + 36o_2o_3o_1o_6^2o_1o_10cs^2o_1o_9o_1o_11 + 3o_2o_3o_1o_6^2o_7^2o_1o_10cs^2o_1o_9o_1o_11 + 12o_2o_3o_1o_6^2o_7^2v_2^2o_1o_11 +$
$18o_2o_3o_1o_6^2o_7^2cs^2o_1o_19 + 12o_1o_6^2o_7^2o_1o_10v_2^2 - 6o_1o_6^2o_7^2o_1o_10o_1o_9v_2^2 + 12o_1o_6o_7o_1o_10o_1o_9v_2^2o_1o_11 - 6o_1o_6o_7^2o_1o_10o_1o_9v_2^2o_1o_11 + 36o_1o_6^2o_7^2o_1o_10cs^2 +$
$5o_2o_3o_1o_6^2o_7^2o_1o_9o_1o_11 + 12o_2o_3o_1o_6^2o_7o_1o_11 + 12o_2o_3o_7o_1o_10o_1o_9o_1o_11 - 36o_1o_6^2o_7o_1o_10cs^2o_1o_11 - 18o_2o_3o_1o_6o_7o_1o_10o_1o_9o_1o_11 - 36o_2o_3o_1o_6o_1o_10cs^2o_1o_9o_1o_11 -$
$36o_2o_3o_1o_6^2o_7o_1o_10cs^2o_1o_9o_1o_11 + 6o_1o_6^2o_7^2o_1o_10o_1o_9v_2^2o_1o_11 - 18o_1o_6^2o_7^2o_1o_10cs^2o_1o_19 - 12o_1o_6^2o_7^2o_1o_10o_1v_2^2o_1o_11 + 18o_2o_3o_1o_6^2o_7o_1o_9v_2^2o_1o_11 + 6o_2o_3o_1o_6^2o_7^2o_1o_9v_2^2 +$
$54o_2o_3o_1o_6o_7o_1o_10cs^2o_1o_9o_1o_11 + 18o_2o_3o_7^2o_1o_10cs^2o_1o_9o_1o_11 + 6o_1o_6o_7^2o_1o_10o_1o_9o_1o_11 + 36o_2o_3o_1o_6^2o_7^2cs^2o_1o_11 - 6o_1o_6^2o_7^2o_1o_10o_1o_9o_1o_11 + 12o_1o_6^2o_7^2o_1o_10o_1o_11 -$
$36o_2o_3o_7o_1o_10cs^2o_1o_9o_1o_11 - 9o_2o_3o_1o_6o_7^2o_1o_10cs^2o_1o_9o_1o_11 - 12o_1o_6^2o_7o_1o_10o_1o_9v_2^2o_1o_11 - 15o_2o_3o_1o_6^2o_7^2cs^2o_1o_9o_1o_11 - 36o_2o_3o_1o_6^2cs^2o_1o_9o_1o_11$

$C_{20} = 6o_2o_3o_7^3o_1o_10cs^2o_1o_9o_1o_11 - 12o_1o_6o_7^2o_1o_10cs^2o_1o_9o_1o_11 - 15o_2o_3o_1o_6o_7^3o_1o_9v_2^2o_1o_11 - 36o_2o_3o_1o_6o_7^2v_2^2o_1o_11 + 6o_7^3o_1o_10o_1o_9o_1o_11 + o_2o_3o_1o_6^2o_7o_1o_10o_1o_9o_1o_11 +$
$12o_7^2o_1o_10cs^2o_1o_9o_1o_11 + 18o_2o_3o_7^2o_1o_10o_1o_9o_1o_11 - o_2o_3o_1o_6o_7^3o_1o_10cs^2o_1o_9o_1o_11 - 18o_2o_3o_1o_6o_7^2o_1o_9o_1o_11 + 36o_2o_3o_7o_1o_10o_1o_9v_2^2o_1o_11 - 3o_2o_3o_1o_6o_7^2o_1o_10o_1o_9v_2^2o_1o_11 -$
$12o_7^2o_1o_10o_1o_9o_1o_11 - 12o_2o_3o_1o_6o_7cs^2o_1o_9o_1o_11 - 18o_7^3o_1o_10o_1o_9v_2^2o_1o_11 - 6o_2o_3o_7^3o_1o_10o_1o_9o_1o_11 + 54o_2o_3o_1o_6o_7^2o_1o_9v_2^2o_1o_11 - 54o_2o_3o_7^2o_1o_10o_1o_9v_2^2o_1o_11 -$
$12o_1o_6o_7^2o_1o_10o_1o_11 - 12o_2o_3o_1o_6o_7^2cs^2o_1o_11 + 18o_1o_6o_7^3o_1o_10o_1o_9v_2^2o_1o_11 + 36o_7^2o_1o_10o_1o_9v_2^2o_1o_11 + 12o_2o_3o_1o_6o_7^2o_1o_11 + 12o_1o_6o_7^3o_1o_10cs^2 + 5o_2o_3o_1o_6o_7^3o_1o_9o_1o_11 -$
$12o_1o_6o_7^3o_1o_10 - 12o_2o_3o_1o_6o_7^3cs^2 - 36o_1o_6o_7^3o_1o_10o_1v_2^2o_1o_11 - 6o_1o_6o_7^3o_1o_10cs^2o_1o_19 + 12o_2o_3o_1o_6o_7^3 + 12o_1o_6o_7^2o_1o_10cs^2o_1o_11 - 5o_2o_3o_1o_6o_7^3cs^2o_1o_9o_1o_11 +$
$6o_2o_3o_1o_6o_7^3cs^2o_1o_19 - 36o_2o_3o_1o_6o_7^3v_2^2 + 36o_2o_3o_1o_6o_7^3v_2^2o_1o_11 - 36o_1o_6o_7^2o_1o_10o_1o_9v_2^2o_1o_11 + 18o_2o_3o_7^3o_1o_10o_1o_9v_2^2o_1o_11 + 6o_1o_6o_7^3o_1o_10o_1o_19 - 12o_2o_3o_7o_1o_10o_1o_9o_1o_11 -$
$6o_1o_6o_7^3o_1o_10o_1o_9o_1o_11 - 6o_2o_3o_1o_6o_7^3o_1o_19 - 12o_2o_3o_1o_6o_7^2o_1o_9o_1o_11 + 36o_1o_6o_7^3o_1o_10o_1v_2^2 + 12o_1o_6o_7^3o_1o_10o_1o_11 + 12o_2o_3o_1o_6o_7^3cs^2o_1o_11 +$
$18o_2o_3o_1o_6o_7^2cs^2o_1o_9o_1o_11 - 18o_1o_6o_7^3o_1o_10o_1o_9v_2^2 + 6o_1o_6o_7^3o_1o_10cs^2o_1o_9o_1o_11 + 18o_2o_3o_1o_6o_7o_1o_10cs^2o_1o_9o_1o_11 - 18o_2o_3o_7^2o_1o_10cs^2o_1o_9o_1o_11 - 12o_2o_3o_1o_6o_7^3o_1o_11 +$
$12o_1o_6o_7^2o_1o_10o_1o_9o_1o_11 + 12o_2o_3o_7o_1o_10cs^2o_1o_9o_1o_11 - 5o_2o_3o_1o_6o_7^2o_1o_10cs^2o_1o_9o_1o_11 + 12o_2o_3o_1o_6o_7o_1o_9o_1o_11 - 12o_1o_6o_7^3o_1o_10cs^2o_1o_11 + 18o_2o_3o_1o_6o_7^3o_1o_9v_2^2 -$
$6o_1o_6o_7^3o_1o_10cs^2o_1o_9o_1o_11 + 36o_1o_6o_7^2o_1o_10o_1v_2^2o_1o_11 - 36o_2o_3o_1o_6o_7o_1o_9v_2^2o_1o_11$

$C_{21} = 12o_2o_2o_1o_8^2o_1o_3o_1o_11^2 - 40o_2o_2o_1o_8^2cs^2o_6o_1o_3o_1o_11^3 - 12o_2o_2o_1o_8o_6^2o_1o_3o_1o_11v_3^2 + 12o_2o_2o_1o_8^2o_6^2o_1o_3v_3^2 - o_2o_2o_1o_8^2o_6^2o_1o_3o_1o_11^3 - 6o_2o_2o_1o_8^2o_6^2o_1o_11^2 -$
$12o_1o_8o_6^2o_1o_3o_1o_11^2 - 36o_2o_2o_1o_8^2cs^2o_6o_1o_11^2 - 12o_2o_2o_1o_8^2o_6o_1o_3o_1o_11v_3^2 + 54o_2o_2o_1o_8^2cs^2o_6o_2o_1o_3o_1o_11^2 + 18o_2o_2o_1o_8o_6o_1o_3o_1o_11^3v_3^2 - 12o_2o_2o_1o_8^2o_1o_3o_1o_11^3 +$
$54o_2o_2o_1o_8cs^2o_6o_1o_3o_1o_11^3 + 12o_1o_8o_6^2o_1o_3o_1o_11^3 + 36o_2o_2o_1o_8^2cs^2o_6^2o_1o_3 - 12o_2o_2o_1o_8^2o_6^2o_1o_3o_1o_11v_3^2 + 2o_2o_2o_1o_8^2o_6^2o_1o_3o_1o_11^2 + 18o_2o_2o_1o_8^2o_6o_1o_3o_1o_11^2v_3^2 -$
$18o_2o_2o_1o_8o_6o_1o_3o_1o_11^3 - 12o_2o_2o_1o_8^2o_6o_1o_11^2v_3^2 - 12o_2o_2o_6o_1o_3o_1o_11^3v_3^2 + 12o_1o_8o_6o_1o_3o_1o_11^3v_3^2 + 12o_2o_2o_1o_8^2o_6^2o_1o_3o_1o_11 - 36o_2o_2cs^2o_6o_1o_3o_1o_11^3 +$
$36o_1o_8cs^2o_6o_1o_3o_1o_11^3 - 36o_2o_2o_1o_8cs^2o_1o_3o_1o_11^3 - 18o_1o_8^2cs^2o_6^2o_1o_11^3 + 6o_1o_8^2o_6^2o_1o_11^3 - 36o_1o_8^2cs^2o_6o_1o_3o_1o_11^3 - 12o_2o_2o_1o_8o_1o_3o_1o_11^3v_3^2 +$
$12o_1o_8^2o_6o_1o_3o_1o_11^3 - 6o_1o_8^2o_6^2o_1o_11^3v_3^2 + 12o_2o_2o_6o_1o_3o_1o_11^3 - 12o_1o_8^2o_6o_1o_3o_1o_11^3v_3^2 - 12o_1o_8^2o_6o_1o_11^3 + 6o_2o_2o_1o_8^2o_6^2o_1o_11^2v_3^2 - 18o_1o_8^2cs^2o_6^2o_1o_3o_1o_11^2 +$
$36o_1o_8^2cs^2o_6o_1o_11^3 + o_2o_2o_1o_8^2o_6^2o_1o_3o_1o_11^3v_3^2 - 12o_2o_2o_6^2o_1o_3o_1o_11^2v_3^2 + 6o_2o_2o_1o_8o_6^2o_1o_3o_1o_11^3 + 6o_1o_8^2o_6^2o_1o_3o_1o_11^2 + 12o_1o_8o_6o_1o_3o_1o_11^2v_3^2 -$
$36o_2o_2o_1o_8^2cs^2o_6^2o_1o_3o_1o_11 + 12o_2o_2o_6^2o_1o_3o_1o_11^2 - 36o_1o_8cs^2o_6^2o_1o_3o_1o_11^3 + 36o_2o_2cs^2o_6^2o_1o_3o_1o_11^3 - 6o_1o_8^2o_6^2o_1o_3o_1o_11^3 + 12o_1o_8^2o_6o_1o_3o_1o_11^3v_3^2 -$
$36o_2o_2o_1o_8cs^2o_6^2o_1o_3o_1o_11 - 18o_2o_2o_1o_8o_6^2o_1o_3o_1o_11^2 - 12o_2o_2o_1o_8^2o_1o_3o_1o_11^2v_3^2 + 18o_1o_8^2cs^2o_6^2o_1o_3o_1o_11^3 - 36o_2o_2cs^2o_6^2o_1o_3o_1o_11^2 - 6o_2o_2o_1o_8o_6^2o_1o_3o_1o_11^3v_3^2 +$
$36o_1o_8cs^2o_6^2o_1o_3o_1o_11^2 - 12o_2o_2o_6^2o_1o_3o_1o_11^3 - 6o_1o_8^2o_6^2o_1o_3o_1o_11^2v_3^2 + 36o_2o_2o_1o_8^2cs^2o_1o_3o_1o_11^3 + 5o_2o_2o_1o_8^2cs^2o_6o_1o_3o_1o_11^3 + 12o_2o_2o_6^2o_1o_3o_1o_11^3v_3^2 -$

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$$12o_18o_6^2o_13o_11^3v_3^2 - 12o_22o_18^2o_6^2o_13 + 54o_22o_18cs^2o_6^2o_13o_11^2 + 12o_22o_18o_6^2o_13o_11 - 2o_22o_18^2o_6^2o_13o_11^2v_3^2 + 12o_22o_18^2o_6o_13o_11^3 +$$
$$12o_22o_18o_13o_11^3 - 6o_22o_18^2cs^2o_6^2o_13o_11^2 + 6o_18^2o_6^2o_13o_11^3v_3^2 - 36o_22o_18^2cs^2o_13o_11^2 + 18o_22o_18o_6^2o_13o_11^2v_3^2 - 18o_22o_18^2o_6o_13o_11^2 -$$
$$12o_18o_6o_13o_11^3 + 12o_22o_18^2o_6o_11^2 - 18o_22o_18cs^2o_6^2o_13o_11^3 + 12o_22o_18^2o_13o_11^3v_3^2 + 18o_22o_18^2cs^2o_6^2o_11^2$$

$$C_{22} = 12cs^2o_6^2o_13o_11^2 + 6o_18cs^2o_6^2o_13o_11^2 - 36o_22o_6^3o_13o_11v_3^2 - 18o_18o_6^3o_13o_11v_3^2 + 12o_22cs^2o_6^3o_13o_11^2 + 72o_22o_18o_6^2o_13o_11v_3^2 -$$
$$12o_6^3o_13o_11 + 36o_22o_6o_13o_11^2v_3^2 - 6o_22o_18cs^2o_6^3o_13o_11 + 12o_18o_6^2o_13o_11^2 - 12o_22o_18cs^2o_6^2o_11 + 12o_22o_18o_6^2o_13 + 12o_22o_18o_6o_13o_11 -$$
$$18o_18o_6^3o_11^2v_3^2 + 18o_22o_18cs^2o_6o_13o_11^2 - 12o_22o_6^3o_13o_11^2 + 18o_22o_18o_6^3o_13v_3^2 + 36o_6^2o_13o_11^2v_3^2 - 6o_22o_18o_6^3o_13 + 6o_22o_18cs^2o_6^3o_11 +$$
$$18o_22o_18o_6^3o_11v_3^2 + 12o_22o_6^3o_13o_11 - 36o_6^3o_13o_11^2v_3^2 - 12o_22o_6o_13o_11^2 + 6o_22o_18o_6^3o_13o_11 - o_22o_18cs^2o_6^3o_13o_11^2 - 18o_22o_18o_6^3o_13o_11v_3^2 -$$
$$12o_22o_18cs^2o_6o_13o_11 + 36o_22o_6^2o_13o_11v_3^2 - 6o_18cs^2o_6^3o_13o_11 - 12o_22cs^2o_6^3o_13o_11 + 12o_6^3o_13o_11^2 +$$
$$12o_22cs^2o_6o_13o_11^2 - 12o_18o_6^3o_11^2 - 72o_22o_6^3o_13o_11^2v_3^2 - 36o_18o_6^3o_13o_11^2v_3^2 - 6o_18cs^2o_6^3o_11^2 - 36o_22o_18o_6o_13o_11v_3^2 - 36o_22o_18o_6^2o_13v_3^2 +$$
$$24o_22o_6^2o_13o_11^2 - 12o_22o_18cs^2o_6^2o_13 - 6o_18o_6^3o_13o_11^2 + 24o_22o_18cs^2o_6^2o_13o_11 + 36o_18o_6^2o_11^2v_3^2 + 12o_22o_18o_6^2o_11 - 24o_22cs^2o_6^2o_13o_11^2 +$$
$$36o_6^3o_13o_11v_3^2 - 12cs^2o_6^3o_13o_11^2 - 12o_18cs^2o_6^2o_13o_11^2 + 12o_22cs^2o_6^2o_13o_11 + 12cs^2o_6^3o_13o_11 - 12o_6^3o_13o_11^2 + 6o_18o_6^3o_13o_11 +$$
$$12o_18cs^2o_6^2o_11^2 - 4o_22o_18cs^2o_6^2o_13o_11^2 - 24o_22o_18o_6^2o_13o_11 + 6o_18o_6^3o_11^2 + 18o_18o_6^3o_13o_11^2v_3^2 - 12o_22o_6^2o_13o_11 + 36o_22o_6^3o_13o_11^2v_3^2 -$$
$$6o_22o_18o_6^3o_11 + 6o_22o_18cs^2o_6^3o_13 - 36o_22o_18o_6^2o_11v_3^2$$

$$C_{23} = 12o_23o_16o_19^2o_11^3v_3^2 - 6o_16o_7^2o_19^2o_11^2v_3^2 + 12o_16o_7o_19o_11^3v_3^2 + 54o_23o_16o_7cs^2o_19o_11^3 - 36o_23o_16o_7^2cs^2o_11^2 - 12o_23o_16o_7^2o_19^2o_11v_3^2 -$$
$$18o_7^2cs^2o_19^2o_11^3 + 12o_23o_16o_7^2o_11^3v_3^2 + 12o_16o_7^2o_19o_11^3 - 36o_7^2cs^2o_19^2o_11^3 + 36o_23o_16o_7^2cs^2o_11^3 - 6o_23o_7^2o_19^2o_11^2 -$$
$$36o_23o_16o_7^2cs^2o_19^2o_11 + 12o_16o_7o_19^2o_11^3 + 6o_7^2o_19^2o_11^3 - 12o_16o_7^2o_19o_11^2 - 12o_23o_16o_7o_19^2o_11^3v_3^2 - 36o_23o_16cs^2o_19o_11^3 +$$
$$18o_23o_16o_7^2o_19o_11^2v_3^2 + 12o_23o_16o_7^2o_19o_11 + 12o_23o_16o_7o_11^3 + 18o_23o_7^2cs^2o_19^2o_11^2 + 12o_23o_16o_7o_19o_11^3 - 12o_23o_16o_7^2o_11^2v_3^2 +$$
$$36o_16o_7^2cs^2o_19o_11^2 - 18o_23o_16o_7^2o_19o_11^2 - 12o_23o_16o_19^2o_11^3 + 12o_7o_19^2o_11^3v_3^2 - 6o_23o_16o_7^2cs^2o_19^2o_11^2 + 6o_16o_7^2o_19^2o_11^3v_3^2 -$$
$$12o_23o_16o_19^2o_11^2v_3^2 - 36o_16o_7^2cs^2o_19o_11^3 + 6o_23o_16o_7^2o_19o_11^3 - 6o_23o_16o_7^2o_19o_11^3v_3^2 - 18o_23o_16o_7o_19^2o_11^2 + 36o_23o_16o_7^2cs^2o_19^2 +$$
$$18o_23o_16o_7o_19^2o_11^2v_3^2 - 12o_23o_7o_19^2o_11^2v_3^2 + 5o_23o_16o_7^2cs^2o_19^2o_11^3 + 12o_23o_16o_19^2o_11^2 - o_23o_16o_7^2o_19^2o_11^3 + 18o_16o_7^2cs^2o_19^2o_11^3 +$$
$$36o_7cs^2o_19^2o_11^3 - 12o_16o_7^2o_19o_11^3v_3^2 - 18o_23o_16o_7^2cs^2o_19o_11^3 + 12o_23o_16o_7^2o_19^2v_3^2 - 12o_23o_16o_7o_19^2 + 2o_23o_16o_7^2o_19^2o_11^2 -$$
$$18o_16o_7^2cs^2o_19^2o_11^2 - 18o_23o_16o_7o_19o_11^3 + 12o_23o_16o_7^2o_19^2o_11^3 + 12o_23o_16o_9o_11^3 + 54o_23o_16o_7^2cs^2o_19o_11^2 + 54o_23o_16o_7cs^2o_19^2o_11^2 -$$
$$12o_16o_7o_19^2o_11^3v_3^2 - 12o_23o_16o_9o_11^3v_3^2 + 12o_16o_7o_19o_11^2v_3^2 - 36o_23o_16o_7cs^2o_19o_11^3 - 6o_23o_7o_19^2o_11^3v_3^2 + 6o_16o_7o_19^2o_11^2 -$$
$$12o_16o_7o_19o_11^3 - 36o_23o_7cs^2o_19^2o_11^2 - 12o_23o_16o_7^2o_11^3 - 12o_23o_16o_7o_11^3v_3^2 + 12o_23o_16o_7^2o_19^2o_11 + 36o_23o_16cs^2o_19^2o_11^3 -$$
$$12o_23o_16o_7^2o_19o_11v_3^2 + 12o_23o_7o_19^2o_11^2 - 40o_23o_16o_7cs^2o_19^2o_11^3 - 36o_23o_16o_7cs^2o_11^3 + 6o_23o_7^2o_19^2o_11^2v_3^2 - 36o_23o_16cs^2o_19^2o_11^2 -$$
$$2o_23o_16o_7^2o_19^2o_11^2v_3^2 + 12o_23o_16o_7^2o_11^2 - 12o_7o_19^2o_11^3 + 36o_16o_7cs^2o_19o_11^3 + 18o_23o_16o_7o_19o_11^3v_3^2 - 6o_16o_7^2o_19^2o_11^3$$

$$C_{24} = -6o_23o_7^3o_19o_11 - 24o_23o_16o_7^2cs^2o_11^2 - 12o_23o_16o_7o_11^2 - 12o_23o_16o_7^2cs^2o_19 - 12o_23o_16cs^2o_19o_11^2 - 36o_23o_16o_7^3o_11v_3^2 +$$
$$6o_16o_7^2cs^2o_19o_11^2 + 18o_23o_16o_7cs^2o_19o_11^2 + 36o_16o_7^2o_11^2v_3^2 - 18o_7^3o_19o_11^2v_3^2 + 12o_16o_7^2o_19o_11^2 - 24o_23o_16o_7^2o_19o_11 -$$
$$18o_16o_7^3o_19o_11v_3^2 - 36o_23o_16o_7o_19o_11v_3^2 + 6o_7^3o_19o_11^2 - 72o_23o_16o_7^2o_11^2v_3^2 - 12o_16o_7^2cs^2o_11^2 - 6o_16o_7^3cs^2o_19o_11 -$$
$$12o_23o_16o_7cs^2o_19o_11 + 36o_7^2o_19o_11^2v_3^2 + 36o_16o_7^3o_11v_3^2 + 12o_16o_7^2cs^2o_11^2 - 36o_23o_16o_7o_19v_3^2 + 12o_23o_16o_7^2cs^2o_11 - 6o_16o_7^3o_19o_11^2 +$$
$$36o_23o_16o_7o_11^2v_3^2 - 36o_16o_7^3o_11^2v_3^2 - 12o_23o_16o_7^2o_11 + 6o_23o_16o_7^3o_19o_11 + 12o_16o_7^2o_11^2 - 6o_23o_16o_7^3cs^2o_19o_11 + 6o_23o_16o_7^3cs^2o_19 +$$
$$18o_16o_7^3o_19o_11^2v_3^2 + 18o_23o_7^3o_19o_11v_3^2 + 36o_23o_16o_7^2o_11v_3^2 - 12o_23o_16o_7^3o_11^2 + 12o_23o_7^3o_19o_11 + 12o_16o_7^2cs^2o_11 - 18o_23o_16o_7^3o_19o_11v_3^2 -$$
$$6o_7^3cs^2o_19o_11^2 - 6o_23o_16o_7^3o_19 + 6o_23o_7^3cs^2o_19o_11 + 12o_23o_16o_7^3cs^2o_11^2 - 4o_23o_16o_7^2cs^2o_19o_11^2 + 12o_23o_16o_7cs^2o_11^2 - 12o_16o_7^3cs^2o_11^2 -$$
$$36o_23o_7^3o_19o_11v_3^2 - 12o_23o_16o_7^3cs^2o_11 + 18o_23o_16o_7^3o_19v_3^2 - 12o_16o_7^2o_11^2 - 36o_16o_7^2o_19o_11^2v_3^2 + 24o_23o_16o_7^2cs^2o_19o_11 -$$
$$o_23o_16o_7^3cs^2o_19o_11^2 - 12o_23o_7^3cs^2o_19o_11 + 12o_23o_16o_7^3o_11 + 12o_7^2cs^2o_19o_11^2 + 72o_23o_16o_7^2o_19o_11v_3^2 - 12o_16o_7^3o_11 + 12o_23o_16o_7^2o_19 +$$
$$12o_23o_16o_7o_19o_11 + 6o_16o_7^3o_19o_11 + 24o_23o_16o_7^2o_11^2 + 36o_23o_16o_7^3o_11^2v_3^2 - 12o_7^2o_19o_11^2$$

$$C_{25} = 4o_18^2o_6^3o_11^3v_3^4 + 6o_18^2cs^4o_6^2o_11^2 + 36o_18cs^2o_6^2o_11^2v_3^2 - 108cs^2o_6^3o_11^2v_3^2 - 36o_6^3o_11^2v_3^4 - o_18^2cs^2o_6^3o_11^2 - 72o_18o_6^3o_11^2v_3^2 -$$
$$12o_18cs^2o_6o_11^3 - 12o_18^2cs^4o_6^3o_11 - 72o_18^2o_6^3v_3^2 + 13o_18^2cs^4o_6^2o_11^3 + 252o_18^2cs^2o_6^3v_3^2 + 36o_18o_6^2o_11^3v_3^4 - 36o_18o_6^3o_11v_3^4 + 36o_6^2o_11^3v_3^2 +$$
$$12o_18^2cs^4o_11^3 + 18o_18^2cs^2o_6^2o_11^2v_3^2 + 12o_18^2cs^2o_6^2o_11 + 39o_18o_6^3o_11^3v_3^2 - 12o_18^2cs^2o_6^3 + 36o_6^3o_11^3v_3^4 - 6o_18^2cs^2o_6^2o_11^2 + o_18^2cs^4o_6^3o_11^2 +$$
$$19o_18^2o_6^3o_11^2v_3^2 + 108cs^2o_6^2o_11^3v_3^2 + 54o_18cs^2o_6^2o_11^3v_3^2 + 12o_18cs^4o_6o_11^3 - 108o_18cs^2o_6^3o_11v_3^2 - 5o_18^2cs^2o_6^2o_11^3 + 90o_18^2o_6^3o_11v_3^2 +$$
$$12o_18^2cs^2o_6^3o_11 - 3o_18^2cs^2o_6^2o_11^3v_3^2 - 306o_18^2cs^2o_6^3o_11v_3^2 + 6o_18o_6^2o_11^3v_3^2 - 12o_18^2cs^4o_6^2o_11 - o_18^2cs^4o_6^3o_11^3 - 19o_18^2o_6^3o_11^2v_3^2 +$$
$$6o_18^2cs^2o_6o_11^3 + 60o_18^2cs^2o_6^3o_11^2v_3^2 + 6o_18cs^2o_6^3o_11^2 + 12o_18cs^4o_6^2o_11^2 - 39o_18o_6^3o_11^3v_3^4 + 36o_18cs^2o_6o_11^3v_3^2 - 36o_6^3o_11^3v_3^2 - 6o_18cs^2o_6^2o_11^3 -$$
$$18o_18^2cs^2o_6o_11^3v_3^2 - 90o_18^2o_6^2o_11v_3^4 + 198o_18cs^2o_6^3o_11^2v_3^2 - 18o_18cs^4o_6^2o_11^3 - 6o_18^2o_6^2o_11^3v_3^4 + 36o_6^3o_11^2v_3^2 - 24o_18^2cs^4o_6o_11^3 +$$
$$72o_18o_6^3o_11^2v_3^4 - 6o_18cs^4o_6^2o_11^2 + 12o_18^2cs^2o_6^2o_11^3v_3^2 - 12o_18cs^2o_6o_11^2 - 4o_18^2o_6^3o_11^3v_3^2 - 36o_18^2cs^2o_6o_11v_3^2 + 12o_18^2cs^4o_6^3 -$$
$$108cs^2o_6^2o_11^3v_3^2 - 99o_18cs^2o_6^3o_11^3v_3^2 + 6o_18cs^4o_6^2o_11^3 + 72o_18^2o_6^3v_3^2 - 36o_18o_6^2o_11^3v_3^2 + 18o_18cs^2o_6^2o_11^3 - 36o_6^2o_11^3v_3^2 + 36o_18o_6^3o_11v_3^2$$

$$C_{26} = -36o_7^3o_19o_11v_3^4 - 36o_7^2o_19o_11^3v_3^2 + 60o_7^3cs^2o_19^2o_11^2v_3^2 - 12o_7cs^4o_19^2o_11 - 36o_7^3o_11^3v_3^2 + o_7^3cs^4o_19^2o_11^2 - 5o_7^3cs^2o_19^2o_11^3 +$$
$$36o_7^2cs^2o_19o_11^2v_3^2 - 6o_7o_19^2o_11^3v_3^4 + 90o_7^3o_19^2o_11v_3^2 - 108o_7^3cs^2o_19o_11v_3^2 + 12o_7^3cs^2o_19^2o_11 + 19o_7^3o_19^2o_11^2v_3^2 + 12cs^4o_19^2o_11^3 +$$
$$12o_7cs^4o_19o_11^3 - 36o_7^2cs^2o_19^2o_11v_3^2 - 72o_7^3o_19o_11^2v_3^2 - 6o_7^2cs^2o_19^2o_11^2 - o_7^3cs^4o_19^2o_11^3 + 54o_7^2cs^2o_19o_11^3v_3^2 + 12o_7^2cs^2o_19^2o_11 +$$
$$36o_7^3o_11^2v_3^2 + 72o_7^3o_19^2v_3^2 + 13o_7^2cs^4o_19^2o_11^3 - o_7^2cs^2o_19^2o_11^3 - 12o_7^2cs^2o_19^2 - 12o_7^3cs^4o_19^2o_11 + 252o_7^3cs^2o_19^2v_3^2 -$$
$$12o_7cs^2o_19o_11^3 + 39o_7^3o_19o_11^3v_3^2 + 36o_7^2cs^2o_19o_11^3v_3^2 + 4o_7^3o_19^2o_11^3v_3^4 - 36o_7^3o_11^3v_3^4 + 6o_7^2cs^4o_19^2o_11^2 - 108o_7^3cs^2o_11^3v_3^2 -$$
$$3o_7^2cs^2o_19^2o_11^3v_3^2 + 6o_7cs^2o_19^2o_11^3 - 36o_7^3o_11^2v_3^4 - 99o_7^3cs^2o_19o_11^3v_3^2 + 12o_7^2cs^4o_19o_11^2 - 6o_7^3cs^2o_19o_11^3 - 72o_7^3o_19^2v_3^2 - 4o_7^3o_19^2o_11^3v_3^2 +$$
$$36o_7^2o_11^3v_3^2 - 108o_7^3cs^2o_11^2v_3^2 + 6o_7^3cs^2o_19o_11^2 - 18o_7^2cs^4o_19o_11^3 - 18o_7cs^2o_19^2o_11^3v_3^2 - 39o_7^3o_19o_11^3v_3^4 + 198o_7^3cs^2o_19o_11^2v_3^2 + 36o_7^3o_11^3v_3^4 +$$
$$12o_7^3cs^4o_19^2 - 24o_7cs^4o_19^2o_11^3 - 90o_7^3o_19^2o_11v_3^4 + 6o_7^2o_19^2o_11^3v_3^2 + 36o_7^2o_19o_11^3v_3^4 + 36o_7^3o_19o_11^3v_3^2 + 18o_7^2cs^2o_19^2o_11^2v_3^2 + 6o_7cs^4o_19o_11^3 -$$
$$12o_7^2cs^2o_19o_11^2 + 72o_7^3o_19o_11^2v_3^4 + 108o_7^3cs^2o_11^3v_3^2 - 306o_7^3cs^2o_19^2o_11v_3^2 + 18o_7^2cs^2o_19o_11^3 - 6o_7^3cs^4o_19o_11^2 - 19o_7^3o_19^2o_11^2v_3^2$$

$$C_{27} = 12 - 78cs^2o_11^2 + 144cs^4 + 144v_3^4 + 10o_11^3v_3^2 + 6cs^2o_11^3 + 672cs^2v_3^2 - 98o_11^2v_3^2 - 1008cs^2o_11v_3^2 + 198cs^2o_11 - 216o_11v_3^4 - 5cs^4o_11^3 +$$
$$90o_11^2v_3^2 + 82cs^2o_11^2 + 234o_11v_3^2 + 404cs^2o_11^2v_3^2 - 132cs^2 - 9o_11^3v_3^2 - 156v_3^2 - 216cs^4o_11 - o_11^3 - 18o_11 + 8o_11^2 - 34cs^2o_11^3v_3^2$$

$$C_{28} = 12 - 22cs^2o_11^2 + 24cs^4 + 504v_3^4 + 14o_11^3v_3^2 + 2cs^2o_11^3 + 432cs^2v_3^2 - 154o_11^2v_3^2 - 648cs^2o_11v_3^2 + 54cs^2o_11 - 756o_11v_3^4 - cs^4o_11^3 +$$

$310o_1 1^2 v_3^4 + 14cs^4 o_1 1^2 + 378o_1 1 v_3^2 + 252cs^2 o_1 1^2 v_3^2 - 36cs^2 - 29o_1 1^3 v_3^4 - 252v_3^2 - 36cs^4 o_1 1 - o_1 1^3 - 18o_1 1 + 8o_1 1^2 - 18cs^2 o_1 1^3 v_3^2$

2.5 CLBM2

2.5.1 Definitions

Collision operator C:

$$C\left(f\right) = \mathbf{K}^{-1}\mathbf{S}\left(\boldsymbol{\kappa}^{(eq)} - \mathbf{K}f\right),$$

where

$$\mathbf{S} = \operatorname{diag}(\omega_1, \omega_2, \cdots, \omega_{27}),$$

$\omega_1, \omega_2, \cdots, \omega_{27} \in (0, 2)$.

Matrix $\mathbf{K}$ corresponds to the transformation matrix to the central moment basis defined by

$$\boldsymbol{\kappa} = \begin{pmatrix} k_{(0,0,0)} \\ k_{(1,0,0)} \\ k_{(0,1,0)} \\ k_{(0,0,1)} \\ k_{(1,1,0)} \\ k_{(1,0,1)} \\ k_{(0,1,1)} \\ k_{(2,0,0)} - k_{(0,2,0)} \\ k_{(2,0,0)} - k_{(0,0,2)} \\ k_{(2,0,0)} + k_{(0,2,0)} + k_{(0,0,2)} \\ k_{(1,2,0)} + k_{(1,0,2)} \\ k_{(2,1,0)} + k_{(0,1,2)} \\ k_{(2,0,1)} + k_{(0,2,1)} \\ k_{(1,2,0)} - k_{(1,0,2)} \\ k_{(2,1,0)} - k_{(0,1,2)} \\ k_{(2,0,1)} - k_{(0,2,1)} \\ k_{(1,1,1)} \\ k_{(2,2,0)} - 2k_{(2,0,2)} + k_{(0,2,2)} \\ k_{(2,2,0)} + k_{(2,0,2)} - 2k_{(0,2,2)} \\ k_{(2,2,0)} + k_{(2,0,2)} + k_{(0,2,2)} \\ k_{(2,1,1)} \\ k_{(1,2,1)} \\ k_{(1,1,2)} \\ k_{(2,2,1)} \\ k_{(2,1,2)} \\ k_{(1,2,2)} \\ k_{(2,2,2)} \end{pmatrix},$$

The transformation matrix $\mathbf{K}$ satisfies

$$\mathbf{K}_{1,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,0,0)}$$

$$\mathbf{K}_{2,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,0,0)}$$

$$\mathbf{K}_{3,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,1,0)}$$

$$\mathbf{K}_{4,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,0,1)}$$

$$\mathbf{K}_{5,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,1,0)}$$

$$\mathbf{K}_{6,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,0,1)}$$

$$\mathbf{K}_{7,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(0,1,1)}$$

$$\mathbf{K}_{8,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,0)} - (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,0)}$$

$$\mathbf{K}_{9,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,0)} - (\boldsymbol{c}_i - \boldsymbol{v})^{(0,0,2)}$$

$$\mathbf{K}_{10,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,0)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,0)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(0,0,2)}$$

$$\mathbf{K}_{11,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,0)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(1,0,2)}$$

$$\mathbf{K}_{12,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,1,0)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(0,1,2)}$$

$$\mathbf{K}_{13,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,1)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,1)}$$

$$\mathbf{K}_{14,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,0)} - (\boldsymbol{c}_i - \boldsymbol{v})^{(1,0,2)}$$

$$\mathbf{K}_{15,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,1,0)} - (\boldsymbol{c}_i - \boldsymbol{v})^{(0,1,2)}$$

$$\mathbf{K}_{16,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,0)} - (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,1)}$$

$$\mathbf{K}_{17,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,1,1)}$$

$$\mathbf{K}_{18,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,0)} - 2(\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,2)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,2)}$$

$$\mathbf{K}_{19,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,0)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,2)} - 2(\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,2)}$$

$$\mathbf{K}_{20,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,0)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(2,0,2)} + (\boldsymbol{c}_i - \boldsymbol{v})^{(0,2,2)}$$

$$\mathbf{K}_{21,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,1,1)}$$

$$\mathbf{K}_{22,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,1)}$$

$$\mathbf{K}_{23,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,1,2)}$$

$$\mathbf{K}_{24,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,1)}$$

$$\mathbf{K}_{25,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,1,2)}$$

$$\mathbf{K}_{26,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(1,2,2)}$$

$$\mathbf{K}_{27,i} = (\boldsymbol{c}_i - \boldsymbol{v})^{(2,2,2)},$$

$\forall i \in \{1, 2, \cdots, 27\}$. The equilibrium central moments are defined by

$$\boldsymbol{\kappa}^{(eq)} = \mathbf{K}\mathbf{M}^{-1}\boldsymbol{\mu}^{(eq)},$$

i.e.,

$$\boldsymbol{\kappa}^{(eq)} = \left(\rho, 0, 0, 0, 0, 0, 0, 0, 0, 3\rho c_s^2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 3\rho c_s^4, 0, 0, 0, 0, 0, 0, \rho c_s^6\right)^T.$$

2.5.2 Conservation of mass: ρ

📎 attached text file: `output_d3q27_nse_clbm2_symbolic_pde_00.txt`

$\frac{\partial \rho}{\partial t} + \frac{\delta_l v_1}{\delta_t}\frac{\partial \rho}{\partial x_1} + \frac{\delta_l \rho}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l v_2}{\delta_t}\frac{\partial \rho}{\partial x_2} + \frac{\delta_l \rho}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_3}{\delta_t}\frac{\partial \rho}{\partial x_3} + \frac{\delta_l \rho}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-1 + v_1^2 + 3cs^2)\frac{\delta_l^3 v_1}{12\delta_t}\frac{\partial^3 \rho}{\partial x_1^3} +$

$(-1 + 3v_1^2 + cs^2)\frac{\delta_l^3 \rho}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} - \frac{\delta_l^3 \rho cs^2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} - \frac{\delta_l^3 \rho cs^2}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + v_2^2 + 3cs^2)\frac{\delta_l^3 v_2}{12\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} +$

$(-1 + 3v_2^2 + cs^2)\frac{\delta_l^3 \rho}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} - \frac{\delta_l^3 \rho cs^2}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{\delta_l^3 \rho cs^2}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2 \partial x_3^2} - \frac{\delta_l^3 \rho cs^2}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{\delta_l^3 \rho cs^2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$

$(-1 + v_3^2 + 3cs^2)\frac{\delta_l^3 v_3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + (-1 + 3v_3^2 + cs^2)\frac{\delta_l^3 \rho}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$

$(24v_1^2 cs^2 - 6v_1^2 + 3v_1^2 o_9 + cs^2 o_9 + 2cs^4 - 3v_1^4 o_9 - cs^4 o_9 - 2cs^2 - 12v_1^2 cs^2 o_9 + 6v_1^4)\frac{\delta_l^4}{24\delta_t o_9}\frac{\partial^4 \rho}{\partial x_1^4} +$

$(-4 + 10v_1^2 - 5v_1^2 o_9 - 3cs^2 o_9 + 6cs^2 + 2o_9)\frac{\delta_l^4 \rho v_1}{12\delta_t o_9}\frac{\partial^4 v_1}{\partial x_1^4} +$

$(-3v_1^2 o_9 - 9cs^2 o_9 + 3o_1 2cs^2 + 3o_1 2cs^2 o_9 - o_1 2o_9 + v_1^2 o_1 2o_9 + v_1^2 o_1 2 - o_1 2 + 3o_9)\frac{\delta_l^4 \rho v_1}{12\delta_t o_1 2o_9}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} +$

$(-2 + o_5)\frac{\delta_l^4 cs^4}{6\delta_t o_5}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$

$(-o_1 5 - 9o_1 0cs^2 + o_1 5o_1 0v_2^2 + o_1 5v_2^2 + 3o_1 0 - o_1 5o_1 0 + 3o_1 5o_1 0cs^2 + 3o_1 5cs^2 - 3o_1 0v_2^2)\frac{\delta_l^4 \rho v_2}{12o_1 5o_1 0\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$

$(-3o_1 0v_2^4 + o_1 0cs^2 - 12o_1 0v_2^2 cs^2 + 2cs^4 - 6v_2^2 - 2cs^2 + 6v_2^4 + 24v_2^2 cs^2 + 3o_1 0v_2^2 - o_1 0cs^4)\frac{\delta_l^4}{24o_1 0\delta_t}\frac{\partial^4 \rho}{\partial x_2^4} +$

$(-4 - 3o_1 0cs^2 + 2o_1 0 + 10v_2^2 + 6cs^2 - 5o_1 0v_2^2)\frac{\delta_l^4 \rho v_2}{12o_1 0\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} +$

$(o_1 3v_1^2 - 3v_1^2 o_9 - 9cs^2 o_9 - o_1 3 + 3o_1 3cs^2 - o_1 3o_9 + o_1 3v_1^2 o_9 + 3o_1 3cs^2 o_9 + 3o_9)\frac{\delta_l^4 \rho v_1}{12o_1 3\delta_t o_9}\frac{\partial^4 v_3}{\partial x_3^3 \partial x_3} +$

$(o_1 6v_2^2 - o_1 6 + 3o_1 6o_1 0cs^2 - 9o_1 0cs^2 + 3o_1 0 + o_1 6o_1 0v_2^2 - 3o_1 0v_2^2 - o_1 6o_1 0 + 3o_1 6cs^2)\frac{\delta_l^4 \rho v_2}{12o_1 6o_1 0\delta_t}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$

$(-2 + o_6)\frac{\delta_l^4 cs^4}{6o_6 \delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + (-2 + o_7)\frac{\delta_l^4 cs^4}{6\delta_t o_7}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$

$(-9o_1 1cs^2 + 3o_1 1 + v_3^2 o_1 8 + 3o_1 8cs^2 - o_1 1o_1 8 - o_1 8 - 3o_1 1v_3^2 + 3o_1 1o_1 8cs^2 + o_1 1v_3^2 o_1 8)\frac{\delta_l^4 \rho v_3}{12o_1 1\delta_t o_1 8}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} +$

$(-o_1 1o_1 9 - 9o_1 1cs^2 + 3o_1 1 + o_1 1o_1 9v_3^2 + 3o_1 9cs^2 - o_1 9 + o_1 9v_3^2 + 3o_1 1o_1 9cs^2 - 3o_1 1v_3^2)\frac{\delta_l^4 \rho v_3}{12o_1 1o_1 9\delta_t}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$

$(-3o_1 1v_3^4 + o_1 1cs^2 + 2cs^4 - 12o_1 1v_3^2 cs^2 - 6v_3^2 - 2cs^2 + 6v_3^4 + 3o_1 1v_3^2 - o_1 1cs^4 + 24v_3^2 cs^2)\frac{\delta_l^4}{24o_1 1\delta_t}\frac{\partial^4 \rho}{\partial x_3^4} +$

$(-4 - 3o_1 1cs^2 + 2o_1 1 + 10v_3^2 + 6cs^2 - 5o_1 1v_3^2)\frac{\delta_l^4 \rho v_3}{12o_1 1\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0.$

2.5.3 Conservation of momentum: ρv_1

📎 attached text file: `output_d3q27_nse_clbm2_symbolic_pde_01.txt`

$v_1\frac{\partial \rho}{\partial t} + \rho\frac{\partial v_1}{\partial t} + (v_1^2 + cs^2)\frac{\delta_l}{\delta_t}\frac{\partial \rho}{\partial x_1} + \frac{2\delta_l \rho v_1}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l v_1 v_2}{\delta_t}\frac{\partial \rho}{\partial x_2} + \frac{\delta_l \rho v_2}{\delta_t}\frac{\partial v_1}{\partial x_2} + \frac{\delta_l \rho v_1}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_1 v_3}{\delta_t}\frac{\partial \rho}{\partial x_3} + \frac{\delta_l \rho v_3}{\delta_t}\frac{\partial v_1}{\partial x_3} +$

$\frac{\delta_l \rho v_1}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 + 6v_1^2 + o_9 - 3o_9 v_1^2 - 2o_9 cs^2 + 4cs^2)\frac{\delta_l^2}{o_9 \delta_t}\frac{\partial \rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} + (2 - o_9)\frac{3\delta_l^2 \rho v_1}{o_9 \delta_t}\left(\frac{\partial v_1}{\partial x_1}\right)^2 +$

$(-2 + o_5)\frac{\delta_l^2 cs^2}{2o_5 \delta_t}\frac{\partial \rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} + (-2 + o_5)\frac{\delta_l^2 cs^2}{2o_5 \delta_t}\frac{\partial \rho}{\partial x_2}\frac{\partial v_1}{\partial x_2} + (-2 + o_6)\frac{\delta_l^2 cs^2}{2\delta_t o_6}\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_1} + (-2 + o_6)\frac{\delta_l^2 cs^2}{2\delta_t o_6}\frac{\partial \rho}{\partial x_3}\frac{\partial v_1}{\partial x_3} +$

$(-2 + 2v_1^2 + o_9 - o_9 v_1^2 - 3o_9 cs^2 + 6cs^2)\frac{\delta_l^2 v_1}{2o_9 \delta_t}\frac{\partial^2 \rho}{\partial x_1^2} + (-2 + 6v_1^2 + o_9 - 3o_9 v_1^2 - o_9 cs^2 + 2cs^2)\frac{\delta_l^2 \rho}{2o_9 \delta_t}\frac{\partial^2 v_1}{\partial x_1^2} +$

$(-2 + o_5)\frac{\delta_l^2 cs^2 \rho}{2o_5 \delta_t}\frac{\partial^2 v_2}{\partial x_1 \partial x_2} + (-2 + o_5)\frac{\delta_l^2 cs^2 \rho}{2o_5 \delta_t}\frac{\partial^2 v_1}{\partial x_2^2} + (-2 + o_6)\frac{\delta_l^2 cs^2 \rho}{2\delta_t o_6}\frac{\partial^2 v_3}{\partial x_1 \partial x_3} + (-2 + o_6)\frac{\delta_l^2 cs^2 \rho}{2\delta_t o_6}\frac{\partial^2 v_1}{\partial x_3^2} + C_1 \frac{\delta_l^3}{12o_9^2 \delta_t}\frac{\partial^3 \rho}{\partial x_1^3}$

$+ (-24 + 60v_1^2 + 5o_9^2 cs^2 + 24o_9 - 60o_9 v_1^2 + 11o_9^2 v_1^2 - 4o_9^2 - 36o_9 cs^2 + 36cs^2)\frac{\delta_l^3 \rho v_1}{6o_9^2 \delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_2 \frac{\delta_l^3 \rho v_1}{12o_5 o_9^2 \delta_t o_1 2}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} +$

$(-12 - o_5^2 + 12o_5)\frac{\delta_l^3 cs^4}{6o_5^2 \delta_t}\frac{\partial^3 \rho}{\partial x_1 \partial x_2^2} - \frac{\delta_l^3 cs^2 \rho v_1}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + v_2^2 + 3cs^2)\frac{\delta_l^3 v_1 v_2}{12\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} + C_3 \frac{\delta_l^3 \rho v_2}{6o_5 \delta_t o_1 5}\frac{\partial^3 v_1}{\partial x_2^3} +$

$(-1 + 3v_2^2 + cs^2)\frac{\delta_l^3 \rho v_1}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_4 \frac{\delta_l^3 \rho v_1}{12o_1 3o_9^2 \delta_t o_6}\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} - \frac{\delta_l^3 cs^2 \rho v_1}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} + (-12 - o_6^2 + 12o_6)\frac{\delta_l^3 cs^4}{6\delta_t o_6^2}\frac{\partial^3 \rho}{\partial x_1 \partial x_3^2} -$

$$\frac{\delta_t^3 cs^2 \rho v_1}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{\delta_t^3 cs^2 \rho v_1}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} + (-1+v_3^2+3cs^2)\frac{\delta_t^3 v_1 v_3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + C_5 \frac{\delta_t^3 \rho v_3}{6\delta_t o_1 8 o_6}\frac{\partial^3 v_1}{\partial x_3^3} + (-1+3v_3^2+cs^2)\frac{\delta_t^3 \rho v_1}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3}$$

$$+ \; C_6 \frac{\delta_t^4 v_1}{12 o_9^3 \delta_t}\frac{\partial^4 \rho}{\partial x_1^4} + \; C_7 \frac{\delta_t^4 \rho}{12 o_9^3 \delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + \; C_8 \frac{\delta_t^4 \rho}{12 o_5^3 o_9^3 \delta_t o_1 2^2}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + \; C_9 \frac{\delta_t^4 cs^2 v_1}{12 o_5^2 o_9^3 o_2 1 \delta_t o_1 2^2 o_1 5}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$$

$$C_{10}\frac{\delta_t^4 cs^2 \rho}{12 o_5^3 o_9^2 o_2 1 \delta_t o_1 2 o_1 5}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + \; C_{11}\frac{\delta_t^4 cs^2 v_2}{12 o_5^2 o_9 o_2 1 o_1 0 \delta_t o_1 2 o_1 5^2}\frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} +$$

$$(o_1 0 v_2^2 o_1 5 + 3cs^2 o_1 0 o_1 5 - 3 o_1 0 v_2^2 - 9cs^2 o_1 0 + 3 o_1 0 + 3 cs^2 o_1 5 - o_1 0 o_1 5 + v_2^2 o_1 5 - o_1 5)\frac{\delta_t^4 \rho v_1 v_2}{12 o_1 0 \delta_t o_1 5}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$$

$$C_{12}\frac{\delta_t^4 cs^2 \rho}{12 o_5^3 o_9 o_2 1 o_1 0 \delta_t o_1 2 o_1 5}\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} +$$

$$(2cs^4 + 24 cs^2 v_2^2 + 3 o_1 0 v_2^2 - 6v_2^2 + cs^2 o_1 0 + 6 v_2^4 - 3 o_1 0 v_2^4 - 2cs^2 - cs^4 o_1 0 - 12 cs^2 o_1 0 v_2^2)\frac{\delta_t^4 v_1}{24 o_1 0 \delta_t}\frac{\partial^4 \rho}{\partial x_2^4} +$$

$$C_{13}\frac{\delta_t^4 \rho}{24 o_5^3 \delta_t o_1 5^2}\frac{\partial^4 v_1}{\partial x_2^4} + (-4 - 5 o_1 0 v_2^2 + 10 v_2^2 - 3cs^2 o_1 0 + 2 o_1 0 + 6 cs^2)\frac{\delta_t^4 \rho v_1 v_2}{12 o_1 0 \delta_t}\frac{\partial^4 v_2}{\partial x_2^4} + \; C_{14}\frac{\delta_t^4 \rho}{12 o_1 3^2 o_9^3 \delta_t o_6^3}\frac{\partial^4 v_3}{\partial x_1 \partial x_3} +$$

$$C_{15}\frac{\delta_t^4 cs^4 \rho}{12 o_5^3 o_1 4 o_8 o_1 3 o_9 o_7 o_1 7 \delta_t o_1 2 o_6^2 o_1 5}\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$(3cs^2 o_1 0 o_1 6 - 3 o_1 0 v_2^2 + o_1 0 v_2^2 o_1 6 - 9 cs^2 o_1 0 + v_2^2 o_1 6 + 3 o_1 0 - o_1 6 - o_1 0 o_1 6 + 3cs^2 o_1 6)\frac{\delta_t^4 \rho v_1 v_2}{12 o_1 0 \delta_t o_1 6}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3} +$$

$$C_{16}\frac{\delta_t^4 cs^2 v_1}{12 o_1 3^2 o_9^3 \delta_t o_1 8 o_6^2 o_2 2}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + \; C_{17}\frac{\delta_t^4 cs^2 \rho}{12 o_1 3 o_9^2 \delta_t o_1 8 o_6^3 o_2 2}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} + \; C_{18}\frac{\delta_t^4}{2 o_5 o_1 4 o_8 o_1 3 o_9 \delta_t o_1 2 o_1 8 o_6 o_2 2 o_2 0}\frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C_{19}\frac{\delta_t^4 \rho}{2 o_5 o_1 4 o_8 o_1 3 o_9 \delta_t o_1 2 o_1 8 o_6 o_2 2 o_2 0}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + \; C_{20}\frac{\delta_t^4 \rho}{12 o_5^2 o_1 4 o_8 o_1 3 o_9 o_7 \delta_t o_1 2 o_1 8 o_6^3 o_2 2 o_2 0}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C_{21}\frac{\delta_t^4 \rho v_3}{o_5 o_1 4 o_8 o_1 3 o_9 \delta_t o_1 2 o_1 8 o_6 o_2 2 o_2 0}\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} + \; C_{22}\frac{\delta_t^4}{12 o_5 o_8 o_7 o_1 7 \delta_t o_1 8 o_6 o_2 0 o_1 5}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} + \; C_{23}\frac{\delta_t^4 \rho}{4 o_5^2 o_8 o_1 7 \delta_t o_1 8 o_6^2 o_2 0 o_1 5}\frac{\partial^4 v_1}{\partial x_2^2 \partial x_3^2} +$$

$$C_{24}\frac{\delta_t^4 \rho v_2}{2 o_5 o_8 o_1 7 \delta_t o_1 8 o_6 o_2 0 o_1 5}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + \; C_{25}\frac{\delta_t^4 \rho}{4 o_5 o_8 o_1 7 \delta_t o_1 8 o_6 o_2 0 o_1 5}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} + \; C_{26}\frac{\delta_t^4 cs^2 v_3}{12 o_1 3 o_9 \delta_t o_1 8^2 o_6^2 o_2 2 o_2 1 1}\frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} +$$

$$(v_3^2 o_1 8 o_1 1 + 3cs^2 o_1 8 - o_1 8 o_1 1 + v_3^2 o_1 8 + 3cs^2 o_1 8 o_1 1 - 9cs^2 o_1 1 - o_1 8 - 3v_3^2 o_1 1 + 3 o_1 1)\frac{\delta_t^4 \rho v_1 v_3}{12 \delta_t o_1 8 o_1 1}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} +$$

$$C_{27}\frac{\delta_t^4 cs^2 \rho}{12 o_1 3 o_9 \delta_t o_1 8 o_6^3 o_2 2 o_2 1 1}\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} +$$

$$(3 o_1 9 cs^2 - o_1 9 - o_1 9 o_1 1 + o_1 9 v_3^2 - 9cs^2 o_1 1 + 3 o_1 9 cs^2 o_1 1 - 3v_3^2 o_1 1 + 3 o_1 1 + o_1 9 v_3^2 o_1 1)\frac{\delta_t^4 \rho v_1 v_3}{12 o_1 9 \delta_t o_1 1}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$$

$$(-cs^4 o_1 1 + 2cs^4 + 24 cs^2 v_3^2 - 3v_3^4 o_1 1 - 6v_3^2 - 12 cs^2 v_3^2 o_1 1 + cs^2 o_1 1 + 6v_3^4 - 2cs^2 + 3v_3^2 o_1 1)\frac{\delta_t^4 v_1}{24 \delta_t o_1 1}\frac{\partial^4 \rho}{\partial x_3^4} +$$

$$C_{28}\frac{\delta_t^4 \rho}{24 \delta_t o_1 1 8^2 o_6^3}\frac{\partial^4 v_1}{\partial x_3^4} + (-4 + 10 v_3^2 - 3cs^2 o_1 1 + 6cs^2 - 5v_3^2 o_1 1 + 2 o_1 1)\frac{\delta_t^4 \rho v_1 v_3}{12 \delta_t o_1 1}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 12cs^4 - 144 o_9 cs^2 v_1^2 - 36 v_1^2 + 144 cs^2 v_1^2 + 7 o_9^2 v_1^4 - o_9^2 cs^2 + 36 o_9 v_1^2 - 12 o_9 cs^4 - 7 o_9^2 v_1^2 + o_9^2 cs^4 - 36 o_9 v_1^4 + 12 o_9 cs^2 - 12 cs^2 + 36 v_1^4 + 24 o_9^2 cs^2 v_1^2$

$C_2 = 36 o_5 o_9^2 cs^2 - 11 o_5 o_9^2 cs^2 o_1 2 + 36 o_5 cs^2 o_1 2 - 12 o_5 o_1 2 - 3 o_5 o_9^2 o_1 2 v_1^2 + 12 o_5 o_1 2 v_1^2 - 12 o_5 o_9 v_1^2 + 6 o_5 o_9 o_1 2 - 36 o_9^2 cs^2 - 12 o_9^2 v_1^2 + 6 o_9^2 o_1 2 v_1^2 + 12 o_9 + 3 o_5 o_9^2 o_1 2 + 18 o_9^2 cs^2 o_1 2 + 12 o_5 o_9 + 12 o_5 o_9^2 v_1^2 - 12 o_5 o_9 - 18 o_5 o_9 cs^2 o_1 2 - 36 o_5 o_9 cs^2 - 6 o_5 o_9 o_1 2 v_1^2 - 6 o_9^2 o_1 2$

$C_3 = 6 - 3 o_5 + 3 o_5 v_2^2 - 6 v_2^2 + 9 o_5 cs^2 + 9 cs^2 o_1 5 - o_5 v_2^2 o_1 5 - 18 cs^2 - 3 o_5 cs^2 o_1 5 + o_5 o_1 5 + 3 v_2^2 o_1 5 - 3 o_1 5$

$C_4 = 6 o_1 3 o_9 o_6 - 6 o_1 3 o_9 v_1^2 o_6 + 36 o_9^2 cs^2 o_6 + 6 o_1 3 o_9^2 v_1^2 - 12 o_9^2 o_6 + 36 o_1 3 cs^2 o_6 - 36 o_9^2 cs^2 - 11 o_1 3 o_9^2 cs^2 o_6 - 12 o_9 v_1^2 o_6 - 12 o_9^2 v_1^2 + 12 o_9^2 + 12 o_9^2 v_1^2 o_6 - 18 o_1 3 o_9 cs^2 o_6 + 12 o_9 o_6 - 6 o_1 3 o_9 - 36 o_9 cs^2 o_6 - 3 o_1 3 o_9^2 v_1^2 o_6 - 12 o_1 3 o_6 + 18 o_1 3 o_9^2 cs^2 + 12 o_1 3 v_1^2 o_6 + 3 o_1 3 o_9^2 o_6$

$C_5 = 6 + 9 cs^2 o_1 8 - 6 v_3^2 + o_1 8 o_6 + 3 v_3^2 o_1 8 - v_3^2 o_1 8 o_6 - 3 o_1 8 + 3 v_3^2 o_6 - 3 o_6 - 18 cs^2 + 9 cs^2 o_6 - 3 cs^2 o_1 8 o_6$

$C_6 = 12 + 6 o_9^3 cs^2 - 9 o_9^3 v_1^4 + 144 cs^4 - 1008 o_9 cs^2 v_1^2 - 156 v_1^2 + 672 cs^2 v_1^2 + 90 o_9^2 v_1^4 - 78 o_9^2 cs^2 - 18 o_9 - 34 o_9^3 cs^2 v_1^2 + 234 o_9 v_1^2 - 216 o_9 cs^4 - 98 o_9^2 v_1^2 + 82 o_9^2 cs^4 + 8 o_9^3 - 216 o_9 v_1^4 - o_9^3 + 198 o_9 cs^2 - 132 cs^2 + 144 v_1^4 - 5 o_9^3 cs^4 + 404 o_9^2 cs^2 v_1^2 + 10 o_9^3 v_1^2$

$C_7 = 12 + 2 o_9^3 cs^2 - 29 o_9^3 v_1^4 + 24 cs^4 - 648 o_9 cs^2 v_1^2 - 252 v_1^2 + 432 cs^2 v_1^2 + 310 o_9^2 v_1^4 - 22 o_9^2 cs^2 - 18 o_9 - 18 o_9^3 cs^2 v_1^2 + 378 o_9 v_1^2 - 36 o_9 cs^4 - 154 o_9^2 v_1^2 + 14 o_9^2 cs^4 + 8 o_9^3 - 756 o_9 v_1^4 - o_9^3 + 54 o_9 cs^2 - 36 cs^2 + 504 v_1^4 - o_9^3 cs^4 + 252 o_9^2 cs^2 v_1^2 + 14 o_9^3 v_1^2$

$C_8 = 72 o_5^3 o_9^2 o_1 2 v_1^4 + 12 o_5 o_9^3 cs^4 o_1 2 - 36 o_5^2 o_9^3 o_1 2 v_1^2 - 36 o_5^2 o_9 cs^2 o_1 2^2 v_1^2 - 12 o_5^3 cs^2 o_1 2^2 + 54 o_5^2 o_9^3 cs^2 o_1 2 v_1^2 + 36 o_5^3 o_9 o_1 2 v_1^2 + 12 o_5^3 o_9^3 cs^2 o_1 2^2 v_1^2 - 90 o_5^3 o_9 o_1 2^2 v_1^4 + 36 o_5^3 o_9^3 v_1^4 + 12 o_5^2 o_9^2 cs^4 o_1 2 + 108 o_5^3 o_9^3 cs^2 v_1^2 + 36 o_5 o_9^3 cs^2 o_1 2 v_1^2 - 108 o_5^3 o_9 cs^2 o_1 2 v_1^2 + o_5^3 o_9^2 cs^4 o_1 2^2 - 19 o_5^3 o_9 o_1 2^2 v_1^2 + 12 o_5^3 o_9 cs^2 o_1 2^2 - 6 o_5^3 o_9^3 o_1 2^2 v_1^4 + 18 o_5^2 o_9^3 cs^2 o_1 2 + 252 o_5 cs^2 o_1 2^2 v_1^2 - 108 o_5^2 o_9^3 cs^2 v_1^2 - 6 o_5^3 o_9 cs^4 o_1 2 + 36 o_5^2 o_9^3 v_1^2 - 5 o_5^3 o_9^3 cs^2 o_1 2^2 + 60 o_5^3 o_9^2 cs^2 o_1 2^2 v_1^2 - 6 o_5^3 o_9^3 cs^2 o_1 2 + 4 o_5^3 o_9^3 o_1 2^2 v_1^4 + 6 o_5^2 o_9^2 cs^4 o_1 2^2 + 12 o_5^3 o_9 cs^2 o_1 2^2 + 72 o_5^3 o_9 o_1 2^2 v_1^4 + 39 o_5^3 o_9^3 o_1 2 v_1^2 - 36 o_5^2 o_9^3 v_1^4 + 36 o_5^2 o_9^2 cs^2 o_1 2 v_1^2 - 24 o_5 o_9^3 cs^4 o_1 2^2 - 4 o_5^3 o_9^3 o_1 2^2 v_1^2 - o_5^3 o_9^3 cs^4 o_1 2^2 - 12 o_5^2 o_9^2 cs^2 o_1 2 - 12 o_5^2 o_9 cs^4 o_1 2^2 + 18 o_5^2 o_9^2 cs^2 o_1 2^2 v_1^2 - o_5^3 o_9^2 cs^2 o_1 2^2 - 18 o_5^2 o_9^3 cs^4 o_1 2 - 36 o_5^2 o_9^3 v_1^4 - 108 o_5^3 o_9^2 cs^2 v_1^2 + 36 o_5^3 o_9^2 v_1^2 - 12 o_5 o_9^3 cs^2 o_1 2 + 198 o_5^3 o_9^2 cs^2 o_1 2 v_1^2 + 12 o_5^3 cs^4 o_1 2^2 - 72 o_5^3 o_1 2^2 v_1^2 - 39 o_5^3 o_9^3 o_1 2 v_1^4 - 99 o_5^3 o_9^3 cs^2 o_1 2 v_1^2 - 18 o_5 o_9^3 cs^2 o_1 2^2 v_1^2 + 12 o_9 cs^4 o_1 2^2 - 36 o_5 o_9 o_1 2 v_1^4 - 72 o_5^3 o_9 o_1 2 v_1^2 + 6 o_5 o_9^3 cs^2 o_1 2^2 - 306 o_5 o_9 cs^2 o_1 2^2 v_1^2 + 36 o_5^2 o_9^3 o_1 2 v_1^4 + 19 o_5^3 o_9^2 o_1 2^2 v_1^4 + 6 o_5^3 o_9^3 cs^2 o_1 2 + 13 o_5^2 o_9^3 cs^4 o_1 2^2 + 6 o_5^2 o_9^3 o_1 2^2 v_1^2 + 6 o_5^3 o_9^3 cs^4 o_1 2 - 3 o_5^2 o_9^3 cs^2 o_1 2^2 v_1^2 - 12 o_5^3 o_9 cs^4 o_1 2^2 + 90 o_5^3 o_9 o_1 2^2 v_1^2 - 6 o_5^3 o_9^2 cs^2 o_1 2^2 - 36 o_5^3 o_9^3 v_1^2$

$$C_9 = 12o_9^3o_21o_12^2v_1^2o_15 + 54o_5o_9^2cs^2o_21o_12^2o_15 + 6o_5^2o_9^3o_12^2v_1^2o_15 + 36o_5^2o_9^3cs^2o_21o_15 - 12o_5^2o_9^2o_12o_15 + 36o_5^2cs^2o_21o_12^2o_15 -$$
$$6o_5^2o_9^2o_21o_12^2 - 18o_5^2o_9^2o_21o_12o_15 - 12o_5o_9^3o_21o_15 - 18o_5^2o_9^2cs^2o_12^2o_15 - 12o_5o_9^3o_12o_15 + 36o_9^3cs^2o_21o_12^2o_15 + 18o_5o_9^3o_21o_12^2v_1^2o_15 +$$
$$12o_5o_9^2o_21o_12o_15 + 54o_5o_9^3cs^2o_21o_12o_15 - 12o_5o_9^3o_12^2v_1^2o_15 - 36o_5o_9^3cs^2o_21o_15 + 18o_5o_9^3o_21o_12v_1^2o_15 + 12o_5^2o_21o_12^2v_1^2o_15 -$$
$$12o_5^2o_21o_12^2o_15 - 18o_5o_9^3o_21o_12o_15 + 6o_5^2o_9^3o_12^2 - 2o_5^2o_9^2o_21o_12^2v_1^2o_15 + 18o_5^2o_9^3cs^2o_12^2o_15 - 18o_5^2o_9^3cs^2o_12^2 + 6o_5^2o_9^2o_21o_12^2v_1^2 -$$
$$36o_5^2o_9cs^2o_21o_12^2o_15 - 6o_5^2o_9^3o_12^2o_15 - 6o_5^2o_9^3o_21o_12v_1^2o_15 - 18o_5^2o_9^3cs^2o_21o_12o_15 - 6o_5^2o_9^2cs^2o_21o_12^2o_15 + 12o_5^2o_9o_21o_12^2o_15 -$$
$$36o_5^2o_9^2cs^2o_21o_15 - 6o_5^2o_9^2o_12^2v_1^2o_15 + 6o_5^2o_9^3o_21o_12o_15 + 12o_5o_9^3o_12^2v_1^2 - 12o_5o_9^2o_21o_12^2v_1^2o_15 - 12o_5^2o_9^2o_21o_12^2v_1^2 - 36o_5o_9^3cs^2o_12^2o_15 +$$
$$12o_5^2o_9^3o_1v_1^2o_15 + 54o_5^2o_9^2cs^2o_21o_12o_15 + 12o_5^2o_9o_21o_12o_15 + 18o_5^2o_9o_21o_12v_1^2o_15 + 12o_5o_9^3o_21o_15 - 12o_5o_9^3o_12^2 + 12o_5o_9^2o_21o_12^2 +$$
$$o_5^2o_9o_21o_12^2v_1^2o_15 - o_5^2o_9^2o_21o_12^2o_15 + 36o_5o_9^3cs^2o_21o_15 + 12o_5o_9^3o_21o_12^2o_15 + 12o_5^2o_9o_21o_15 + 12o_5^2o_9o_1v_1^2o_15 - 36o_5^2o_9^3cs^2o_21o_15 -$$
$$12o_5o_9^3o_21v_1^2o_15 + 12o_9^2o_21o_12^2o_15 - 36o_5o_9cs^2o_21o_12o_15 - 12o_5^2o_9o_21o_12v_1^2o_15 + 5o_5^2o_9^3cs^2o_21o_12^2o_15 + 12o_5^2o_9o_12o_15 + 12o_5o_9o_12^2o_15 -$$
$$12o_5^2o_9o_12v_1^2o_15 + 36o_5^2o_9cs^2o_21o_15 - 18o_5o_9o_21o_12^2o_15 - 12o_9^3o_21o_12v_1^2o_15 - 36o_9^3cs^2o_21o_12o_15 + 36o_5o_9^3cs^2o_12^2 + 18o_5^2o_9cs^2o_21o_12^2 -$$
$$12o_9^3o_21o_12^2v_1^2o_15 - 40o_5o_9^3cs^2o_21o_12^2o_15 - 12o_9^3o_21o_12o_15 - 36o_5o_9^3cs^2o_21o_12^2 + 6o_5^2o_9o_12^2o_15 - 12o_5^2o_9o_21v_1^2o_15 - 6o_5^2o_9^3o_12^2v_1^2 -$$
$$36o_9^3cs^2o_21o_12o_15 + 12o_5o_9^3o_12v_1^2o_15 - 12o_5o_9^3o_21o_12v_1^2o_15 + 2o_5^2o_9^2o_21o_12^2o_15$$

$$C_{10} = -18o_5^3o_9o_21o_12v_1^2o_15 - 6o_5^3o_9cs^2o_21o_12o_15 + 12o_5^3o_9o_21o_15 + 12o_5^2o_9o_12o_15 + 12o_5^3o_9o_15 - 12o_9cs^2o_21o_12o_15 + 6o_5^3o_9^2cs^2o_21o_12o_15 -$$
$$12o_5^3o_9cs^2o_21o_15 - 12o_5^3o_9cs^2o_15 + 18o_5^3o_21o_12v_1^2o_15 + 6o_5^3cs^2o_21o_12o_15 - 12o_5o_9cs^2o_21o_12 - 36o_5^2o_9o_21o_12v_1^2 - 12o_5o_9^2o_21o_15 -$$
$$o_5^3o_9cs^2o_21o_12o_15 + 36o_5^3o_9^2o_1v_1^2o_15 + 12o_5^3o_9cs^2o_15 + 12o_5o_9cs^2o_21o_15 + 36o_5^3o_9v_1^2o_15 + 6o_5^3o_9o_21o_12o_15 - 12o_5^2o_9o_21o_15 -$$
$$24o_5^2o_9cs^2o_21o_15 - 6o_5^3o_9o_12o_15 - 12o_5^3o_9o_21o_12 + 18o_5^3o_9o_21o_12v_1^2o_15 + 36o_5^2o_9o_21v_1^2o_15 - 6o_5^3o_9cs^2o_21o_15 - 4o_5^2o_9^2o_21o_12o_15 -$$
$$24o_5^2o_9o_21o_12o_15 + 12o_5^3o_5cs^2o_12 - 36o_5^3o_9^2v_1^2o_15 - 12o_5^2o_9cs^2v_1^2o_15 + 24o_5^2o_9o_21o_15 - 36o_5^3o_9o_21o_12v_1^2o_15 + 12o_5^3o_9o_21o_12 +$$
$$6o_5^3o_9o_12o_15 - 36o_5^3o_9o_21v_1^2o_15 + 24o_5^2o_9cs^2o_21o_12o_15 + 12o_5o_9o_21o_12o_15 + 72o_5^2o_9o_21o_12v_1^2o_15 + 12o_5^3o_9cs^2o_21o_15 + 36o_5^2o_9o_12v_1^2 -$$
$$6o_5^3o_9o_21o_12 - 12o_5^3o_9o_21o_15 - 12o_5^2o_9cs^2o_12o_15 - 6o_5^3o_21o_12o_15 - 18o_5^2o_9o_12v_1^2 - 36o_5o_9o_21o_12v_1^2o_15 - 12o_5o_9cs^2o_21o_12o_15 + 6o_5^3o_9o_12 +$$
$$36o_5o_9^2o_1v_1^2o_15 + 18o_5o_9cs^2o_21o_12o_15 + 12o_5o_9cs^2o_15 - 6o_5^3o_9cs^2o_12 + 18o_5^3o_9o_21o_12v_1^2 - 18o_5o_9o_1v_1^2o_15 + 6o_5^3o_9cs^2o_21o_12 -$$
$$72o_5^2o_9^2o_21v_1^2o_15 - 12o_5^2cs^2o_21o_12o_15 - 12o_5^3o_9o_15 - 36o_5^2o_21o_12v_1^2o_15 + 36o_5^2o_9^2v_1^2o_15 + 12o_5^2o_9cs^2o_21o_15$$

$$C_{11} = -18o_5^2o_9cs^2o_10o_12o_15 - 12o_5o_9o_10o_12o_15 + 18o_5^2o_9cs^2o_21o_10o_12 - 5o_5^2o_9o_21o_12v_2^2o_15^2 + 12o_5o_9o_21o_10o_12 - 12o_5o_9o_21o_10o_12v_2^2 -$$
$$12o_5o_9o_10o_12v_2^2o_15^2 - 3o_5^2o_9o_21o_10o_12v_2^2o_15 - 36o_5o_9cs^2o_10o_12o_15^2 - 12o_5^2o_9o_21o_15^2 + 54o_5o_9cs^2o_21o_10o_12o_15 - 6o_5^2o_9o_10o_12v_2^2o_15 +$$
$$12o_9o_21o_10o_12o_15 - 6o_5^2o_10o_12v_2^2o_15^2 - 6o_5^2o_9o_21o_10o_12 + 6o_5^2o_9o_10o_12o_15 - 12o_9o_21o_10o_12v_2^2o_15 - 18o_5^2cs^2o_10o_12o_15^2 -$$
$$6o_5^2o_9o_10o_12o_15^2 + 12o_9o_21o_10o_12v_2^2o_15^2 + 12o_5o_9o_10v_2^2o_15^2 + 6o_5^2o_12v_2^2o_15^2 + 12o_5o_10v_2^2o_15^2 - 12o_5o_9o_10o_15^2 -$$
$$12o_9o_21o_10o_12o_15^2 - 36o_5^2o_9cs^2o_10o_15^2 - 36o_5cs^2o_21o_12o_15^2 - 12o_5^2o_10o_15^2 + o_5^2o_9o_21o_10o_12v_2^2o_15^2 + 6o_5^2o_10o_12o_15^2 +$$
$$6o_5^2o_9o_21o_10o_12v_2^2 + 36o_5o_9cs^2o_10o_12o_15 + 18o_5o_9o_21o_12v_2^2o_15^2 - 36o_5o_9cs^2o_21o_10o_12 + 36o_5o_9cs^2o_10o_15^2 - 36o_5o_9cs^2o_21o_10o_12o_15^2 +$$
$$6o_5^2o_9o_10o_12v_2^2o_15^2 + 12o_5o_9o_10o_12o_15^2 + 18o_5^2o_9cs^2o_10o_12o_15^2 - 12o_5o_9o_10v_2^2o_15^2 + 36o_5^2cs^2o_10o_15^2 + 12o_5o_9o_10o_12v_2^2o_15 +$$
$$18o_5^2cs^2o_21o_12o_15^2 + 36o_9cs^2o_21o_10o_12o_15^2 + 12o_5^2o_12o_15^2 + 12o_5o_9o_21o_15^2 + 36o_5^2o_9cs^2o_21o_15^2 - 12o_9o_21o_12v_2^2o_15^2 +$$
$$3o_5^2o_9cs^2o_21o_10o_12o_15^2 + 54o_5o_9cs^2o_21o_12o_15^2 + 12o_5o_9o_21o_10o_12o_15^2 - 12o_5o_9o_21o_10o_12v_2^2o_15^2 - 36o_5^2cs^2o_21o_15^2 +$$
$$3o_5^2o_9o_21o_10o_12o_15 - 36o_5o_9cs^2o_21o_15^2 + 12o_9o_21o_12o_15^2 + 12o_5o_9o_21v_2^2o_15^2 - 18o_5o_9o_21o_10o_12o_15^2 - 15o_5^2o_9cs^2o_21o_10o_12o_15^2 -$$
$$o_5^2o_9o_21o_10o_15^2 + 12o_5o_9o_10o_15^2 - 18o_5o_9o_21o_10o_10o_12o_15 - 9o_5^2o_9cs^2o_21o_10o_12o_15 - 6o_5^2o_21o_12o_15^2 + 18o_5o_9o_21o_10o_10o_12v_2^2o_15 -$$
$$12o_5^2o_1v_2^2o_15^2 - 12o_5o_9o_21v_1^2o_15^2 + 5o_5^2o_9o_21o_12o_15^2 - 36o_9cs^2o_21o_10o_12o_15$$

$$C_{12} = -12o_5^2o_9cs^2o_10o_12o_15 - 5o_5^3o_9cs^2o_21o_12o_15 - 18o_5^2o_9cs^2o_21o_10o_12 - 12o_5o_9o_21o_10o_12 + 36o_5^2o_9o_1o_1v_2^2o_15 + 36o_5o_9o_21o_10o_12v_2^2 -$$
$$12o_5^3o_9o_21o_15 - 3o_5^2o_9o_21o_10o_12v_2^2o_15 - 36o_5o_9o_21o_12v_2^2o_15 + 18o_5o_9cs^2o_21o_10o_12o_15 - 36o_5^2o_9o_10o_12v_2^2o_15 + 6o_5^3o_9o_10o_12 +$$
$$12o_5^3o_9cs^2o_21o_15 + 12o_5^2o_9cs^2o_10o_15 + 6o_5^3cs^2o_21o_12o_15 - 6o_5^3o_9cs^2o_10o_12 + 18o_5^2o_9o_21o_10o_12 + 12o_5^2o_9o_10o_12o_15 - 18o_5^2o_9o_10o_12v_2^2 +$$
$$12o_5^3o_21o_10v_2^2o_15 + 36o_5^2o_9o_21o_12v_2^2 + 12o_5^2o_9o_21o_15 + 12o_5o_9o_21o_10o_12v_2^2 - 54o_5^2o_9cs^2o_21o_10o_12 + 36o_5o_9o_21v_2^2o_15 +$$
$$12o_5^3cs^2o_10o_15 + 54o_5^2o_9o_21o_12v_2^2o_15 - 12o_5o_9o_10o_12 + 6o_5^3o_10o_12o_15 - 18o_5^3o_10o_12v_2^2o_15 - 18o_5^2o_9o_21o_12o_15 - 12o_5^3o_10o_15 -$$
$$6o_5^3cs^2o_10o_12o_15 + 18o_5o_9o_10o_12v_2^2o_15 - 12o_5^3cs^2o_21o_15 - 36o_5^2o_9o_21v_2^2o_15 + o_5^2o_9o_21o_10o_12o_15 + 6o_5^3o_9cs^2o_21o_10o_12 + 18o_5^2o_9cs^2o_21o_12o_15 +$$
$$12o_5o_9o_21o_12o_15 + 6o_5^3o_9cs^2o_10o_12o_15 - o_5^3o_9cs^2o_21o_10o_12o_15 - 12o_5^2o_9o_10o_15 - 15o_5^3o_9o_21o_12v_2^2o_15 - 6o_5^3o_21o_12o_15 + 12o_5^3o_9o_10o_15 -$$
$$5o_5^2o_9cs^2o_21o_10o_12o_15 - 12o_5o_9cs^2o_21o_12o_15 + 18o_5^3o_9o_21o_10o_12v_2^2 - 36o_5^3o_9o_1o_1v_2^2o_15 + 36o_5^3o_9o_10o_12v_2^2 - 6o_5^3o_9o_10o_12o_15 -$$
$$6o_5^3o_9o_21o_10o_12 + 12o_5^2o_9cs^2o_10o_12 + 18o_5^3o_21o_12v_2^2o_15 - 12o_9cs^2o_21o_10o_12o_15 - 36o_5^3o_21v_2^2o_15 - 12o_5^3o_9cs^2o_10o_15 - 12o_5^2o_9cs^2o_21o_15$$

$$C_{13} = -48o_5cs^4o_15^2 + 3o_5^3v_2^4o_15^2 - 72o_5^3v_2^4 + 6o_5^3cs^4o_15 + 12o_5^3v_2^2o_15^2 + 24o_5^2cs^2o_15 - 72o_5^3cs^2v_2^2o_15 - 12o_5^2cs^2v_2^2o_15^2 + 144o_5^2cs^2v_2^2o_15 +$$
$$36o_5^3v_2^4 + 6o_5^3cs^2v_2^2o_15^2 + 24cs^4o_15^2 - 72o_5^3v_2^2o_15 - 8o_5^2cs^2o_15^2 - 30o_5^3v_2^4o_15 + 24o_5cs^4o_15 + 108o_5^3cs^2v_2^2 - 3o_5^3cs^4o_15^2 - 36o_5^3v_2^2 -$$
$$36o_5cs^2v_2^2o_15^2 - 3o_5^3v_2^2o_15^2 + 12o_5cs^2o_15^2 - 6o_5^3cs^2o_15 - 12o_5^3v_2^4o_15^2 - 24o_5^2cs^4o_15 + 72o_5^2v_2^4o_15 + 24o_5cs^4o_15^2 - 216o_5^2cs^2v_2^2 +$$
$$72o_5cs^2v_2^2o_15 - 24o_5cs^2o_15 + 30o_5^3v_2^2o_15 + 72o_5^3v_2^2 + o_5^3cs^2o_15^2$$

$$C_{14} = o_13^2o_9^2cs^4o_6^3 - 306o_13^2o_9cs^2v_1^2o_6^3 - 18o_13o_9^3cs^4o_6^2 + 4o_13^2o_9^3v_1^4o_6^3 - 12o_13o_9^2cs^2o_6^2 - 19o_13^2o_9^2v_1^2o_6^3 - 108o_9^3cs^2v_1^2o_6^3 - 36o_13o_9^3v_1^2o_6^3 -$$
$$6o_13^2o_9^3v_1^4o_6^2 + 72o_13o_9o_9v_1^4o_6^3 - 36o_13^2o_9cs^2v_1^2o_6^2 + 6o_13^2o_9^3cs^4o_6^2 + 6o_13o_9cs^4o_6^3 + 108o_9^3cs^2v_1^2o_6^3 + 39o_13o_9^3v_1^2o_6^2 - 108o_13o_9cs^2v_1^2o_6^3 -$$
$$5o_13^2o_9^2cs^2o_6^2 + 6o_13o_9^2cs^2o_6^3 + 12o_13^2o_9cs^2o_6^2 + 36o_13o_9v_1^4o_6^3 - 36o_9v_1^4o_6^3 + 6o_13^2o_9cs^2o_6^2 - 36o_9^4v_1^4o_6^3 - 108o_5^2cs^4v_1^2o_6^3 - 72o_13^2v_1^2o_6^3 +$$
$$36o_9^3v_1^2o_6^2 + 12o_13^2o_9cs^2o_6^3 + 252o_13^2cs^2v_1^2o_6^3 + 12o_13o_9cs^4o_6^3 - 90o_13^2o_9v_1^4o_6^3 + 12o_13^2cs^4o_6^3 - 72o_13^2o_9^3v_1^2o_6^2 + 6o_13^2o_9^3v_1^2o_6^2 +$$
$$36o_13o_9cs^2v_1^2o_6^2 - 6o_13o_9^3cs^2o_6^3 - 6o_13^2o_9^2cs^2o_6^2 - 39o_13o_9^3v_1^4o_6^2 - 6o_13o_9cs^4o_6^3 + 60o_13^2o_9cs^2v_1^2o_6^3 + 36o_13o_9^3cs^2v_1^2o_6 + 13o_13^2o_9^3cs^4o_6^2 +$$
$$12o_13^2o_9cs^4 + 18o_13o_9^3cs^2o_6^2 - o_13^2o_9^2cs^2o_6^3 + 198o_13o_9^2cs^2v_1^2o_6^3 - 4o_13^2o_9^3v_1^2o_6^3 - 18o_13^2o_9cs^2v_1^2o_6 + 18o_13^2o_9^2cs^2v_1^2o_6^3 + 12o_13o_9^2cs^4o_6^3 -$$
$$o_13^2o_9^3cs^4o_6^3 + 36o_13o_9^3v_1^4o_6^3 + 19o_13^2o_9^2v_1^4o_6^3 + 72o_13^2v_1^4o_6^3 - 99o_13o_9^3cs^2v_1^2o_6^3 - 36o_9^3v_1^4o_6^2 - 12o_13^2o_9cs^4o_6^3 + 90o_13^2o_9v_1^2o_6^3 - 12o_13o_9^3cs^2o_6 -$$
$$3o_13^2o_9^3cs^2v_1^2o_6^2 - 12o_13^2cs^2o_6^3 - 12o_13^2o_9cs^4o_6^3 - 24o_13^2o_9^3cs^4o_6 + 36o_9^3v_1^4o_6^3 + 54o_13o_9^3cs^2v_1^2o_6^3 - 36o_13o_9v_1^4o_6^3 + 12o_13^2o_9^3cs^2v_1^2o_6^3 + 36o_9^2v_1^4o_6^3$$

$$C_{15} = 12o_5^2o_14o_8o_13o_9o_17o_6^2o_15 + 12o_5^3o_8o_9o_9o_7o_17o_12o_6^2o_15 + 6o_5^3o_14o_8o_13o_9o_9o_7o_17o_12o_6o_15 - 12o_5^3o_14o_9o_13o_9o_7o_17o_12o_6^2o_15 +$$
$$12o_5^3o_8o_13o_9o_9o_7o_17o_12o_6o_15 + 12o_5^2o_14o_8o_13o_9o_9o_7o_17o_12o_6^2o_15 - 12o_5^3o_14o_8o_13o_17o_12o_6^2o_15 + 12o_5o_9o_14o_8o_13o_9o_9o_7o_17o_12o_6o_15 +$$
$$12o_5^3o_14o_8o_13o_9o_9o_17o_12o_15 - 12o_5^2o_8o_13o_9o_9o_7o_17o_6^2o_15 - 12o_5^3o_14o_8o_9o_17o_12o_6^2o_15 - 12o_5^3o_13o_9o_9o_7o_17o_12o_6o_15 + 12o_5^3o_14o_8o_13o_9o_9o_7o_17o_12o_6 +$$
$$12o_5^3o_14o_13o_9o_9o_7o_17o_12o_6^2o_15 - 12o_5^3o_13o_9o_9o_7o_17o_12o_6^2o_15 + 10o_5^3o_14o_8o_13o_9o_9o_17o_12o_6^2o_15 - 18o_5^2o_14o_8o_13o_9o_9o_7o_17o_12o_6o_15 +$$

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$6o_5^3o_14o_8o_13o_9o_7o_12o_6o_15 - 12o_5^2o_14o_8o_13o_9o_7o_12o_6^2 + 12o_5^3o_14o_8o_13o_17o_6^2o_15 + 12o_5^2o_8o_13o_9o_7o_17o_12o_6^2o_15 -$
$18o_5^3o_14o_8o_13o_9o_17o_12o_6o_15 - 2o_5^2o_14o_8o_13o_9o_7o_17o_12o_6^2o_15 - 12o_5^3o_8o_13o_7o_17o_6^2o_15 +$
$12o_5^3o_8o_13o_9o_7o_17o_6^2o_15 - 6o_5^2o_14o_8o_13o_9o_7o_12o_6^2o_15 - 6o_5^3o_14o_8o_17o_6^2o_15 + 12o_5^2o_14o_13o_9o_7o_17o_12o_6o_15 +$
$12o_5^3o_14o_8o_17o_12o_6^2o_15 - 24o_14o_8o_13o_9o_7o_17o_12o_6^2o_15 + 6o_5^3o_14o_8o_13o_9o_7o_12o_6^2 + 12o_5^2o_14o_8o_9o_17o_12o_6o_15 - 12o_5^3o_8o_7o_17o_12o_6^2o_15 -$
$12o_5^2o_14o_13o_9o_7o_12o_6^2o_15 + 12o_5^3o_13o_9o_7o_17o_12o_6^2o_15 + 12o_5^2o_14o_13o_9o_7o_17o_12o_6o_15 - 12o_5^3o_8o_13o_9o_7o_17o_12o_6^2o_15 +$
$24o_5^2o_14o_8o_13o_9o_7o_17o_12o_6^2o_15 - 12o_5^3o_14o_8o_13o_9o_17o_6^2o_15 + 12o_5^2o_8o_13o_7o_17o_12o_6^2o_15 - 18o_5^2o_14o_8o_13o_9o_17o_12o_6^2o_15 -$
$6o_5^3o_14o_8o_13o_9o_7o_17o_12o_6 - 12o_5^2o_8o_9o_7o_17o_12o_6o_15 - o_5^3o_14o_8o_13o_9o_7o_17o_12o_6^2o_15 + 12o_5o_14o_8o_13o_9o_17o_12o_6^2o_15$

$C_{16} = -12o_13o_9v_1^2o_18o_6^2o_22 + 12o_9^3v_1^2o_18o_6^2o_22 + 12o_13o_9o_18o_6^2o_22 - 12o_9^3o_18o_6^2o_22 + 18o_13o_9^3v_1^2o_18o_6o_22 - 12o_13^2o_9^3v_1^2o_6o_22 +$
$6o_13^2o_9^3o_6^2 + 6o_13^2o_9^2o_18o_6^2 - 6o_13^2o_9^2o_6^2o_22 - 18o_13o_9^3cs^2o_18o_6^2o_22 - 18o_13o_9^3o_18o_6o_22 - 36o_9^3cs^2o_18o_6o_22 - 36o_9^2cs^2o_18o_6^2o_22 +$
$12o_13^2o_9^3o_18o_6o_22 + 18o_13o_9^3v_1^2o_18o_6^2o_22 + 12o_13^2o_9o_18o_6^2o_22 - 18o_13^2o_9^3cs^2o_6^2 + 12o_13o_9^3o_18o_6^2 - 18o_13^2o_9^2o_18o_6o_22 + 12o_13^2o_9^2o_18o_22 +$
$36o_13^2cs^2o_18o_6^2o_22 + 36o_13^2o_9^3cs^2o_6 + 54o_13^2o_9^2cs^2o_18o_6o_22 - 12o_13o_9^3o_18o_6 - 12o_13^2o_18o_6^2o_22 - 2o_13^2o_9^3v_1^2o_18o_6^2o_22 - 12o_13^2o_9^3o_6 -$
$12o_13^2o_9v_1^2o_18o_6^2o_22 + 12o_9^3o_18o_6^2o_22 + 12o_13o_9^3o_18o_22 - 12o_13^2o_9^3v_1^2o_18o_6o_22 + 5o_13^2o_9^3cs^2o_18o_6^2o_22 - 36o_13^2o_9^2cs^2o_6o_22 - 6o_13^2o_9^3v_1^2o_6^2 +$
$6o_13^2o_9^3v_1^2o_18o_6^2 - 36o_13^2o_9^3cs^2o_18o_6 + o_13^2o_9^3v_1^2o_18o_6^2o_22 - 12o_13o_9o_18o_6^2 + 18o_13^2o_9^2cs^2o_6^2o_22 - 18o_13o_9o_18o_6^2o_22 - 36o_13o_9^3cs^2o_18o_22 -$
$40o_13^2o_9^3cs^2o_18o_6o_22 - 18o_13^2o_9^2cs^2o_18o_6^2 - 36o_13^2o_9cs^2o_18o_6^2o_22 + 36o_13^2o_9^3cs^2o_18o_22 + 2o_13^2o_9^3o_18o_6^2o_22 + 36o_13o_9^2cs^2o_18o_6^2 -$
$6o_13^2o_9^3o_18o_6^2 - 6o_13^2o_9cs^2o_18o_6^2o_22 - 12o_13^2o_9^3v_1^2o_18o_22 - 12o_13o_9^3v_1^2o_18o_6^2 + 18o_13^2o_9^3v_1^2o_18o_6o_22 + 12o_13^2v_1^2o_18o_6^2o_22 +$
$36o_13o_9^3cs^2o_18o_6 - 36o_13o_9^3v_1^2o_18o_6 - 36o_13o_9^3cs^2o_18o_6^2 + 54o_13o_9^2cs^2o_18o_6^2o_22 - 36o_13^2o_9^3cs^2o_18o_22 - o_13^2o_9^3o_18o_6^2o_22 + 12o_13^2o_9^3o_18o_6 +$
$12o_13o_9^3v_1^2o_18o_6^2 - 12o_9^3v_1^2o_18o_6^2o_22 + 12o_13^2o_9^3v_1^2o_18o_22 - 12o_9^3v_1^2o_18o_6o_22 - 6o_13^2o_9^2v_1^2o_18o_6^2 - 6o_13o_9^3v_1^2o_18o_6^2o_22 + 6o_13^2o_9^2v_1^2o_6^2o_22 -$
$12o_13o_9^3v_1^2o_18o_6^2o_22 + 12o_9^3o_18o_6o_22 + 54o_13o_9^3cs^2o_18o_6o_22 + 12o_13^2o_9^3v_1^2o_6 + 12o_13^2o_9^2o_6o_22 - 12o_13^2o_9^3v_1^2o_18o_6 + 18o_13^2o_9^3cs^2o_18o_6^2 +$
$6o_13o_9^3o_18o_6^2o_22 + 36o_9^3cs^2o_18o_6^2o_22 - 36o_13o_9o_9cs^2o_18o_6^2o_22 - 12o_13^2o_9^3o_18o_22$

$C_{17} = -36o_9^2v_1^2o_18o_6^3 + 72o_13o_9v_1^2o_18o_6^2o_22 - 24o_13o_9o_18o_6^2o_22 - 6o_13o_9cs^2o_18o_6^3 - 12o_9o_18o_6^3 + 12o_13o_9^2cs^2o_6^2 + 12o_9cs^2o_18o_6^2o_22 -$
$12o_13o_9cs^2o_18o_6o_22 - 6o_13o_9o_9o_6^3o_22 + 18o_13o_9v_1^2o_6^3o_22 + 6o_13cs^2o_18o_6^3o_22 - 24o_9^2cs^2o_18o_6^2o_22 + 18o_13o_9^2cs^2o_18o_6o_22 + 36o_9^2v_1^2o_18o_6^3 +$
$36o_9^2v_1^2o_18o_6^2o_22 - 12o_13o_9cs^2o_6^2o_22 - 6o_13o_9^2cs^2o_6^3 - 12o_9o_18o_6^3o_22 + 12o_13o_9o_6^2o_22 - 36o_13o_9v_1^2o_6^2o_22 - 12o_9cs^2o_18o_6^3o_22 +$
$12o_9^2cs^2o_18o_6^2o_22 + 6o_13o_9o_18o_6^2o_22 - 18o_13o_9v_1^2o_18o_6^2o_22 + 6o_13o_9cs^2o_6^3o_22 + 24o_9^2o_18o_6^2o_22 + 6o_13o_9o_18o_6^3 - 18o_13o_9v_1^2o_18o_6^3 +$
$12o_9^2cs^2o_18o_6^2o_22 - 12o_9cs^2o_18o_6^3 - 12o_13cs^2o_18o_6^2o_22 - 18o_13o_9^2v_1^2o_6^3 - 12o_9o_18o_6o_22 - 12o_13o_9o_6 - 36o_13v_1^2o_18o_6^2o_22 + 36o_9^2v_1^2o_18o_6^3o_22 +$
$6o_13o_9^2cs^2o_18o_6^3 + 12o_13o_9o_18o_6^2 - 6o_13o_9o_18o_6^2o_22 - o_13o_9cs^2o_18o_6^2o_22 + 36o_9v_1^2o_18o_6^3 - 12o_13o_9^2cs^2o_18o_6 - 6o_13o_9o_9cs^2o_18o_6^2o_22 +$
$12o_9o_9o_18o_6^3o_22 - 6o_13o_9o_18o_6^3 + 6o_13o_9o_6^3 + 36o_13o_9^2v_1^2o_6^2 - 36o_9v_1^2o_18o_6^3o_22 + 12o_9^2cs^2o_18o_6^2o_22 + 12o_13o_18o_6^2o_22 - 4o_13o_9^2cs^2o_18o_6^2o_22 -$
$36o_13o_9^2v_1^2o_18o_6^2 + 12o_9^2o_18o_6^3 - 72o_9v_1^2o_18o_6^2o_22 + 18o_13v_1^2o_18o_6^3o_22 - 36o_13o_9v_1^2o_18o_6o_22 + 12o_9cs^2o_18o_6^3 + 12o_13o_9o_18o_6o_22 +$
$36o_9v_1^2o_18o_6^2o_22 - 12o_9^2o_18o_6^3 + 18o_13o_9^2v_1^2o_18o_6^3 - 12o_9o_9o_18o_6^2o_22 + 24o_13o_9o_9cs^2o_18o_6^2o_22 - 12o_13o_9^2cs^2o_18o_22$

$C_{18} = 2o_5o_8o_13o_9cs^2o_12v_1v_3^2o_18o_22o_20 - 2o_5o_14o_8o_12v_1v_3^2o_18v_2o_6o_20 - o_5o_14o_8o_13cs^2o_12v_1v_3^2o_18o_6o_22o_20 +$
$2o_5o_8o_9cs^2o_12v_1^2o_18v_2o_22o_20 + 2o_8o_13o_9cs^2v_3^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9o_12v_1^2v_3^2v_2o_6o_22o_20 + 2o_5o_14o_8o_9o_12v_1^2v_3^2o_18v_2o_22o_20 +$
$o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 + o_14o_8o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_1^2v_2o_6o_22o_20 -$
$2o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_20 - o_5o_14o_8o_13cs^2v_1^2o_18v_2o_6o_22o_20 + 2o_5o_8o_9o_12v_1^2v_3^2o_18v_2o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_22 -$
$2o_5o_14o_13o_9cs^2o_12v_1v_3^2o_18o_22 + o_5o_14o_8o_13o_9cs^2o_12v_1v_2^2o_6o_22 - o_5o_14o_8o_13o_12v_1^2v_3^2o_18v_2o_6o_20 + 2o_5o_14o_8o_9cs^2o_12v_1v_3^2o_18o_6o_20 -$
$2o_5o_14o_8o_13o_9cs^2o_12v_1^2v_2o_22o_20 + 2o_5o_8o_13cs^2v_1^2o_18v_2o_6o_22o_20 - 2o_5o_14o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 - 2o_5o_14o_8o_9o_12v_1^2v_3^2o_18v_2o_22o_20 +$
$o_5o_14o_8o_13o_9cs^2o_12v_1v_2^2o_6o_20 + 2o_14o_13o_9o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - 2o_8o_13o_9cs^2v_1o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8o_9o_9o_12v_1v_3^2o_18v_2o_20 -$
$2o_5o_14o_8o_9cs^2o_12v_1^2o_18v_2o_22o_20 - 2o_5o_8o_13o_9cs^2v_1^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13cs^2o_12v_1^2o_18v_2o_6o_20 +$
$o_14o_8o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9v_1^2v_3^2o_18v_2o_6o_22o_20 +$
$2o_5o_8o_13v_1^2v_3^2o_18v_2o_6o_22o_20 - 2o_5o_13o_9cs^2o_12v_1o_18v_2^2o_22o_20 - 2o_5o_8cs^2o_12v_1o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8cs^2o_12v_3^2o_18v_2o_6o_22o_20 +$
$2o_5o_14o_13o_9cs^2o_12v_1^2o_18v_2o_22 + 2o_5o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 - 2o_13o_9o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 + o_14o_8o_13o_9cs^2v_1o_18v_2^2o_6o_22o_20 +$
$o_5o_14o_8o_13o_9cs^2v_1^2o_18v_2o_6o_22o_20 - 2o_5o_8o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 + 2o_8o_13o_9o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 + 2o_5o_13o_9cs^2o_12v_3^2o_18v_2o_22o_20 -$
$2o_5o_8o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 - 2o_5o_8o_13o_9v_1^2v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_22o_20 +$
$o_5o_14o_8o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22 + 2o_5o_8o_13cs^2o_12v_1v_3^2o_18o_6o_22o_20 - o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22 - o_14o_8o_13o_9cs^2v_3^2o_18v_2o_6o_22o_20 +$
$2o_5o_14o_8o_13o_9cs^2o_12v_3^2v_2o_20 - 2o_5o_14o_8o_9cs^2o_12v_1o_18v_2^2o_20 - 2o_5o_8o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 - 2o_14o_13o_9o_9cs^2o_12v_1v_3^2o_18o_6o_22 +$
$2o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_3^2v_2o_22 + 2o_5o_14o_13o_9o_12v_1v_3^2o_18v_2o_6o_22 - 2o_5o_14o_13o_9cs^2o_12v_3^2o_18v_2o_22o_20 +$
$o_5o_14o_8o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13v_1^2v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8cs^2o_12v_1v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_13o_9cs^2o_12v_1o_18v_2^2o_22o_20 +$
$2o_5o_8cs^2o_12v_3^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_6o_20 + o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22 + o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22 +$
$o_5o_14o_8o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22 + o_5o_14o_8o_13o_9o_12v_1v_3v_2^2o_6o_22 + 2o_5o_14o_8o_9cs^2o_12v_1v_3^2o_18o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12v_3^2v_2o_6o_20 +$
$2o_5o_14o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 - 2o_14o_13o_9o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_9o_9o_12v_1^2v_3^2o_18v_2o_6o_20 -$
$o_5o_14o_8o_13o_9cs^2o_12v_1^2v_2o_6o_22 + 2o_5o_14o_8o_13o_9cs^2o_12v_1v_2^2o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_6o_22o_20 + o_5o_14o_8o_13cs^2o_12v_1v_3^2o_18o_6o_20 -$
$2o_5o_14o_8o_9cs^2o_12v_1^2o_18v_2o_6o_20 - o_5o_14o_8o_13cs^2o_12v_1o_18v_2^2o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12v_1^2o_18v_2o_20 - o_14o_8o_13o_9o_9o_12v_1v_3^2o_18v_2^2o_6o_22o_20 -$
$o_5o_14o_8o_13o_9v_1v_3^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 + o_5o_14o_8o_13cs^2o_12v_3^2o_18v_2o_6o_22o_20 -$
$2o_8o_13o_9cs^2v_1v_3^2o_18o_6o_22o_20 - 2o_5o_14o_8o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8cs^2o_12v_3^2o_18v_2o_6o_20 - 2o_5o_8o_13o_9o_12v_1^2v_3^2o_18v_2o_22o_20 -$
$2o_5o_8o_9cs^2o_12v_1v_3^2o_18o_22o_20 - 2o_5o_8o_13o_9cs^2o_12v_1^2o_18v_2o_22o_20 - 2o_14o_8cs^2o_12v_1o_18v_2^2o_6o_22o_20 - 2o_14o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 -$
$2o_5o_14o_13o_9cs^2o_12v_1o_18v_2^2o_22 - 2o_5o_14o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_20 -$
$2o_5o_8o_13cs^2o_12v_3^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_6o_22 + 2o_14o_13o_9o_9o_12v_1^2v_3^2o_18v_2o_6o_22 + o_14o_8o_13o_9cs^2v_1v_3^2o_18o_6o_22o_20 +$
$2o_5o_14o_13o_9o_9o_12v_1v_3^2o_18v_2^2o_22o_20 - 2o_5o_14o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22 - 2o_5o_8o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_6o_20 -$
$2o_5o_14o_8o_9cs^2o_12v_1v_3^2o_18o_20 + 2o_5o_8o_9o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22 + 2o_5o_14o_8o_13o_9o_12v_1^2v_3^2o_18v_2o_22o_20 -$
$2o_8o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 + o_14o_8o_13o_9o_9o_12v_1v_3^2o_18v_2^2o_6o_22 + o_5o_14o_8o_13v_1v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1^2o_18v_2o_22o_20 +$
$2o_5o_14o_8o_13o_9o_12v_1v_3v_2^2o_22o_20 - 2o_5o_8cs^2o_12v_1v_3^2o_18o_6o_22o_20 + 2o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 + 2o_5o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 +$
$2o_5o_14o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22 + 2o_14o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22 - 2o_5o_14o_13o_9o_9o_12v_1v_3^2o_18v_2^2o_22 - 2o_5o_8o_13v_1v_3^2o_18v_2o_6o_22o_20 -$
$2o_5o_14o_8o_13o_9o_9o_12v_1^2v_3^2o_18v_2o_22 + 2o_5o_14o_8cs^2o_12v_1v_3^2o_18o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_9o_12v_1^2v_3^2o_18v_2o_20 - 2o_5o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 +$

$$2o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 + 2o_5o_8o_13cs^2o_12v_1o_18v_2^2o_6o_22o_20 - 2o_5o_13o_9o_12v_1v_3^2o_18v_2^2o_22o_20 + 2o_5o_8o_13o_9v_1v_3^2o_18v_2^2o_6o_22o_20 +$$
$$2o_5o_8o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 - 2o_8o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 + 2o_5o_8o_13o_9cs^2o_12v_1^2v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_8o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 - 2o_8o_13o_9v_1v_3^2o_18v_2^2o_6o_22o_20 - 2o_5o_13o_9cs^2o_12v_1v_3^2o_18o_22o_20 - 2o_5o_8o_13cs^2o_12v_1^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_13o_9o_12v_1^2v_3^2v_2o_22 + 2o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_22 + 2o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 +$$
$$2o_5o_14o_8o_13o_9o_12v_1^2v_3^2v_2o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_20 + 2o_5o_14o_8o_12v_1v_3^2o_18v_2^2o_6o_22o_20 - 2o_5o_14o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22 -$$
$$2o_14o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22 - 2o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 - 2o_5o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_22o_20 -$$
$$2o_5o_14o_8o_13o_9o_12v_1^2v_3^2v_2o_22o_20 - 2o_5o_8o_13o_12v_1v_3^2o_18v_2^2o_6o_22o_20 - o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_22 + 2o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_22o_20 +$$
$$2o_5o_8o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 + o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22 + 2o_5o_8o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 + 2o_8o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 +$$
$$2o_14o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22 - 2o_5o_14o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22 - o_5o_14o_8o_13o_9cs^2v_1v_3^2o_18o_6o_22o_20 + 2o_5o_14o_13o_9cs^2o_12v_1v_3^2o_18o_22o_20 -$$
$$o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_20 - 2o_5o_8o_13o_12v_1^2v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_22o_20 + 2o_14o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 +$$
$$2o_5o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 - 2o_5o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_22o_20 - o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_22o_20 -$$
$$2o_5o_14o_13o_9o_12v_1^2v_3^2o_18v_2o_22 + 2o_5o_14o_8cs^2o_12v_1^2o_18v_2o_6o_20 + 2o_5o_8o_13o_9cs^2o_12v_1o_18v_2^2o_22o_20 + 2o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_22 -$$
$$2o_5o_8o_13o_9cs^2o_12v_3^2o_18v_2o_22o_20 + 2o_5o_14o_8o_12v_1^2v_3^2o_18v_2o_6o_20 - 2o_5o_14o_8o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 + 2o_5o_8o_13o_9cs^2v_1v_3^2o_18o_6o_22o_20 +$$
$$o_5o_14o_8o_13o_12v_1^2v_3^2o_18v_2o_6o_22o_20 - o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 + o_14o_8o_13o_9v_1v_3^2o_18v_2^2o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12v_3^2o_18v_2o_20 +$$
$$o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_22o_20 + o_5o_14o_8o_13cs^2o_12v_1^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12v_1o_18v_2^2o_6o_20 +$$
$$o_5o_14o_8o_13o_12v_1v_3^2o_18v_2^2o_6o_20 - o_5o_14o_8o_13o_9cs^2o_12v_3^2v_2o_6o_20 - 2o_5o_14o_8o_9cs^2o_12v_3^2o_18v_2o_6o_20 + 2o_5o_14o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 +$$
$$o_5o_14o_8o_13cs^2v_1v_3^2o_18o_6o_22o_20 - 2o_14o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12v_3^2v_2o_6o_22 + 2o_5o_14o_8o_9o_12v_1v_3^2o_18v_2^2o_22o_20 -$$
$$o_14o_8o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22 - o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22 - o_5o_14o_8o_13o_9o_12v_1^2v_3^2o_22 + 2o_5o_8o_13o_12v_1^2v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_14o_8cs^2o_12v_1^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_6o_20 - o_5o_14o_8o_13o_9o_12v_1^2v_3^2o_6o_20 -$$
$$2o_5o_14o_13o_9cs^2o_12v_1^2o_18v_2o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1^2v_2o_22 + o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_6o_20 - 2o_5o_8o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_14o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_22 - 2o_5o_14o_13o_9o_12v_1^2v_3^2o_18v_2o_22o_20 + 2o_5o_14o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22 + 2o_5o_8o_13o_12v_1v_3^2o_18v_2^2o_6o_22o_20 +$$
$$2o_5o_14o_8o_9o_12v_1^2v_3^2o_18v_2o_20 + o_5o_14o_8o_13o_9cs^2v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1^2v_2o_20 +$$
$$o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22 - o_14o_8o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22 + 2o_5o_8o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 + 2o_8o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 +$$
$$2o_8o_13o_9v_1v_3^2o_18v_2o_6o_22o_20 - 2o_5o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_22o_20 + 2o_5o_13o_9o_12v_1^2v_3^2o_18v_2o_22o_20 - o_14o_8o_13o_9cs^2v_1^2o_18v_2o_6o_22o_20 -$$
$$o_5o_14o_8o_13o_9cs^2v_1o_18v_2^2o_6o_22o_20 + 2o_5o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_22 -$$
$$2o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 + 2o_5o_14o_13o_9cs^2o_12v_3^2o_18v_2o_22 - 2o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_22 + 2o_5o_8cs^2o_12v_1^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_14o_8o_12v_1^2v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_20 + 2o_5o_13o_9cs^2o_12v_1^2o_18v_2o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_18o_20 -$$
$$o_14o_8o_13o_9v_1^2v_3^2o_18v_2o_6o_22o_20 + o_14o_8o_13o_9cs^2o_12v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 -$$
$$o_5o_14o_8o_13o_9o_12v_1^2v_3^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13cs^2o_12v_1o_18v_2^2o_6o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_22 + 2o_8o_13o_9cs^2v_1^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_14o_8o_13o_9cs^2o_12v_1v_3^2o_20 + 2o_5o_8o_13o_9cs^2v_1o_18v_2^2o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12v_1o_18v_2^2o_22o_20 - 2o_5o_8o_13cs^2v_1o_18v_2^2o_6o_22o_20 -$$
$$2o_5o_14o_13o_9o_12v_1v_3^2o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_3^2v_2o_22o_20 - o_5o_14o_8o_13cs^2v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_14o_8o_9cs^2o_12v_3^2o_18v_2o_22o_20 + 2o_14o_13o_9cs^2o_12v_1v_3^2o_18o_6o_22o_20 + 2o_5o_14o_8o_9o_12v_1v_3^2o_18v_2^2o_6o_20 -$$
$$o_5o_14o_8o_13cs^2o_12v_3^2o_18v_2o_6o_20 + o_5o_14o_8o_13cs^2v_1o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_3^2v_2o_20 + 2o_5o_8o_13cs^2v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_14o_8o_13o_9cs^2o_12v_1^2o_18v_2o_20 + 2o_5o_8o_9cs^2o_12v_3^2o_18v_2o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_3^2v_2o_22 - 2o_5o_14o_8o_13o_9cs^2o_12v_1^2o_18v_2o_22 -$$
$$o_5o_14o_8o_13o_9o_12v_1v_3^2v_2o_6o_20 - o_5o_14o_8o_13o_9cs^2o_12v_1^2o_18v_2o_6o_22o_20 - o_14o_8o_13o_9cs^2o_12v_1o_18v_2^2o_6o_22o_20 +$$
$$2o_5o_14o_8o_9cs^2v_3^2o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_3^2v_2o_6o_22o_20 - o_5o_14o_8o_13o_12v_1v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_8o_13o_9cs^2v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8cs^2o_12v_1v_3^2o_18o_6o_20 + 2o_5o_8o_13o_9o_12v_1v_3^2o_18v_2^2o_22o_20 - 2o_5o_8o_9cs^2o_12v_1o_18v_2^2o_22o_20$$

$C_{19} =$

$$o_5o_14o_8o_13cs^2o_12o_18v_2^2o_6o_20 + 4o_5o_14o_8o_13o_9cs^2o_12v_1v_2o_20 + 4o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_22o_20 - 4o_8o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 +$$
$$4o_5o_14o_8o_13o_9cs^2o_12v_1v_2o_22 - 2o_5o_14o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 + 2o_5o_13o_9o_12v_3^2o_18v_2^2o_6o_22o_20 + 4o_14o_13o_9o_12v_1v_3^2o_18v_2o_6o_22 +$$
$$4o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_6o_20 - 2o_5o_14o_13o_9cs^2o_12o_18v_2^2o_22 + 4o_5o_8o_12v_1v_3^2o_18v_2o_6o_22o_20 +$$
$$2o_5o_8o_9cs^2o_12v_3^2o_18o_6o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_6o_22 - 2o_5o_14o_8o_13o_9cs^2o_12v_2^2o_20 + 4o_5o_14o_8o_13o_9o_12v_1v_3^2v_2o_22 -$$
$$o_5o_14o_8o_13o_9cs^2o_12o_18v_2^2o_6o_20 + 4o_5o_14o_8o_13o_9o_12v_1v_3^2v_2o_20 - 2o_5o_8o_13cs^2v_3^2o_18o_6o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12o_18v_2^2o_6o_22 -$$
$$4o_5o_14o_8o_12v_1v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_2^2o_22 + 2o_5o_14o_13o_9o_12v_3^2o_18v_2^2o_22o_20 - 2o_5o_13o_9cs^2o_12o_18v_2^2o_22o_20 -$$
$$2o_14o_13o_9cs^2o_12v_3^2o_18o_6o_22 + 4o_8o_13o_9v_1v_3^2o_18v_2o_6o_22o_20 + 2o_5o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 - 2o_5o_14o_13o_9o_12v_3^2o_18v_2o_6o_22o_20 -$$
$$o_14o_8o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 + 2o_5o_14o_8o_13o_9o_12v_3^2o_18v_2^2o_20 - 4o_5o_14o_8o_9o_12v_1v_3^2o_18v_2o_6o_20 + 2o_5o_14o_8o_13o_9o_12v_3^2o_18v_2^2o_22 +$$
$$2o_5o_14o_8o_9o_12v_3^2o_18v_2o_6o_20 - 2o_5o_14o_8o_9cs^2o_12v_3^2o_20 - 2o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_14o_13o_9v_3^2o_18v_2o_6o_22o_20 - 4o_5o_14o_8o_9cs^2o_12v_1o_18v_2o_6o_20 + 2o_8o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 - 2o_5o_14o_8o_9cs^2o_12v_3^2o_22 +$$
$$2o_5o_14o_8o_13o_12v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13cs^2o_12v_1o_18v_2o_6o_20 + 2o_5o_14o_13o_9cs^2o_12v_3^2o_18o_22o_20 + o_14o_8o_13o_9v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_14o_13o_9o_12v_3^2o_18v_2o_6o_22 - 4o_5o_8o_13o_9o_12v_1v_3^2o_18v_2o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_3^2v_2o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18o_22 +$$
$$4o_5o_8o_9cs^2o_12v_1o_18v_2o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_3^2v_2o_22 + 2o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18o_20 + 2o_5o_14o_8cs^2o_12o_18v_2^2o_6o_22o_20 -$$
$$4o_14o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1v_2o_6o_22o_20 + o_14o_8o_13o_9cs^2o_18v_2^2o_6o_22o_20 - 4o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_22 -$$
$$4o_5o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12o_18v_2^2o_22o_20 - 4o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_20 - 4o_5o_8o_9cs^2o_12v_1o_18v_2o_6o_22o_20 +$$
$$4o_5o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_13o_9o_12v_3^2o_18v_2o_22 + 2o_5o_14o_8o_13o_9cs^2v_1o_18v_2o_6o_22o_20 + o_14o_8o_13o_9cs^2o_12v_3^2o_18o_6o_22 +$$
$$2o_5o_14o_13o_9o_12v_3^2o_18v_2o_6o_22 - o_14o_8o_13o_9o_12v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 - 2o_5o_8o_13v_3^2o_18v_2o_6o_22o_20 -$$
$$2o_5o_14o_8o_12v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22 - 4o_5o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 -$$
$$o_14o_8o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 + 2o_5o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 + 4o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_22o_20 - 2o_5o_14o_13o_9o_12v_3^2o_18o_22 +$$
$$2o_5o_8o_13o_9cs^2o_12o_18v_2^2o_22o_20 + 4o_14o_13o_9cs^2o_12v_1o_18v_2o_6o_22 + 2o_5o_14o_8cs^2o_12v_3^2o_18o_22o_20 - 2o_5o_8o_13cs^2o_18v_2^2o_6o_22o_20 +$$
$$2o_5o_14o_8o_13o_9cs^2o_12o_18v_2^2o_22 + 2o_5o_14o_8o_9o_12v_1v_3^2v_2o_6o_22o_20 + 2o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 - 2o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 +$$
$$2o_5o_14o_8o_13o_12v_1v_3^2o_18v_2o_6o_22o_20 + 2o_5o_14o_13o_9cs^2o_12v_3^2o_18o_6o_22 + 2o_8o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 + o_14o_8o_13o_9o_12v_3^2o_18v_2o_6o_22 +$$
$$2o_5o_14o_8o_13o_9cs^2o_12o_18v_2o_20 + 4o_5o_8o_9o_12v_1v_3^2o_18v_2o_22o_20 - 2o_5o_14o_8o_13cs^2v_1o_18v_2o_6o_22o_20 - 4o_5o_8o_13o_9cs^2o_12v_1o_18v_2o_22o_20 -$$
$$4o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_20 - 4o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_22 - 4o_5o_14o_8o_9o_12v_1v_3^2o_18v_2o_22o_20 + 4o_5o_8o_13cs^2v_1o_18v_2o_6o_22o_20 +$$
$$4o_5o_14o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 + o_14o_8o_13o_9cs^2v_3^2o_18o_6o_22o_20 - 2o_5o_14o_8o_13o_12v_1v_3^2o_18v_2o_6o_20 - o_5o_14o_8o_13o_9cs^2o_12v_2^2o_6o_22o_20 -$$

$$2o_5o_8o_9cs^2o_12o_18v_2^2o_22o_20 + 2o_5o_14o_8o_9o_12v_3^2o_18v_2^2o_22o_20 - 2o_5o_14o_8cs^2o_12v_3^2o_18o_6o_20 + 4o_5o_14o_8o_9cs^2o_12v_1o_18v_2o_6o_22o_20 -$$

$$2o_13o_9o_12v_3^2o_18v_2^2o_6o_22o_20 - 4o_5o_14o_8o_9cs^2o_12v_1o_18v_2o_6o_20 + 2o_5o_14o_8cs^2o_12v_3^2o_18o_6o_22o_20 - 4o_5o_8o_13o_9cs^2v_1o_18v_2o_6o_22o_20 +$$

$$2o_8o_13o_9o_12v_3^2o_18v_2^2o_6o_22o_20 - 2o_5o_8o_13o_9o_12v_3^2o_18v_2^2o_6o_22o_20 + 4o_8o_13o_9cs^2v_1o_18v_2o_6o_22o_20 + 2o_5o_8o_9cs^2o_12v_3^2o_18o_6o_22o_20 +$$

$$o_5o_14o_8o_13o_9cs^2o_12v_3^2o_6o_22 - 4o_5o_14o_8o_13o_9cs^2o_12v_1v_2o_22o_20 - o_5o_14o_8o_13o_9cs^2v_3^2o_18o_6o_22o_20 + o_5o_14o_8o_13o_12v_3^2o_18v_2^2o_6o_20 -$$

$$4o_14o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13cs^2o_12o_18v_2^2o_6o_22o_20 + 2o_5o_8o_13o_12v_3^2o_18v_2^2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_3^2o_6o_20 -$$

$$o_5o_14o_8o_13o_9cs^2o_12v_3^2o_6o_22o_20 - 2o_5o_14o_8o_9cs^2o_12v_3^2o_18o_6o_22o_20 + 2o_5o_8o_13o_9cs^2v_3^2o_18o_6o_22o_20 - 2o_5o_13o_9o_12v_3^2o_18v_2^2o_22o_20 +$$

$$2o_5o_14o_13o_9cs^2o_12o_18v_2^2o_22o_20 + 4o_5o_14o_13o_9o_12v_1v_3^2o_18v_2o_22 + 2o_5o_8o_13cs^2o_12o_18v_2^2o_6o_22o_20 + 4o_5o_14o_8cs^2o_12v_1o_18v_2o_6o_20 -$$

$$o_5o_14o_8o_13o_12v_3^2o_18v_2^2o_6o_22o_20 + o_5o_14o_8o_13cs^2v_3^2o_18o_6o_22o_20 - o_5o_14o_8o_13o_9o_12v_3^2o_18v_2^2o_6o_22 - 2o_5o_8o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 -$$

$$2o_5o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 - o_5o_14o_8o_13o_9o_12v_3^2o_18v_2^2o_6o_20 - 4o_5o_14o_8cs^2o_12v_1o_18v_2o_6o_22o_20 - 2o_5o_8o_12v_3^2o_18v_2^2o_6o_22o_20 -$$

$$4o_5o_14o_13o_9cs^2o_12v_1o_18v_2o_6o_22 + o_5o_14o_8o_13cs^2o_12v_3^2o_18o_6o_20 - 4o_5o_14o_8o_13o_9cs^2v_1v_3^2v_2o_22o_20 - 2o_8o_13o_9cs^2o_18v_2^2o_6o_22o_20 -$$

$$2o_8o_13o_9v_3^2o_18v_2^2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12o_18v_2^2o_6o_20 - 2o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22 +$$

$$2o_5o_14o_8o_13o_9cs^2o_12v_2^2o_22o_20 - 4o_5o_14o_13o_9o_12v_1v_3^2o_18v_2o_22o_20 + 2o_14o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 + o_5o_14o_8o_13o_9o_12v_3^2o_18v_2^2o_6o_22o_20 -$$

$$o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18o_6o_22 - 2o_14o_8o_13o_9cs^2v_1o_18v_2o_6o_22o_20 - 4o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18o_6o_20 +$$

$$4o_5o_13o_9o_12v_1v_3^2o_18v_2o_22o_20 + 4o_5o_8cs^2o_12v_1o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_9cs^2o_12o_18v_2^2o_20 + o_5o_14o_8o_13o_9o_12v_3^2v_2^2o_6o_20 -$$

$$2o_5o_8cs^2o_12o_18v_2^2o_6o_22o_20 + 4o_5o_14o_13o_9cs^2o_12v_1o_18v_2o_22 - 2o_5o_13o_9cs^2o_12v_3^2o_18o_22o_20 - 2o_14o_13o_9cs^2o_12o_18v_2^2o_6o_22 +$$

$$o_5o_14o_8o_13o_9o_12v_3^2v_2^2o_6o_22 + 4o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - o_5o_14o_8o_13o_9cs^2o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8o_9o_12v_3^2o_18v_2^2o_6o_22o_20 +$$

$$2o_5o_14o_13o_9cs^2o_12o_18v_2^2o_6o_22 + 2o_5o_8o_9cs^2o_12o_18v_2^2o_6o_22o_20 - o_5o_14o_8o_13cs^2o_12v_3^2o_18o_6o_22o_20 + 4o_5o_14o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 +$$

$$4o_5o_14o_8o_12v_1v_3^2o_18v_2o_6o_20 + 4o_5o_14o_8o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_3^2o_18v_2^2o_6o_22o_20 - o_5o_14o_8o_13o_9v_3^2o_18v_2^2o_6o_22o_20 +$$

$$4o_5o_14o_8o_13cs^2o_12v_1o_18v_2o_6o_22o_20 - 2o_5o_8o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 + 2o_5o_14o_8o_13cs^2o_12v_1o_18v_2o_6o_22o_20 - 2o_5o_8o_9cs^2o_12v_3^2o_18o_22o_20 +$$

$$o_5o_14o_8o_13cs^2o_18v_2^2o_6o_22o_20 + 2o_5o_14o_8o_13o_9v_1v_3^2o_18v_2o_6o_22o_20 + 2o_14o_8o_13o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 + 2o_5o_8o_13o_9v_3^2o_18v_2^2o_6o_22o_20 +$$

$$2o_5o_8o_13o_9o_12v_3^2o_18v_2^2o_22o_20 + 2o_5o_8o_13o_9cs^2o_18v_2^2o_6o_22o_20 + 2o_5o_8o_9o_12v_3^2o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_1v_2o_6o_20 -$$

$$2o_5o_14o_8o_9cs^2o_12o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8cs^2o_12o_18v_2^2o_6o_20 + o_5o_14o_8o_13v_3^2o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_1v_2o_6o_22 +$$

$$2o_5o_8o_13cs^2o_12v_3^2o_18o_6o_22o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_3^2o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18o_6o_22o_20 + 2o_14o_13o_9o_12v_3^2o_18v_2^2o_6o_22o_20 -$$

$$4o_5o_8o_13cs^2o_12v_1o_18v_2o_6o_22o_20 - 4o_5o_8o_13o_9v_1v_3^2o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9cs^2o_12v_3^2o_18o_22o_20 - 2o_5o_14o_8o_9cs^2o_12v_3^2o_18o_20 +$$

$$o_14o_8o_13o_9cs^2o_12o_18v_2^2o_6o_22 + 2o_5o_14o_8o_13o_9o_12v_3^2v_2^2o_22o_20 + 4o_5o_8o_13v_1v_3^2o_18v_2o_6o_22o_20 + 4o_5o_13o_9cs^2o_12v_1o_18v_2o_22o_20 -$$

$$2o_8o_13o_9cs^2v_3^2o_18o_6o_22o_20 - 2o_14o_8o_13o_9cs^2o_12v_1o_18v_2o_6o_22 - 2o_5o_8cs^2o_12v_3^2o_18o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_3^2v_2o_6o_22 -$$

$$2o_5o_14o_8o_13v_1v_3^2o_18v_2o_6o_22o_20 - 4o_5o_14o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_3^2v_2o_6o_22o_20 - 4o_5o_14cs^2o_12v_1o_18v_2o_6o_22o_20 -$$

$$4o_5o_14o_13o_9o_12v_1v_3^2o_18v_2o_6o_22 - o_5o_14o_8o_13o_9o_12v_3^2v_2^2o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12o_18v_2^2o_22o_20 - 2o_5o_8o_9o_12v_3^2o_18v_2^2o_22o_20 +$$

$$2o_14o_13o_9cs^2o_12o_18v_2^2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_2^2o_6o_22 - 2o_5o_14o_8o_9o_12v_3^2o_18v_2^2o_20 + o_5o_14o_8o_13o_9cs^2o_12v_2^2o_6o_20 +$$

$$4o_5o_8o_13o_9cs^2o_12v_1o_18v_2o_6o_22o_20 + 2o_5o_8o_13o_9cs^2o_12v_3^2o_18o_22o_20 - 4o_5o_8o_9o_12v_1v_3^2o_18v_2o_6o_22o_20 + 4o_5o_14o_8o_9o_12v_1v_3^2o_18v_2o_20$$

$$C_{20} = 12o_5o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 - 6o_5o_14o_8o_13o_9cs^2o_7v_1^2o_18o_6^3o_22o_20 - 2o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6^2o_22o_20 +$$

$$12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1v_2o_6^3o_22 + 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1v_2o_6^3o_20 + 12o_5^2o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 +$$

$$12o_5^2o_14o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9cs^4o_7o_12v_1^2o_18o_6^3o_22o_20 - 12o_5o_8o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 -$$

$$6o_5o_14o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22 - 12o_5o_8o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 - 12o_5o_8o_13o_9cs^4o_7o_18o_6^3o_22o_20 -$$

$$12o_5^2o_14o_8o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 - 12o_5^2o_14o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22 + 10o_5^2o_14o_8o_13o_9cs^4o_12o_18o_6^3o_22o_20 +$$

$$6o_5^2o_14o_8o_13o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 - 12o_5^2o_14o_8cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 - 12o_5^2o_14o_13o_9cs^2o_7o_12v_3^2o_18o_6^2o_22o_20 +$$

$$12o_5^2o_8cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_13cs^2o_7v_1o_18v_2o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^2o_22o_20 -$$

$$24o_5^2o_8o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 - 12o_5^2o_14o_8o_9o_7o_12v_1^2v_3^2o_18o_6^3o_20 - 6o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22 +$$

$$12o_5^2o_14o_8o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 - 24o_5^2o_8cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 + 12o_5^2o_14o_8o_7o_12v_1^2v_3^2o_18o_6^3o_20 +$$

$$24o_5^2o_14o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 + 24o_5o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 - 6o_5^2o_14o_8o_13o_7v_1^2v_3^2o_18o_6^3o_22o_20 +$$

$$12o_5^2o_14o_13o_9cs^2o_7o_12v_1^2o_6^2o_22 + 12o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22 + 12o_5^2o_14o_8cs^4o_7o_12o_18o_6^3o_22 +$$

$$24o_5o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 + 24o_5^2o_14o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 + 24o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6o_20 -$$

$$6o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 + 24o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_20 + 24o_5^2o_8o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 +$$

$$24o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22 + 24o_5^2o_8o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 - 12o_5^2o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 +$$

$$12o_5o_14o_8o_13o_9cs^4o_18o_6^3o_22o_20 + 24o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22 + 24o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2v_2o_6^2o_22o_20 -$$

$$12o_5^2o_14o_8o_9cs^2o_7o_12v_1^2o_18o_6^3o_20 + 12o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_6^2o_20 - 12o_5o_14o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 +$$

$$24o_5^2o_14o_8o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_20 + 24o_5^2o_14o_8o_9cs^2o_7o_12v_1o_18v_2o_6^3o_20 + 12o_5o_8o_13o_9cs^2o_7v_1^2o_18o_6^3o_22o_20 -$$

$$12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_20 - 24o_5o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 + 24o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1v_2o_6^2o_22o_20 -$$

$$12o_5^2o_14o_13o_9cs^2o_7v_1^2o_18o_6^2o_22o_20 - 12o_5o_14o_8o_13o_9cs^2o_7v_1^2o_18o_6^2o_22o_20 - 24o_5o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 +$$

$$12o_5^2o_14o_8cs^2o_7o_12v_1^2o_18o_6^3o_20 - 12o_5o_13o_9o_7v_1^2v_3^2o_18o_6^3o_22o_20 + 12o_5o_14o_8o_13o_9cs^2o_7v_1o_18v_2o_6^3o_22o_20 +$$

$$24o_5^2o_8o_13o_9cs^2o_7v_1o_18v_2o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_6^2o_22 - 24o_5^2o_14o_8cs^2o_7o_12v_1o_18v_2o_6^3o_20 -$$

$$24o_5^2o_8o_13o_7v_1v_3^2o_18v_2o_6^3o_22o_20 - 24o_5^2o_14o_8o_7o_12v_1v_3^2o_18v_2o_6^3o_20 + 12o_5^2o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 +$$

$$12o_5^2o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 - 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_6^2o_22o_20 + 6o_5o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 +$$

$$12o_5^2o_14o_8o_9o_7o_12v_1^2v_3^2o_18o_6^3o_20 + 12o_5^2o_14o_8cs^4o_12o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22 - 12o_5^2o_14o_8o_9cs^4o_12o_18o_6^3o_22o_20 -$$

$$12o_5^2o_13o_9cs^2o_7o_12v_3^2o_18o_6^2o_22o_20 + 12o_5^2o_8o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 + 6o_5^2o_14o_8o_13cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 +$$

$$12o_5^2o_14o_13o_9cs^2o_7o_12v_3^2o_18o_6^2o_22 + 12o_5^2o_8o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^2o_22o_20 -$$

$$6o_5^2o_14o_8o_13o_9cs^4o_7o_12o_6^2o_22o_20 - 6o_5^2o_14o_8o_13o_7o_12v_1^2v_3^2o_18o_6^3o_20 + 24o_5^2o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 +$$

$$24o_5o_14o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 - 12o_5^2o_8o_9cs^4o_7o_12o_18o_6^2o_22o_20 + 12o_5^2o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 +$$

$$12o_5^2o_14o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 + 24o_5^2o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 - 24o_5o_8o_13o_9cs^2o_7v_1o_18v_2o_6^3o_22o_20 +$$

$$24o_5^2o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 + 12o_5o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 + 24o_5o_14o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 +$$

$$24o_5^2o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 + 12o_5^2o_8o_13o_9cs^4o_7o_18o_6^3o_22o_20 - 12o_5^2o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 -$$

$$12o_5^2o_8o_13cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 - 24o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1v_2o_6^2o_22 + 12o_5o_14o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22 +$$

$$24o_5^2o_14o_8o_9o_7o_12v_1v_3^2o_18v_2o_6^2o_22o_20 - 12o_5^2o_8o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 + 6o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_6^3o_22o_20 -$$

$$12o_5^2o_14o_8o_9cs^2o_7o_12v_1^2o_18o_6^2o_22o_20 + 12o_14o_8o_13o_9cs^4o_12o_18o_6^3o_22o_20 - 6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 +$$
$$24o_5^2o_14o_8o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 - 24o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1v_2o_6^3o_20 - 12o_5o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 +$$
$$6o_5^2o_14o_8o_13o_9cs^2o_7v_1^2o_18o_6^3o_22o_20 - 18o_5o_14o_8o_13o_9cs^4o_7o_12o_18o_6^2o_22o_20 - 12o_5o_13o_9cs^4o_7o_12o_18o_6^2o_22o_20 -$$
$$6o_5^2o_14o_8o_13cs^2o_7o_12v_1^2o_18o_6^3o_20 - 12o_5o_14o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_8o_13cs^2o_7v_1^2o_18o_6^3o_22o_20 -$$
$$6o_5^2o_14o_8o_13cs^2o_7v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9cs^4o_12o_18o_6o_22o_20 + 6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_20 -$$
$$24o_5^2o_14o_8o_9cs^2o_7o_12v_1o_18v_2o_6^3o_20 + 12o_5o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 + 6o_5o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 +$$
$$12o_5^2o_14o_8o_9cs^2o_7o_12v_1^2o_18o_6^2o_20 - 6o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_3^2o_20 - 24o_5^2o_14o_8o_9o_7o_12v_1v_3^2o_18v_2o_6^2o_20 +$$
$$12o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 - 6o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_6^3o_22 + 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 +$$
$$6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22 - 12o_5^2o_8o_13o_9cs^2o_7v_3^2o_18o_6^3o_22o_20 + 6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_6^3o_22o_20 -$$
$$12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_20 - 12o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_20 + 12o_5o_14o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22 -$$
$$12o_5^2o_14o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22 - 12o_5^2o_14o_8o_13o_9cs^4o_18o_6^3o_22o_22 - 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22 -$$
$$6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_6^3o_22 + 24o_5^2o_8o_13cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 + 12o_5o_14o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 -$$
$$12o_5o_14o_13o_9cs^4o_7o_12o_18o_6^3o_22 + 12o_5^2o_14o_13o_9cs^4o_7o_12o_18o_6^2o_22o_20 + 24o_5^2o_8o_13o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 -$$
$$6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_6^3o_20 - 12o_5^2o_14o_13o_9cs^4o_7o_12o_18o_6^3o_22 + 12o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2v_2o_6^3o_22 - 12o_5^2o_8o_13o_9cs^2o_7v_1^2o_18o_6^3o_22o_20 -$$
$$6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_6^3o_20 + 12o_5o_8o_13o_9o_7v_1^2v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2v_2o_6^3o_20 -$$
$$6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_6^3o_22 - 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1v_2o_6^3o_22o_20 - 12o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2v_2o_6^3o_22o_20 +$$
$$6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_6^3o_22o_20 + 24o_5^2o_14o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22 + 24o_5^2o_14o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22 -$$
$$12o_5^2o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 - 12o_5o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 + 6o_5o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_20 -$$
$$24o_5^2o_14o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 + 6o_5^2o_14o_8o_13o_9cs^2o_7v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_9cs^2o_7o_12v_3^2o_18o_6^3o_20 -$$
$$6o_5^2o_14o_8o_13cs^2o_7v_1^2o_18o_6^3o_22o_20 - 24o_5o_8o_13o_9o_7v_1v_3^2o_18v_2o_6^3o_22o_20 - 24o_5^2o_14o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 +$$
$$12o_5^2o_8o_13cs^2o_7v_3^2o_18o_6^3o_22o_20 + 6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22 + 12o_5^2o_14o_8o_13cs^2o_7o_12v_1o_18v_2o_6^3o_20 +$$
$$6o_5o_14o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_13o_9o_7o_12v_1^2v_3^2o_18o_6^2o_22 + 12o_5^2o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 -$$
$$24o_5^2o_8o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 + 12o_5^2o_14o_8o_13o_7o_12v_1v_3^2o_18v_2o_6^2o_20 - 24o_5^2o_8o_9o_7o_12v_1v_3^2o_18v_2o_6^2o_22o_20 -$$
$$6o_5^2o_14o_8o_13cs^2o_7o_12v_3^2o_18o_6^3o_20 + 12o_5^2o_14o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 + 12o_5o_14o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22 -$$
$$18o_5^2o_14o_8o_13o_9cs^4o_12o_18o_6^3o_22o_20 - 12o_5^2o_8o_13cs^4o_7o_18o_6^3o_22o_20 - 12o_5^2o_8o_13cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 -$$
$$18o_5^2o_14o_8o_13o_9cs^4o_12o_18o_6^2o_22o_20 - 12o_5^2o_14o_8o_9cs^2o_7o_12v_3^2o_18o_6^2o_22o_20 + 6o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22 +$$
$$12o_5o_14o_13o_9cs^4o_12o_18o_6o_22o_20 - 6o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6o_22o_20 + 12o_5o_14o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22 -$$
$$12o_5^2o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 - 12o_5o_14o_13o_9o_7o_12v_1^2v_3^2o_18o_6^2o_22o_20 + 12o_5o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 -$$
$$12o_5^2o_14o_8o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_13o_9cs^2o_7o_12v_1^2o_18o_6^2o_22 + 12o_5o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22 -$$
$$o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 + 6o_5^2o_14o_8o_13cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 - 6o_5o_14o_8o_13o_9o_7v_1^2v_3^2o_18o_6^3o_22o_20 +$$
$$12o_5^2o_8o_9cs^2o_7o_12v_1^2o_18o_6^2o_22o_20 + 12o_5^2o_14o_8o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 - 12o_5^2o_14o_8o_13o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 +$$
$$6o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_20 + 6o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22 - 12o_5^2o_14o_8o_13cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 +$$
$$6o_5^2o_14o_8o_13o_9cs^4o_7o_12o_6^3o_22 + 12o_5o_8o_13o_9cs^2o_7v_3^2o_18o_6^3o_22o_20 - 12o_5o_14o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 -$$
$$12o_5^2o_14o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22 - 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_6^3o_22o_20 - 12o_5^2o_14o_8o_9cs^2o_7o_12v_3^2o_18o_6^3o_20 -$$
$$12o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 - 12o_5o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_20 + 12o_5^2o_14o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 -$$
$$12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^2o_22 + 24o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6o_22o_20 - 24o_5^2o_14o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22 -$$
$$24o_5^2o_14o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^2o_22 + 12o_5^2o_8o_13o_7v_1^2v_3^2o_18o_6^3o_22o_20 + 6o_5o_14o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 +$$
$$6o_5^2o_14o_8o_13o_9o_7v_1^2v_3^2o_18o_6^3o_22o_20 + 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_6^2o_20 - 24o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2v_2o_6^2o_22 -$$
$$24o_5^2o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 + 12o_5^2o_14o_8o_13o_7v_1v_3^2o_18v_2o_6^3o_22o_20 - 24o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^2o_22o_20 -$$
$$6o_5o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22 + 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_6^2o_22 - 24o_5^2o_14o_8o_13o_9o_7o_12v_1v_3^2v_2o_6^2o_20 -$$
$$12o_5^2o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^2o_22o_20 - 24o_5^2o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^2o_22o_20 + 12o_5^2o_8o_13o_9cs^4o_7o_12o_18o_6^2o_22o_20 -$$
$$12o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^2o_20 - 24o_5^2o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 - 12o_5o_14o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 -$$
$$12o_5^2o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 + 12o_5o_8o_9cs^4o_7o_12o_18o_6^3o_22o_20 - 12o_5o_14o_8o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20 +$$
$$12o_5^2o_8cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 - 12o_5^2o_14o_8o_13o_9cs^4o_7o_12o_6^2o_22 - 24o_5^2o_8o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 -$$
$$12o_5^2o_14o_13o_9cs^2o_7o_12v_1^2o_18o_6^2o_22o_20 + 12o_5o_8o_13o_9cs^4o_7o_12o_18o_6^3o_22o_20 - 12o_5^2o_14o_8cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 -$$
$$24o_5^2o_13o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 - 12o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^2o_22 - 12o_5^2o_14o_8o_13cs^4o_12o_18o_6^3o_22o_20 -$$
$$12o_5^2o_14o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22 - 12o_5^2o_8cs^4o_7o_12o_18o_6^3o_22o_20 - 24o_5o_14o_13o_9cs^2o_7o_12v_1o_18v_2o_6^3o_22 -$$
$$24o_5^2o_14o_13o_9o_7o_12v_1v_3^2o_18v_2o_6^3o_22 - 24o_5^2o_14o_8o_9cs^2o_7o_12v_1o_18v_2o_6^2o_22o_20 + 12o_5^2o_14o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^2o_22o_20 +$$
$$12o_5^2o_8o_9o_7o_12v_1^2v_3^2o_18o_6^2o_22o_20 - 24o_5^2o_14o_8o_9o_7o_12v_1v_3^2o_18v_2o_6^2o_22o_20 - 12o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_6^2o_22o_20 +$$
$$12o_5^2o_14o_8o_9cs^2o_7o_12v_1^2o_18o_6^3o_22o_20 - 12o_5o_8o_13o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 - 24o_5^2o_14o_8o_13o_9cs^4o_7o_12o_18o_6o_22o_20 -$$
$$12o_5^2o_14o_8o_13o_9cs^2o_7v_1o_18v_2o_6^3o_22o_20 + 12o_5o_14o_8o_13o_9cs^2o_7v_1^2o_18o_6^3o_22o_20 + 12o_5^2o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22 -$$
$$12o_5^2o_14o_8o_9cs^4o_12o_18o_6^2o_22o_20 + 24o_5^2o_8o_13o_9o_7v_1v_3^2o_18v_2o_6^3o_22o_20 - 6o_5o_14o_8o_13o_9cs^2o_7o_12v_1^2o_18o_6^3o_22 +$$
$$12o_5^2o_13o_9cs^2o_7o_12v_3^2o_18o_6^2o_22o_20 + 12o_5o_14o_8o_13o_9o_7v_1v_3^2o_18v_2o_6^3o_22o_20 - 12o_5o_8o_13o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 +$$
$$24o_5^2o_14o_8o_7o_12v_1v_3^2o_18v_2o_6^3o_22o_20 - 6o_5^2o_14o_8o_13o_9o_7o_12v_1^2v_3^2o_18o_6^3o_22o_20 - 24o_5^2o_8o_13cs^2o_7v_1o_18v_2o_6^3o_22o_20 +$$
$$12o_5o_14o_8o_13o_9cs^4o_7o_12o_6^2o_22o_20 - 12o_5^2o_8o_9cs^2o_7o_12v_3^2o_18o_6^3o_22o_20 + 24o_5^2o_14o_8cs^2o_7o_12v_1o_18v_2o_6^3o_22o_20$$

$C_{21} = -2o_8o_13o_9o_12v_1^2o_18v_2o_6o_22o_20 + 2o_5o_8o_13o_9cs^2o_12o_18v_2o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_2^2o_20 + 2o_5o_14o_8o_13o_9cs^2o_12v_1o_18o_22 -$
$2o_5o_8o_13o_9o_12v_1o_18v_2^2o_6o_22o_20 - 2o_5o_14o_8o_13o_9o_12v_1v_2^2o_22 - 2o_5o_4o_8o_13cs^2o_12v_1o_18o_6o_22o_20 + 2o_5o_14o_8o_9cs^2o_12v_1o_18o_20 +$
$2o_13o_9o_12v_1^2o_18v_2o_6o_22o_20 + 2o_5o_14o_13o_9cs^2o_12v_1o_18o_6o_22 + 2o_5o_8o_13o_12v_1o_18v_2^2o_6o_22o_20 - 2o_5o_4o_8o_13o_9o_12v_1o_18v_2^2o_20 -$
$2o_5o_14o_13o_9cs^2o_12o_18v_2o_6o_22 + 2o_14o_13o_9o_12v_1^2o_18v_2o_6o_22 - 2o_5o_8o_13cs^2o_12o_18v_2o_6o_22o_20 + 2o_5o_14o_8cs^2o_12o_18v_2o_6o_20 -$
$2o_5o_8o_13o_9cs^2o_12v_1o_18o_6o_22o_20 - o_5o_14o_8o_13o_9o_12v_1o_18v_2^2o_6o_22o_20 + 2o_5o_8o_13o_9o_12v_1o_18v_2o_22o_20 + o_5o_14o_8o_13cs^2o_12o_18v_2o_6o_22o_20 -$
$2o_5o_14o_8o_9o_12v_1^2o_18v_2o_6o_20 - 2o_5o_14o_8cs^2o_12v_1o_18o_6o_20 + 2o_5o_8o_13cs^2o_12v_1o_18o_6o_22o_20 - 2o_5o_8o_13o_12v_1o_18v_2^2o_6o_22o_20 +$
$2o_5o_8cs^2o_12o_18v_2o_6o_22o_20 + o_5o_14o_8o_13o_9cs^2o_12v_1o_18o_6o_22o_20 - o_14o_8o_13o_9cs^2o_12o_18v_2o_6o_22 - 2o_5o_14o_13o_9o_12v_1^2o_18v_2o_2o_22o_20 +$
$2o_5o_14o_8o_13o_9o_12v_1^2v_2o_20 - 2o_8o_13o_9v_1o_18v_2^2o_6o_22o_20 - 2o_8o_13o_9cs^2v_1o_18o_6o_22o_20 - 2o_5o_14o_13o_9o_12v_1o_18v_2o_22 +$

$$
\begin{aligned}
&2o_5o_{14}o_8o_{13}o_9o_{12}v_1^2v_2o_{22} + 2o_5o_8o_{13}v_1^2o_{18}v_2o_6o_{22}o_{20} + o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{18}o_6o_{22} - 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{20} - \\
&o_5o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} - 2o_5cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} - o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_2o_6o_{20} + \\
&o_5o_{14}o_8o_{13}o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} - 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{22} - 2o_5o_{14}o_8o_9cs^2o_{12}o_{18}v_2o_{22}o_{20} - o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_2o_6o_{22} - \\
&o_5o_{14}o_8o_{13}o_9o_{12}v_1v_2^2o_6o_{22}o_{20} - 2o_5o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_{22} - 2o_5o_8o_9o_{12}v_1o_{18}v_2^2o_{22}o_{20} + 2o_8o_{13}o_9cs^2o_{18}v_2o_6o_{22}o_{20} + \\
&2o_5o_{14}o_8o_9cs^2o_{12}v_1o_{18}o_{22}o_{20} - 2o_5o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_{20} + 2o_5o_{14}o_8o_{13}o_9o_{12}v_1o_{18}v_2^2o_{20} - 2o_5o_8o_{13}o_9cs^2o_{18}v_2o_6o_{22}o_{20} - \\
&2o_5o_{14}o_8o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} + 2o_5o_{14}o_8o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + 2o_5o_{14}o_8o_{13}o_9o_{12}v_1o_{18}v_2^2o_{22} - 2o_5o_{14}o_8o_9o_{12}v_1^2o_{18}v_2o_{22}o_{20} + \\
&2o_5o_8o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} - o_5o_{14}o_8o_{13}cs^2o_{18}v_2o_6o_{22}o_{20} - o_5o_{14}o_8o_{13}o_9cs^2v_1o_{18}o_6o_{22}o_{20} - o_5o_{14}o_8o_{13}o_9v_1o_{18}v_2^2o_6o_{22}o_{20} + \\
&o_5o_{14}o_8o_{13}o_1 2v_1o_{18}v_2^2o_6o_{20} - o_{14}o_8o_{13}o_9v_1^2o_{18}v_2o_6o_{22}o_{20} + 2o_5o_{14}o_1 3o_9cs^2o_{12}v_1o_{18}o_{22}o_{20} - 2o_5o_{14}o_8o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} - \\
&2o_5o_{14}o_8o_1 2v_1^2o_{18}v_2o_6o_{22}o_{20} + 2o_5o_{14}o_1 3o_9o_{12}v_1^2o_{18}v_2o_{22} + 2o_5o_8o_{13}o_9cs^2v_1o_{18}o_6o_{22}o_{20} + 2o_5o_8o_{13}o_9v_1o_{18}v_2^2o_6o_{22}o_{20} - \\
&2o_5o_1 3o_9o_{12}v_1o_{18}v_2^2o_{20}o_{20} - o_5o_{14}o_8o_{13}o_9o_{12}v_1o_{18}v_2^2o_6o_{22} + 2o_5o_8o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} - 2o_5o_{14}o_1 3o_9cs^2o_{12}o_{18}v_2o_{22}o_{20} + \\
&o_5o_{14}o_8o_1 3cs^2v_1o_{18}o_6o_{22}o_{20} + o_5o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} - o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_6o_{22} - 2o_5o_8o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + \\
&2o_5o_{14}o_8o_9cs^2o_{12}o_{18}v_2o_{20} - o_5o_{14}o_8o_{13}o_9o_{12}v_1o_{18}v_2^2o_6o_{20} + o_5o_{14}o_8o_1 3v_1o_{18}v_2^2o_6o_{22}o_{20} - 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_2o_{22}o_{20} + \\
&2o_1 4o_1 3o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} - 2o_{14}o_1 3o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + 2o_5o_{14}o_1 3o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} - 2o_5o_{14}o_8o_9cs^2o_{12}o_{18}v_2o_6o_{20} - \\
&2o_5o_{14}o_1 3o_9cs^2o_{12}v_1o_{18}o_{22} + 2o_5o_{14}o_8o_1 2v_1^2o_{18}v_2o_6o_{20} + 2o_5o_{14}o_8o_9cs^2o_{12}v_1o_{18}o_6o_{20} - 2o_5o_{14}o_1 3o_9o_{12}v_1^2o_{18}v_2o_6o_{22} + \\
&2o_1 4o_1 3o_9cs^2o_{12}o_{18}v_2o_6o_{22} + 2o_{14}o_1 3o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} - 2o_1 4o_1 3o_9cs^2o_{12}v_1o_{18}o_6o_{22} - 2o_5o_1 3o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} - \\
&2o_5o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_{20} - 2o_5o_1 3o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} - 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_{22} - 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{18}o_{22}o_{20} + \\
&2o_5o_1 3o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} - o_5o_{14}o_8o_{13}o_9o_{12}v_1^2v_2o_{22} + 2o_5o_{14}o_8o_{13}o_9o_{12}v_1v_2^2o_{22}o_{20} - o_5o_{14}o_8o_{13}o_9o_{12}v_1^2v_2o_6o_{20} - \\
&2o_5o_1 4o_1 3o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} + 2o_5o_{14}o_1 3o_9cs^2o_{12}v_1o_{18}v_2^2o_6o_{22} + 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_{22}o_{20} - 2o_5o_{14}o_8o_1 2v_1o_{18}v_2^2o_6o_{20} + \\
&o_5o_{14}o_8o_{13}o_9o_{12}v_1^2v_2o_6o_{22}o_{20} + 2o_5o_1 3o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} - 2o_5o_8o_1 3o_9cs^2o_{12}o_{18}v_2o_2o_{20} - 2o_5o_{14}o_8o_9o_{12}v_1o_{18}v_2^2o_{20} - \\
&2o_1 4o_1 3o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} + 2o_5o_{14}o_1 3o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} - 2o_5o_{14}o_1 3o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} + 2o_5o_8o_{13}o_9cs^2o_{12}v_1o_{18}o_2 2o_{20} + \\
&o_5o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_6o_{20} - o_5o_{14}o_8o_1 3v_1^2o_{18}v_2o_6o_{22}o_{20} - 2o_5o_8o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} + o_5o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_6o_{22} - \\
&o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + o_{14}o_8o_{13}o_9o_{12}v_1o_{18}v_2^2o_6o_{22} - 2o_5o_8o_{13}o_9v_1^2o_{18}v_2o_6o_{22}o_{20} + 2o_5o_1 3o_9o_{12}v_1^2o_{18}v_2o_{22}o_{20} + \\
&2o_5o_{14}o_8o_1 2v_1o_{18}v_2^2o_6o_{22}o_{20} - 2o_5o_{14}o_8cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + o_5o_{14}o_8o_{13}o_9v_1^2o_{18}v_2o_6o_{22}o_{20} - 2o_5o_8o_9cs^2o_{12}v_1o_{18}o_{22}o_{20} + \\
&o_{14}o_8o_{13}o_9v_1o_{18}v_2^2o_6o_{22}o_{20} - o_5o_{14}o_8o_1 3o_{12}v_1^2o_{18}v_2o_6o_{20} + o_{14}o_8o_{13}o_9cs^2v_1o_{18}o_6o_{22}o_{20} + 2o_5o_{14}o_8o_9o_{12}v_1o_{18}v_2^2o_{22}o_{20} + \\
&o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_6o_{22} + 2o_5o_8o_9cs^2o_{12}o_{18}v_2o_{22}o_{20} + 2o_5o_{14}o_8cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} + 2o_5o_{14}o_8o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} + \\
&o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_6o_{20} + 2o_5o_8o_9o_{12}v_1^2o_{18}v_2o_{22}o_{20} + o_5o_{14}o_8o_1 3cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} + 2o_5o_8o_1 3cs^2o_{18}v_2o_6o_{22}o_{20} - \\
&o_5o_{14}o_8o_1 3cs^2o_{12}o_{18}v_2o_6o_{20} - o_{14}o_8o_{13}o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} - o_5o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} + o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} - \\
&o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{18}o_6o_{22} - 2o_5o_8o_{13}v_1o_{18}v_2^2o_6o_{22}o_{20} + 2o_5o_1 3o_9cs^2o_{12}o_{18}v_2o_{22}o_{20} - 2o_5o_8o_1 3cs^2v_1o_{18}o_6o_{22}o_{20} - \\
&o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{18}o_6o_{20} + 2o_8o_1 3o_9v_1^2o_{18}v_2o_6o_{22}o_{20} - 2o_5o_{14}o_8o_9cs^2o_{12}v_1o_{18}o_{20} + 2o_5o_{14}o_1 3o_9o_{12}v_1o_{18}v_2^2o_{22}o_{20} + \\
&o_5o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_6o_{22} + o_5o_{14}o_8o_{13}o_9o_{12}v_1v_2^2o_6o_{20} - o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} - 2o_5o_1 3o_9cs^2o_{12}v_1o_{18}o_2 2o_{20} + \\
&o_5o_{14}o_8o_{13}o_9o_{12}v_1v_2^2o_6o_{22} + 2o_5o_8o_1 2v_1^2o_{18}v_2o_6o_{22}o_{20} - 2o_5o_{14}o_8o_{13}o_9o_{12}v_1^2v_2o_{22}o_{20} + o_5o_{14}o_8o_{13}o_9cs^2o_{12}o_{18}v_2o_6o_{20} + \\
&2o_5o_{14}o_8o_9o_{12}v_1^2o_{18}v_2o_{20} + 2o_5o_{14}o_8o_9o_{12}v_1o_{18}v_2^2o_6o_{20} - 2o_5o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_{22}o_{20} + o_5o_{14}o_8o_1 3o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20} - \\
&2o_1 3o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} + 2o_8o_1 3o_9cs^2o_{12}v_1o_{18}o_6o_{22}o_{20} + o_5o_{14}o_8o_1 3o_9cs^2o_{12}v_2o_6o_{22}o_{20} + 2o_5o_{14}o_1 3o_9cs^2o_{12}o_{18}v_2o_{22} + \\
&2o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_1o_{18}o_{22}o_{22}o_{20} + 2o_5o_{14}o_8o_{13}o_9o_{12}v_1^2o_{18}v_2o_{22}o_{20} - 2o_5o_8o_{13}o_1 2v_1^2o_{18}v_2o_6o_{22}o_{20} - o_5o_{14}o_8o_1 3o_9cs^2o_{12}v_1o_6o_{22}o_{20} - \\
&2o_1 4o_1 3o_9o_{12}v_1o_{18}v_2^2o_6o_{22} + 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_2o_{22} + 2o_5o_{14}o_8o_{13}o_9cs^2o_{12}v_2o_{20} - 2o_1 3o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} + \\
&2o_1 3o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + 2o_8o_1 3o_9o_{12}v_1o_{18}v_2^2o_6o_{22}o_{20} - 2o_8o_1 3o_9cs^2o_{12}o_{18}v_2o_6o_{22}o_{20} + 2o_5o_8o_1 3o_9o_{12}v_1^2o_{18}v_2o_6o_{22}o_{20}
\end{aligned}
$$

$$
\begin{aligned}
C_{22} =\ & 6o_5o_8o_7v_1^2v_3o_{18}v_2^2o_{20}o_{15} + 12o_8cs^2o_7v_1o_{18}v_2^2o_6o_{20} - 12o_5cs^2o_7o_{17}v_1^2v_3o_{18}o_{15} + 3o_5o_8cs^2o_7o_{17}v_1v_2^2o_6o_{20}o_{15} + \\
&12o_5cs^2o_7o_{17}v_1o_{18}v_2^2o_{15} - 6o_5o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_{20}o_{15} + 6o_5o_8o_7v_1^2v_3o_{18}v_2^2o_6o_{20} - 6o_5o_8o_7o_{17}v_1v_3v_2^2o_6o_{15} - 3o_5o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_{20} + \\
&12o_5cs^2o_7v_3o_{18}v_2^2o_6o_{20}o_{15} + 6o_5o_8o_7o_{17}v_1v_3^2o_{18}v_2^2o_6o_{15} - 12o_8cs^2o_7v_1^2v_3o_{18}o_6o_{20} + 12o_5o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_{20}o_{15} - \\
&6o_5o_8cs^2o_7o_{17}v_1v_3^2o_{20}o_{15} - 6o_5o_8cs^2o_7v_1v_3^2o_{18}o_{20}o_{15} + 12o_5cs^2o_7o_{17}v_1o_{18}v_2^2o_{20}o_{15} + 12o_5o_8o_7o_{17}v_1v_3v_2^2o_{15} - 12o_8o_7o_{17}v_1v_3^2o_{18}v_2^2o_6o_2o_{15} - \\
&6o_8cs^2o_7o_{17}v_1o_{18}v_2^2o_6o_{15} - 12o_5cs^2o_7v_1^2v_3o_{18}o_2o_{15} + 6o_5o_8cs^2o_7o_{17}v_1^2v_3o_6o_{15} + 6o_8cs^2o_7o_{17}v_1v_3^2o_{18}o_6o_2o_{15} + \\
&6o_8cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_{15} + 12o_5o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_{15} - 6o_5o_8cs^2o_7v_1v_3^2o_{18}o_6o_{20} - 12o_5o_8cs^2o_7o_{17}v_1^2v_3o_{15} + 12cs^2o_7v_1v_3^2o_{18}o_6o_{20}o_{15} - \\
&12cs^2o_7o_{17}v_1v_3^2o_{18}o_6o_2o_{15} - 6o_8o_7o_{17}v_1v_3^2o_{18}v_2^2o_6o_{20} + 12o_5cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_{15} + 6o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_{15} + \\
&12o_5cs^2o_7v_1o_{18}v_2^2o_6o_2o_{15} - 12o_5o_7v_1v_3^2o_{18}v_2^2o_6o_2o_{15} - 12o_5cs^2o_7o_{17}v_1o_{18}v_2^2o_6o_{15} + 2o_5o_8cs^4o_7o_{17}v_1o_{18}o_6o_2o_{15} - \\
&6o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_{20}o_{15} + 12cs^2o_7o_{17}v_1v_3^2o_{18}o_6o_{15} + 12o_8cs^2o_7v_3o_{18}v_2^2o_6o_2o_{15} - 3o_5o_8o_7o_{17}v_1^2v_3v_2^2o_6o_2o_{15} - \\
&3o_5o_8cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_{20} + 6o_5o_8cs^2o_7o_{17}v_1o_{18}v_2^2o_2o_{15} - 12o_5cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_2o_{15} + 12o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_2o_{15} + \\
&12o_5o_7o_{17}v_1v_3^2o_{18}v_2^2o_{15} + 12o_8cs^2o_7o_{17}v_1v_3^2o_{15} - 6o_5o_8cs^2o_7o_{17}v_1^2v_3o_{18}o_2o_{15} - 12o_7v_1^2v_3o_{18}v_2^2o_6o_2o_{15} + 12o_5o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_{15} + \\
&3o_5o_8o_7o_{17}v_1o_{18}v_2^2o_6o_2o_{15} - 6o_5o_8cs^2o_7v_1v_3^2o_{18}o_{15} - 6o_8cs^2o_7o_{17}v_1o_{18}v_2^2o_6o_2o_{15} - 12o_5o_8o_7o_{17}v_1^2v_3v_2^2o_{15} + 6o_5o_8o_7v_3o_{18}v_2^2o_2o_{15} + \\
&6o_5o_8cs^2o_7o_{17}v_1^2v_3o_2o_{15} + 12o_5o_7o_{17}v_1^2v_3o_{18}v_2^2o_2o_{15} - 12o_5o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_2o_{15} + 3o_5o_8cs^2o_7o_{17}v_3o_{18}v_2^2o_6o_2o_{15} + \\
&12cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_2o_{15} - 12cs^2o_7v_1^2v_3o_{18}o_6o_2o_{15} - 12o_5o_7o_{17}v_1v_3^2o_{18}v_2^2o_6o_{15} + 6o_8cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_2o_{15} - \\
&3o_5o_8cs^2o_7o_{17}v_1^2v_3o_6o_2o_{15} - 6o_5o_8cs^2o_7v_3o_{18}v_2^2o_6o_2o_{15} + 6o_5o_8cs^2o_7v_3o_{18}v_2^2o_6o_2o_{20} - 6o_5o_8cs^2o_7o_{17}v_1v_3^2o_6o_{15} - \\
&6o_8cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_2o_{15} - 6o_5o_8o_7v_1v_3^2o_2o_{20}o_{15} + 6o_5o_8o_7v_1v_3^2o_{18}v_2^2o_2o_{20}o_{15} + 6o_8cs^2o_7o_{17}v_1o_{18}v_2^2o_6o_2o_{15} - \\
&6o_5o_8o_7v_1v_3^2o_{18}v_2^2o_2o_{15} - 12cs^2o_7o_{17}v_1o_{18}v_2^2o_6o_2o_{15} + 12cs^2o_7v_1o_{18}v_2^2o_6o_2o_{15} + 12o_5cs^2o_7o_{17}v_1v_3^2o_{18}o_{15} - \\
&6o_5o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_{15} + 3o_5o_8o_7o_{17}v_1v_3^2o_{18}v_2^2o_6o_{20} + 12o_5o_8cs^2o_7o_{17}v_3o_{18}v_2^2o_{15} - 6o_5o_8o_7v_1v_3^2o_{18}v_2^2o_6o_{20} - \\
&3o_5o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_2o_{15} + 12o_5cs^2o_7o_{17}v_1v_3^2o_{18}o_6o_2o_{15} - 6o_5o_8cs^2o_7o_{17}v_1v_3^2o_{18}o_6o_{15} + 6o_5o_8o_7o_{17}v_1v_3^2o_2o_{20}o_{15} + \\
&12cs^2o_7o_{17}v_1o_{18}v_2^2o_6o_{15} - 6o_5o_8o_7v_1v_3^2o_{18}v_2^2o_6o_2o_{15} + 6o_8o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_2o_{20} - 12o_5cs^2o_7o_{17}v_1o_{18}v_2^2o_2o_{15} + 12o_5cs^2o_7o_{17}v_1^2v_3o_{18}o_2o_{15} + \\
&12o_5o_7v_1^2v_3o_{18}v_2^2o_6o_2o_{15} + 12o_5cs^2o_7o_{17}v_3o_{18}v_2^2o_2o_{15} - 12o_5cs^2o_7o_{17}v_1v_3^2o_{18}o_6o_{15} + 6o_5o_8cs^2o_7o_{17}v_1v_3^2o_{18}o_{20}o_{15} + \\
&12cs^2o_7v_1o_{18}v_2^2o_6o_{15} + 12o_7v_1v_3^2o_{18}v_2^2o_6o_2o_{15} - 12o_5o_8o_7o_{17}v_1v_3^2o_{18}v_2^2o_{15} + 3o_5o_8cs^2o_7o_{17}v_1v_3^2o_{18}o_6o_{20} + \\
&6o_5o_8cs^2o_7o_{17}v_3v_2^2o_{20}o_{15} - 12cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_{15} - 6o_5o_8cs^2o_7o_{17}v_3o_{18}v_2^2o_6o_{15} - 12o_7o_{17}v_1v_3^2o_{18}v_2^2o_6o_2o_{15} - \\
&12o_5o_7o_{17}v_1^2v_3o_{18}v_2^2o_{15} + 6o_8o_7o_{17}v_1v_3^2o_{18}v_2^2o_6o_2o_{20} - 12o_8cs^2o_7v_1v_3^2o_{18}o_6o_2o_{15} - 12o_5o_7v_1^2v_3o_{18}v_2^2o_2o_{15} + \\
&12o_5o_8cs^2o_7o_{17}v_2^2v_3o_{18}o_{15} - 12o_5cs^2o_7v_1v_3^2o_{18}o_6o_2o_{15} - 12o_5o_8cs^2o_7o_{17}v_1o_{18}v_2^2o_{15} + 12o_8cs^2o_7v_1v_3^2o_{18}o_6o_{20} - 12o_7o_{17}v_1^2v_3o_{18}v_2^2o_6o_{15} + \\
&6o_5o_8o_7o_{17}v_1^2v_3v_2^2o_6o_{15} + 6o_5o_8cs^2o_7v_1o_{18}v_2^2o_6o_2o_{15} - 3o_5o_8cs^2o_7o_{17}v_1o_{18}v_2^2o_6o_2o_{15} + 3o_5o_8cs^2o_7o_{17}v_1^2v_3o_{18}o_6o_2o_{15} +
\end{aligned}
$$

$$12cs^2o_7o_17v_3o_18v_2^2o_6o_2o_015 + 6o_5o_8cs^2o_7v_1^2v_3o_18o_6o_20 - 12cs^2o_7v_3o_18v_2^2o_6o_2o_015 + 6o_8cs^2o_7o_17v_3o_18v_2^2o_6o_20 -$$
$$6o_8cs^2o_7o_17v_1v_3^2o_18o_6o_15 + 12o_5cs^2o_7v_1v_3^2o_18o_2o_015 - 6o_5o_8cs^2o_7o_17v_3o_18v_2^2o_6o_2o_015 -$$
$$6o_5o_8cs^2o_7v_1^2v_3o_18v_2^2o_2o_015 - 12o_8o_7v_1^2v_3o_18v_2^2o_6o_20 + 6o_5o_8cs^2o_7v_1^2v_3o_18o_2o_015 + 12o_8o_7v_1^2v_3o_18v_2^2o_6o_2o_015 - 6o_5o_8cs^2o_7v_1o_18v_2^2o_6o_20 -$$
$$6o_5o_8o_7v_1^2v_3o_18v_2^2o_6o_2o_015 + 6o_5o_8cs^2o_7o_17v_3v_2^2o_6o_15 - 6o_5o_8cs^2o_7o_17v_3o_18v_2^2o_2o_015 + 12o_8cs^2o_7v_1^2v_3o_18o_6o_2o_015 +$$
$$6o_5o_8cs^2o_7o_17v_1v_3^2o_18o_6o_15 - 3o_5o_8cs^2o_7o_17v_3o_18v_2^2o_6o_20 + 3o_5o_8o_7o_17v_1^2v_3o_18v_2^2o_6o_2o_015 - 12o_5cs^2o_7o_17v_3o_18v_2^2o_6o_2o_015 -$$
$$12o_5cs^2o_7o_17v_1v_3^2o_18o_2o_015 - 12o_8cs^2o_7v_1o_18v_2^2o_6o_2o_015 + 12o_5cs^2o_7o_17v_3o_18v_2^2o_6o_15 + 12o_8o_7v_1v_3^2o_18v_2^2o_6o_20 +$$
$$6o_5o_8cs^2o_7v_1v_3^2o_18o_6o_2o_015 + 12o_5o_7o_17v_1v_3^2o_18v_2^2o_6o_2o_015 + 6o_8cs^2o_7o_17v_3o_18v_2^2o_6o_15 - 12o_5cs^2o_7v_3o_18v_2^2o_2o_015 -$$
$$6o_8cs^2o_7o_17v_1v_3^2o_18o_6o_20 + 3o_5o_8cs^2o_7o_17v_1v_3^2o_6o_2o_015 - 3o_5o_8cs^2o_7o_17v_1v_3^2o_18o_6o_2o_015 - 12o_5cs^2o_7v_1o_18v_2^2o_6o_2o_015 -$$
$$4o_5o_8cs^4o_17v_1o_18o_6o_2o_015 - 3o_5o_8cs^2o_7o_17v_3v_2^2o_6o_2o_015 - 12o_8cs^2o_7v_3o_18v_2^2o_6o_20 - 12o_5o_8cs^2o_7o_17v_3v_2^2o_15 + 12o_7o_17v_1v_3^2o_18v_2^2o_6o_15 +$$
$$12o_5cs^2o_7v_1^2v_3o_18o_6o_2o_015 - 12o_5o_8cs^2o_7o_17v_1v_3^2o_18o_15 + 12o_5o_7v_1v_3^2o_18v_2^2o_2o_015 + 6o_5o_8o_7o_17v_1^2v_3v_2^2o_2o_015 - 12o_5cs^2o_7o_17v_3o_18v_2^2o_15$$

$C_{23} = 2o_5^2o_8cs^4o_18o_6o_2o_015 + 2o_5^2o_8cs^2v_3^2o_18o_6^2o_2o_015 - 2o_5^2o_8cs^2o_17v_3^2o_6^2o_15 + 4o_5^2o_17v_3^2o_18v_2^2o_6o_15 - 4o_5^2o_8cs^2v_1v_3o_18o_6^2o_2o_015 +$
$4o_5^2cs^4o_18o_6^2o_2o_015 - 4o_5^2cs^2o_17o_18v_2^2o_6o_2o_015 - 4o_5^2o_8o_17v_3^2o_18v_2^2o_6o_15 - 4o_5^2cs^2v_3^2o_18o_6^2o_2o_015 + 2o_5^2o_8cs^4o_18o_6^2o_20 -$
$8o_5v_1v_3o_18v_2^2o_6^2o_2o_015 + 2o_5^2o_8cs^2o_17o_18v_2^2o_6o_2o_015 - 2o_5o_8cs^2o_17o_18v_2^2o_6^2o_20 - 2o_5^2o_8cs^4o_17o_18o_6o_20 + 4o_5^2o_8o_17v_1v_3v_2^2o_6o_2o_015 -$
$4o_5o_8o_17v_1v_3o_18v_2^2o_6^2o_2o_015 - 8o_5o_17v_1v_3o_18v_2^2o_6^2o_15 + 4o_5cs^2o_17o_18v_2^2o_6^2o_15 - 4o_5cs^2o_17v_3o_18o_6^2o_2o_015 - 2o_5^2o_8cs^4o_17o_18o_2o_015 -$
$8o_5^2cs^2o_17v_1v_3o_18o_6^2o_2o_015 + 8o_5^2cs^2v_1v_3o_18o_6^2o_2o_015 + 4o_5o_8cs^2v_3^2o_18o_6^2o_20 + o_5^2o_8cs^2o_17v_3^2o_18o_6^2o_20 - 8o_5cs^2o_17v_1v_3o_18o_6^2o_15 +$
$4o_5^2cs^4o_17o_18o_6^2o_15 + 8o_5o_8cs^2v_1v_3o_18o_6^2o_2o_015 + 4o_5o_17v_3^2o_18v_2^2o_6^2o_15 + 4o_5o_8v_1v_3o_18v_2^2o_6^2o_20 - 2o_5o_8o_17v_3^2o_18v_2^2o_6^2o_20 +$
$2o_5^2o_8cs^2o_17v_1v_3o_18v_2^2o_6o_2o_015 - 4o_5cs^4o_18o_6^2o_2o_015 - 4o_5o_17v_3^2o_18v_2^2o_6o_2o_015 - 4o_5cs^4o_17o_18o_6^2o_2o_015 - 8o_5^2o_8o_17v_1v_3v_2^2o_6o_15 -$
$4o_5^2o_8cs^2o_17o_18v_2^2o_6o_15 + 8o_5cs^2o_17v_1v_3o_18o_6^2o_2o_015 + 4o_5^2cs^2o_17o_18v_2^2o_6o_15 - 4o_5^2cs^2o_17v_3o_18o_6o_2o_015 - 4o_5cs^4o_17o_18o_6^2o_15 +$
$2o_5^2o_8v_3^2o_18v_2^2o_6^2o_2o_015 + 4o_5^2o_8cs^4o_17o_18o_6o_15 - 2o_5o_8cs^2o_17o_18v_2^2o_6^2o_15 - 4o_5^2cs^2o_18v_2^2o_6^2o_2o_015 - 4o_5^2v_3^2o_18v_2^2o_6^2o_2o_015 -$
$2o_5^2o_8v_3^2o_18v_2^2o_6^2o_20 + 2o_5^2o_8cs^2o_18v_2^2o_6^2o_2o_015 + 4o_5^2cs^4o_18o_6^2o_2o_015 + 2o_5^2o_8o_17v_1v_3o_18v_2^2o_6^2o_2o_015 - 2o_5^2o_8cs^2o_18v_2^2o_6^2o_20 +$
$8o_5^2o_8cs^2o_17v_1v_3o_18o_6o_15 + 4o_5^2o_8v_1v_3o_18v_2^2o_6o_2o_015 - 4o_5cs^2o_17o_18v_2^2o_6^2o_2o_015 - 8o_5^2v_1v_3o_18v_2^2o_6o_2o_015 - 8o_5^2cs^2o_17v_1v_3o_18o_6o_15 +$
$8o_5o_17v_1v_3o_18v_2^2o_6^2o_2o_015 + 2o_5^2o_8cs^2o_17v_3^2o_18o_6o_2o_015 - 2o_5^2o_8o_17v_3^2v_2^2o_6o_2o_015 - 2o_5^2o_8o_17v_3^2v_2^2o_6o_2o_015 + 4o_5^2o_8cs^2o_17v_1v_3o_6o_2o_015 -$
$8o_5^2o_17v_1v_3o_18v_2^2o_6o_15 - 12o_5o_8cs^4o_17o_18o_6o_2o_015 - 4o_5o_8cs^4o_18o_6^2o_20 - 2o_5^2o_8o_17v_3^2v_2^2o_6^2o_15 + 4o_5^2o_8cs^2v_1v_3o_18o_6^2o_20 +$
$4o_5^2o_8cs^2o_17v_1v_3o_6^2o_15 - 2o_5o_8cs^4o_17o_18o_6^2o_2o_015 + 2o_5^2o_8cs^4o_17o_18o_6^2o_15 + 2o_5^2o_8o_17v_3^2o_18v_2^2o_6o_2o_015 -$
$2o_8cs^4o_17o_18o_6^2o_2o_015 + o_5^2o_8cs^2o_17v_3^2o_6^2o_2o_015 + 2o_5^2o_8cs^2o_17v_3^2o_18o_6^2o_15 - 4o_5o_8cs^2o_17v_1v_3o_18o_6^2o_20 - 4o_5^2o_17v_3^2o_18v_2^2o_6o_2o_015 -$
$2o_5^2o_8cs^2o_17v_3^2o_6^2o_15 - 2o_5o_8o_17v_3^2o_18v_2^2o_6^2o_15 - 4o_5^2cs^2o_17v_3^2o_18o_6^2o_15 - 8o_5^2v_1v_3o_18v_2^2o_6^2o_2o_015 + 8o_5^2o_8o_17v_1v_3o_18v_2^2o_6o_15 -$
$4o_5^2o_8o_17v_1v_3o_18v_2^2o_6o_2o_015 + 4o_5o_8v_3^2o_18v_2^2o_6^2o_20 - 4o_5o_8v_1v_3o_18v_2^2o_6^2o_2o_015 + 4o_5v_3^2o_18v_2^2o_6^2o_2o_015 + 8o_5^2o_17v_1v_3o_18v_2^2o_6^2o_15 +$
$o_5^2o_8cs^2o_17o_18v_2^2o_6^2o_20 + 4o_5^2v_3^2o_18v_2^2o_6o_2o_015 + 4o_5o_8cs^2o_17v_1v_3o_18o_6^2o_15 + 4o_5o_8cs^2o_18v_2^2o_6^2o_20 - 2o_5^2o_8cs^2o_18v_2^2o_6o_2o_015 -$
$4o_5^2cs^4o_18o_6o_2o_015 - 8o_5o_8cs^2v_1v_3o_18o_6^2o_2o_015 - 4o_5^2o_8cs^4o_17o_6o_15 - 2o_5^2o_8v_3^2o_18v_2^2o_6o_2o_015 + 4o_5^2cs^2o_18v_2^2o_6o_2o_015 -$
$8o_5^2o_8cs^2o_17v_1v_3o_6o_15 + 4o_5cs^2o_18v_2^2o_6^2o_2o_015 + 2o_5o_8o_17v_3^2o_18v_2^2o_6^2o_2o_015 + 4o_5^2cs^2o_17v_3o_18o_6^2o_2o_015 + 4o_5^2o_17v_3^2v_2^2o_6o_15 +$
$4o_5^2o_8cs^2o_17v_2^2o_6o_15 + o_5^2o_8cs^2o_17v_2^2o_6^2o_2o_015 - 4o_5^2cs^2o_17v_3^2o_18o_6o_15 - o_5^2o_8cs^2o_17v_3^2o_18o_6^2o_2o_015 - 4o_5o_8cs^2v_3^2o_18o_6^2o_2o_015 +$
$8o_5^2v_1v_3o_18v_2^2o_6^2o_2o_015 - 4o_5^2o_8o_17v_1v_3o_18v_2^2o_6^2o_15 + 4o_5^2cs^2o_17v_3^2o_18o_6o_15 - 2o_5^2o_8cs^4o_17o_18o_6^2o_15 - o_5^2o_8o_17v_3^2o_18v_2^2o_6^2o_2o_015 +$
$4o_5o_8cs^4o_17o_6o_2o_015 - 4o_5^2cs^2o_17v_1v_3o_18o_6^2o_15 - 2o_5^2o_8cs^4o_17o_18o_6^2o_2o_015 + 2o_5o_8cs^2o_17v_1v_3o_6o_2o_015 + 8o_5o_8v_1v_3o_18v_2^2o_6^2o_2o_015 +$
$o_5^2o_8o_17v_3^2o_2^2o_6^2o_2o_015 + 4o_5cs^2o_17v_3o_18o_6^2o_15 + 8o_5^2o_17v_1v_3o_18o_6^2o_15 + 4o_5o_8o_17v_1v_3o_18o_6^2o_15 + 8o_5^2v_1v_3o_18v_2^2o_6o_2o_015 -$
$2o_5o_8cs^2o_17v_3^2o_18o_6^2o_20 - 2o_5^2o_8cs^2o_17v_3^2o_6o_2o_015 + 4o_8cs^4o_17o_18o_6o_2o_015 + 4o_5^2o_17v_3^2o_18v_2^2o_6^2o_2o_015 + 2o_5o_8cs^2o_17v_3^2o_18o_6^2o_2o_015 +$
$o_5^2o_8o_17v_3^2o_18v_2^2o_6^2o_20 - 8o_5o_8v_1v_3o_18v_2^2o_6^2o_20 - 4o_5^2cs^4o_17o_18o_6o_15 + 4o_5^2cs^2v_3^2o_18o_6^2o_2o_015 + 4o_5^2cs^2o_17o_18v_2^2o_6^2o_2o_015 +$
$4o_5cs^2v_3^2o_18o_6^2o_2o_015 + 4o_5o_8cs^2v_1o_18o_6^2o_2o_015 - 2o_5^2o_8cs^4o_18o_6^2o_2o_015 - 2o_5^2o_8cs^2v_3^2o_18o_6^2o_2o_015 - 2o_5^2o_8o_17v_1v_3o_18v_2^2o_6^2o_20 +$
$2o_5^2o_8cs^2o_17o_18v_2^2o_6^2o_15 + 4o_5o_8cs^2o_17v_1v_3o_18o_6^2o_20 + 4o_5o_8cs^4o_17o_18o_2o_015 + 4o_5^2o_8o_17v_1v_3v_2^2o_6^2o_15 - 8o_5^2cs^2v_1v_3o_18o_6o_2o_015 -$
$4o_5o_8v_3^2o_18v_2^2o_6^2o_2o_015 + 8o_5^2cs^2o_17v_1v_3o_18o_6o_2o_015 - 2o_5^2o_8o_17v_1v_3v_2^2o_6^2o_2o_015 + 4o_5o_8cs^4o_17o_18o_6o_20 - 4o_5o_8cs^2o_18v_2^2o_6^2o_2o_015 -$
$4o_5^2cs^2o_17o_18v_2^2o_6^2o_15 - o_5^2o_8cs^2o_17o_18v_2^2o_6^2o_2o_015 - 4o_5o_8cs^2o_17v_1v_3o_18o_6o_2o_015 + 4o_5o_8o_17v_1v_3o_18v_2^2o_6^2o_20 + 4o_5o_8cs^2o_17v_3^2o_6o_15 -$
$4o_5^2v_3^2o_18v_2^2o_6^2o_15 - 2o_5o_8cs^2o_17v_3^2o_18o_6^2o_15 - 2o_5^2o_8cs^2v_3^2o_18o_6^2o_20 + 2o_5^2o_8o_17v_3^2o_18v_2^2o_6^2o_15 + 2o_5^2o_8cs^4o_17o_18o_6o_2o_015 +$
$2o_5o_8cs^2o_17o_18v_2^2o_6^2o_2o_015 + 4o_5cs^4o_17o_18o_6^2o_2o_015 + 4o_5^2cs^4o_17o_18o_6o_2o_015 - 2o_5^2o_8cs^2o_17v_1v_3o_18o_6^2o_20 - 8o_5o_8cs^2v_1v_3o_18o_6^2o_20$

$C_{24} = 4o_5o_17v_1^2v_3o_18o_6o_15 - 2o_5o_8v_1v_3^2o_18o_6o_20 + 2o_5o_8o_17v_1^2v_3o_6o_15 - o_5o_8o_17v_1^2v_3o_18o_6o_20 - 4o_5v_1v_3^2o_18o_6o_2o_015 -$
$2o_5o_8v_1v_3^2o_18o_2o_015 - 2o_5o_8o_17v_1v_3^2o_2o_015 + 2o_8cs^2o_17v_1o_18o_6o_2o_015 - 2o_5o_8o_17v_1^2v_3o_18o_2o_015 + 4o_5cs^2o_17v_1o_18o_6o_2o_015 +$
$2o_8cs^2o_7v_3o_18o_6o_20 - 2o_5o_8cs^2o_17v_1o_6o_15 + 4o_5o_8cs^2o_17v_1o_15 + 4o_5v_1v_3^2o_18o_2o_015 - 4cs^2o_17v_3o_18o_6o_15 - 2o_8o_17v_1v_3^2o_18o_6o_15 +$
$4cs^2v_1o_18o_6o_2o_015 + 4o_5o_17v_1v_3^2o_18o_6o_2o_015 + o_5o_8cs^2o_17v_1o_18o_6o_20 - 4o_5cs^2o_17v_1o_18o_6o_15 + 2o_8o_17v_1v_3^2o_18o_6o_2o_015 +$
$2o_5o_8cs^2o_17v_1o_18o_2o_015 + 4o_5cs^2v_3o_18o_6o_2o_015 + 4cs^2o_17v_3o_18o_6o_2o_015 - 4v_1^2v_3o_18o_6o_2o_015 + 2o_8cs^2o_17v_3o_18o_6o_15 + 4o_17v_1v_3^2o_18o_6o_15 -$
$4o_8v_1^2v_3o_18o_6o_2o_015 - 2o_5o_8cs^2o_17v_1o_2o_015 - 4o_8cs^2o_17v_3o_6o_2o_015 + o_5o_8o_17v_1o_18o_6o_2o_015 + 4o_8cs^2v_1o_18o_6o_2o_015 + 2o_5o_8cs^2o_17v_1o_6o_2o_015 -$
$2o_5o_8o_17v_1^2v_3o_18o_6o_15 + 2o_5o_8cs^2v_3o_18o_2o_015 - 2o_5o_8o_17v_1v_3^2o_6o_15 + 4o_5o_17v_1^2v_3o_18o_2o_015 + 4o_5o_8cs^2o_17v_3o_18o_15 +$
$2o_5o_8o_17v_1^2v_3o_2o_015 + 4o_8v_1^2v_3o_18o_6o_2o_015 + 2o_5o_8cs^2v_3o_18o_6o_20 - 2o_8o_17v_1^2v_3o_18o_6o_2o_015 + 2o_5o_8cs^2o_17v_1o_18o_6o_15 +$
$4v_1v_3^2o_18o_6o_2o_015 - 4o_5cs^2o_17v_1o_18o_2o_015 - 2o_5o_8cs^2v_3o_18o_6o_2o_015 - 2o_8o_17v_1v_3^2o_18o_6o_20 - 4o_5cs^2o_17v_3o_18o_15 - o_5o_8o_17v_1^2v_3o_6o_2o_015 -$
$4o_5o_17v_1^2v_3o_18o_6o_2o_015 - 4o_5cs^2v_3o_18o_2o_015 - 2o_5o_8v_1^2v_3o_18o_6o_2o_015 + 4o_5cs^2v_1o_18o_2o_015 - 4o_5v_1v_3^2o_18o_6o_2o_015 - 4o_5v_1^2v_3o_18o_2o_015 +$
$4o_5cs^2o_17v_1o_18o_15 - o_5o_8o_17v_1v_3^2o_18o_6o_2o_015 + 2o_8o_17v_1^2v_3o_18o_6o_15 - 4o_5o_17v_1^2v_3o_18o_15 + 4o_5cs^2o_17v_3o_18o_2o_015 - 4o_5o_8o_17v_1^2v_3o_15 +$
$2o_5o_8cs^2v_1o_18o_6o_2o_015 - 2o_5o_8cs^2o_17v_3o_18o_6o_15 - 4o_5o_8cs^2o_17v_1o_18o_15 + 2o_5o_8v_1^2v_3o_18o_2o_015 + 4o_17v_1^2v_3o_18o_6o_2o_015 -$
$2o_5o_8cs^2v_1o_18o_6o_20 + 2o_5o_8o_17v_1^2v_3o_18o_6o_2o_015 + 2o_5o_8v_1^2v_3o_18o_6o_20 - 4o_5o_17v_1^2v_3o_18o_6o_15 + o_5o_8o_17v_1v_3^2o_18o_6o_20 - 2o_5o_8cs^2v_1o_18o_2o_015 -$
$4o_8cs^2o_17v_3o_18o_6o_20 - o_5o_8cs^2o_17v_1o_18o_6o_2o_015 + 4o_8cs^2v_3o_18o_6o_2o_015 - o_5o_8cs^2o_17v_1o_6o_2o_015 + 4o_5o_8o_17v_1^2v_3o_15 +$
$2o_5o_8cs^2o_17v_3o_2o_015 + 4o_5o_8o_17v_1v_3^2o_15 - 2o_8cs^2o_17v_1o_18o_6o_15 - 2o_5o_8cs^2o_17v_3o_18o_2o_015 + 4o_5o_17v_1v_3^2o_18o_15 - o_5o_8o_17v_3o_18o_6o_20 -$
$4cs^2o_17v_1o_18o_6o_2o_015 - 4o_5cs^2v_1o_18o_6o_2o_015 + 4o_5cs^2o_17v_3o_18o_6o_15 + 4o_5v_1^2v_3o_18o_6o_2o_015 + o_5o_8o_17v_1v_3^2o_6o_2o_015 -$
$4cs^2v_3o_18o_6o_2o_015 + 2o_5o_8v_1v_3^2o_18o_6o_2o_015 + 2o_8o_17v_1^2v_3o_18o_6o_20 + 4cs^2o_17v_1o_18o_6o_15 + o_5o_8o_17v_1^2v_3o_18o_6o_2o_015 -$
$4o_5o_8cs^2o_17v_3o_15 + 2o_5o_8cs^2o_17v_3o_6o_15 - 4o_5cs^2o_17v_3o_18o_6o_2o_015 - 4o_5o_8o_17v_1v_3^2o_18o_15 - 2o_8cs^2o_17v_1o_18o_6o_20 + 4o_8v_1v_3^2o_18o_6o_20 -$
$4o_17v_1^2v_3o_18o_6o_15 - 4o_17v_1v_3^2o_18o_6o_2o_015 - 4o_5o_17v_1v_3^2o_18o_2o_015 - 2o_8cs^2o_17v_3o_18o_6o_2o_015 + 2o_5o_8o_17v_1v_3^2o_18o_6o_15$

$$C_{25} = 8o_5v_1v_3o_18v_2^2o_2o_15 - 4o_5o_17v_1^2o_18v_2^2o_6o_2o_15 - o_5o_8o_17v_1^2v_2^2o_6o_2o_15 + 2o_5o_8o_17v_1v_3o_18v_2^2o_6o_2o_2 + 2o_5o_8cs^2o_17v_2^2o_2o_15 -$$
$$4o_5o_17v_1^2o_18v_2^2o_15 + 4o_5o_8o_17v_1v_3o_18v_2^2o_2o_15 - 2o_5o_8cs^2o_18v_2^2o_6o_2o_15 - 4o_5o_8cs^2v_1v_3o_18o_2o_15 - 4cs^2v_1^2o_18o_6o_2o_15 -$$
$$4o_5o_8cs^2v_1v_3o_18o_6o_2o_20 - 4o_5o_8cs^2o_17v_1v_3o_6o_2o_15 - 2o_8o_17v_1^2o_18v_2^2o_6o_2o_15 + 8cs^2o_17v_1v_3o_18o_6o_15 + 8v_1v_3o_18v_2^2o_6o_2o_15 -$$
$$4o_5cs^2v_1^2o_18o_2o_15 - 4cs^2o_17o_18v_2^2o_6o_15 + 2o_8cs^2o_17v_1^2o_18o_6o_15 - 8o_17v_1v_3o_18v_2^2o_6o_2o_15 + 4o_5o_8o_17v_1^2o_18v_2^2o_15 +$$
$$4o_8v_1^2o_18v_2^2o_6o_2o_15 - 4o_5cs^2o_17v_1^2o_18o_6o_2o_15 + 2o_8cs^2o_17o_18v_2^2o_6o_2o_2 + 8o_17v_1v_3o_18v_2^2o_6o_15 - 2o_5o_8o_17v_1^2o_18v_2^2o_2o_15 +$$
$$2o_5o_8cs^2v_1^2o_18o_2o_15 + 2o_5o_8cs^2o_17v_1v_3o_18o_6o_2o_2 + 2o_5o_8o_17v_1v_3v_2^2o_6o_2o_15 - 8o_5o_8o_17v_1v_3o_18v_2^2o_15 - o_5o_8o_17v_1^2o_18v_2^2o_6o_2o_2 -$$
$$2o_8cs^2o_17v_1^2o_18o_6o_2o_15 + 4o_5o_17v_1^2o_18v_2^2o_6o_15 - 4o_5o_8cs^2o_17v_2^2o_15 + o_5o_8cs^2o_17o_18v_2^2o_6o_2o_2o_15 + 4o_5o_8cs^2o_17v_1v_3o_18o_2o_15 +$$
$$2o_5o_8cs^2v_1^2o_18o_6o_2o_2 + 8o_5cs^2v_1v_3o_18o_2o_15 + 4o_5cs^2o_18v_2^2o_6o_2o_15 + 4cs^2o_17o_18v_2^2o_6o_2o_15 - 4o_5cs^2o_18v_2^2o_2o_15 -$$
$$4cs^2o_17v_1^2o_18o_6o_15 - 8o_5cs^2v_1v_3o_18o_6o_2o_2o_15 - 8cs^2o_17v_1v_3o_18o_6o_2o_2o_15 - 4v_1^2o_18v_2^2o_6o_2o_2o_15 - 4o_5o_8cs^2o_17v_1v_3o_2o_15 -$$
$$4o_5cs^2o_17v_1^2o_18o_15 + 2o_5o_8cs^2o_17v_1v_3o_6o_2o_2o_15 - 4o_5o_8o_17v_1^2v_2^2o_15 + 4o_5o_8o_17v_1v_3o_18v_2^2o_2o_15 - 4o_5o_8v_1v_3o_18v_2^2o_2o_15 -$$
$$8o_8cs^2v_1v_3o_18o_6o_2o_2o_15 - 4o_5o_8v_1v_3o_18v_2^2o_6o_2o_2 + 2o_5o_8cs^2o_17v_2^2o_6o_15 + 4o_5o_17v_1^2o_18v_2^2o_2o_15 + 4o_5o_8cs^2o_17v_1v_3o_18o_6o_15 +$$
$$2o_5o_8cs^2o_18v_2^2o_6o_2o_2 + 4o_5o_8v_1v_3o_18v_2^2o_6o_2o_15 + 8o_5o_17v_1v_3o_18v_2^2o_15 + 2o_5o_8cs^2o_18v_2^2o_2o_15 - 2o_5o_8o_17v_1^2o_18v_2^2o_6o_15 +$$
$$4o_5o_8cs^2o_17v_1^2o_18o_15 + 2o_8cs^2o_17v_1^2o_18o_6o_2o_2 + 4o_8cs^2v_1^2o_18o_6o_2o_2o_15 - 4o_8v_1^2o_18v_2^2o_6o_2o_2 + 2o_8cs^2o_17o_18v_2^2o_6o_15 -$$
$$2o_8cs^2o_17o_18v_2^2o_6o_2o_2o_15 + 8o_8v_1v_3o_18v_2^2o_6o_2o_2 + o_5o_8cs^2o_17v_1^2o_18o_6o_2o_2o_15 - 4o_8cs^2o_17v_1v_3o_18o_6o_2o_2 + 2o_5o_8cs^2o_17v_1^2o_2o_15 -$$
$$4o_8cs^2o_18v_2^2o_6o_2o_2 + 2o_5o_8v_1^2o_18v_2^2o_6o_2o_2 + 8o_5o_17v_1v_3o_18v_2^2o_6o_2o_2o_15 + 8cs^2v_1v_3o_18o_6o_2o_2o_15 + 8o_5o_8cs^2o_17v_1v_3o_15 +$$
$$2o_5o_8v_1^2o_18v_2^2o_2o_15 - 4o_5cs^2o_17o_18v_2^2o_6o_2o_2o_15 - 8o_5cs^2o_17v_1v_3o_18o_2o_15 - 2o_5o_8cs^2o_17o_18v_2^2o_6o_15 - 8o_5o_8cs^2o_17v_1v_3o_18o_15 -$$
$$2o_5o_8cs^2o_17v_1^2o_18o_2o_15 - 4o_5o_8o_17v_1v_3v_2^2o_6o_15 + o_5o_8o_17v_1^2o_18v_2^2o_6o_2o_2o_15 + 4o_8o_17v_1v_3o_18v_2^2o_6o_2o_15 - 2o_5o_8cs^2v_1^2o_18o_6o_2o_2o_15 -$$
$$o_5o_8cs^2o_17v_1^2o_18o_6o_2o_2 + 4o_5v_1^2o_18v_2^2o_6o_2o_2o_15 + 4o_5cs^2o_17v_1^2o_18o_2o_15 + 4o_5cs^2o_17o_18v_2^2o_2o_15 - 4cs^2o_18v_2^2o_6o_2o_15 -$$
$$8o_5o_17v_1v_3o_18v_2^2o_2o_15 + 2o_8o_17v_1^2o_18v_2^2o_6o_15 - 4o_5v_1^2o_18v_2^2o_2o_15 - 4o_8v_1v_3o_18v_2^2o_6o_2o_2o_15 - 2o_5o_8o_17v_1v_3o_18v_2^2o_6o_2o_2o_15 +$$
$$2o_5o_8o_17v_1^2v_2^2o_6o_15 + 4o_5o_8cs^2o_17o_18v_2^2o_15 + 8o_5o_8o_17v_1v_3o_18v_2^2o_15 - 8o_5v_1v_3o_18v_2^2o_6o_2o_2o_15 - 8o_5cs^2o_17v_1v_3o_18o_6o_15 +$$
$$8o_8cs^2v_1v_3o_18o_6o_2o_2 + 4o_8cs^2o_17v_1v_3o_18o_6o_2o_2o_15 - o_5o_8cs^2o_17v_2^2o_6o_2o_2o_15 + 4o_8cs^2o_18v_2^2o_6o_2o_2o_15 - 4o_8cs^2v_1^2o_18o_6o_2o_2 -$$
$$4o_17v_1^2o_18v_2^2o_6o_2o_15 + 2o_5o_8cs^2o_17v_1^2o_6o_2o_15 - o_5o_8cs^2o_17v_1^2o_6o_2o_2o_15 - 2o_5o_8o_17v_1v_3o_18v_2^2o_6o_2o_2o_15 + 4o_17v_1^2o_18v_2^2o_6o_2o_2o_15 -$$
$$8o_8v_1v_3o_18v_2^2o_6o_2o_2o_15 - 4o_8cs^2o_17v_1v_3o_18o_6o_15 + 2o_5o_8o_17v_1^2v_2^2o_2o_15 + 4o_5o_8cs^2v_1v_3o_18o_6o_2o_2o_15 + 2o_8o_17v_1^2o_18v_2^2o_6o_2o_2 -$$
$$4o_5cs^2o_17o_18v_2^2o_15 - 4o_8o_17v_1v_3o_18v_2^2o_6o_2o_15 + 4o_5cs^2o_17o_18v_2^2o_6o_15 + 4o_5cs^2o_17v_1^2o_18o_2o_15 + 8o_5cs^2o_17v_1v_3o_18o_15 -$$
$$8o_5o_17v_1v_3o_18v_2^2o_6o_15 - o_5o_8cs^2o_17o_18v_2^2o_6o_2o_2o_2 + 4cs^2o_17v_1^2o_18o_6o_2o_2o_15 + 4o_5cs^2v_1^2o_18o_6o_2o_2o_15 - 2o_5o_8v_1^2o_18v_2^2o_6o_2o_2o_15 -$$
$$4o_5o_8cs^2o_17v_1^2o_15 + 8o_5cs^2o_17v_1v_3o_18o_6o_2o_2o_15 - 2o_5o_8cs^2o_17v_1^2o_18o_6o_15 - 2o_5o_8cs^2o_17o_18v_2^2o_2o_15 - 4o_5o_8o_17v_1v_3v_2^2o_2o_2o_15$$

$$C_{26} = -12o_1 3o_9v_3^2o_18^2o_2^2 - 3o_1 3o_9v_3^3o_18o_6^2o_2^2o_1 1 - 12o_18^2o_6^2o_1 1 - 6o_1 3o_18^2o_6^2o_2^2 - 9o_1 3o_9cs^2o_18o_6^2o_2^2o_1 1 - 12o_1 3o_9o_18^2o_2^2o_1 1 -$$
$$18o_1 3o_9o_18^2o_6o_2^2 - 18o_1 3o_9o_18o_6o_2^2o_1 1 - 5o_1 3o_9v_3^2o_18^2o_6^2o_2^2 - 12o_9o_18^2o_6^2o_2^2 - 15o_1 3o_9cs^2o_18^2o_6^2o_2^2 - 36o_1 3o_9cs^2o_18o_2^2o_1 1 -$$
$$12o_1 3o_9v_3^2o_18o_2^2o_1 1 + 12v_3^2o_18^2o_6^2o_1 1 + 36cs^2o_18^2o_6^2o_1 1 - 12o_9v_3^2o_18^2o_6o_2^2 - 36o_9cs^2o_18^2o_6o_2^2 + 12o_9v_3^2o_18^2o_6o_1 1 - 12o_1 3o_9v_3^2o_6o_2^2o_1 1 -$$
$$36o_1 3o_9cs^2o_6o_2^2o_1 1 + 36o_9cs^2o_18^2o_6o_1 1 - 12v_3^2o_18^2o_6^2o_2^2 - 36cs^2o_18^2o_6^2o_2^2 + 12o_9o_18^2o_6^2o_1 1 + 6o_1 3o_9v_3^2o_18^2o_6^2o_1 1 + 18o_1 3o_9cs^2o_18^2o_6^2o_1 1 -$$
$$36o_1 3o_9cs^2o_18^2o_6o_2^2o_1 1 - 12o_1 3o_9v_3^2o_18^2o_6o_2^2o_1 1 + 12o_1 3o_9o_18^2o_6o_1 1 + 36o_1 3o_9cs^2o_18o_6o_1 1 + 12o_1 3o_9v_3^2o_18o_6o_1 1 - o_1 3o_9o_18^2o_6^2o_2^2o_1 1 +$$
$$6o_1 3o_9o_18o_6^2o_1 1 - 6o_1 3o_9o_6^2o_2^2o_1 1 + 6o_1 3o_18^2o_6^2o_1 1 + 12o_18^2o_6^2o_2^2 - 36o_1 3o_9cs^2o_18^2o_2^2 - 6o_1 3o_9v_3^2o_18^2o_6^2o_1 1 - 18o_1 3o_9cs^2o_18o_6^2o_1 1 +$$
$$6o_1 3o_9v_3^2o_6^2o_2^2o_1 1 + 18o_1 3o_9cs^2o_6^2o_2^2o_1 1 - 12o_1 3o_9o_18o_6o_1 1 + o_1 3o_9o_18^2o_6^2o_2^2o_1 1 + 3o_1 3o_9cs^2o_18^2o_6^2o_2^2o_1 1 - 36o_9cs^2o_18^2o_6^2o_1 1 -$$
$$12o_9v_3^2o_18^2o_6^2o_1 1 - 36o_1 3o_9cs^2o_18^2o_6o_1 1 - 12o_9o_18^2o_6o_1 1 - 12o_1 3o_9v_3^2o_18^2o_6o_1 1 + 6o_1 3v_3^2o_18^2o_6^2o_2^2 + 18o_1 3cs^2o_18^2o_6^2o_2^2 +$$
$$12o_1 3o_9o_6o_2^2o_1 1 - 6o_1 3o_9o_18^2o_6^2o_1 1 + 12o_1 3o_9o_18^2o_6o_2^2o_1 1 + 12o_1 3o_9o_18o_2^2o_1 1 + 5o_1 3o_9o_18^2o_6^2o_2^2 + 54o_1 3o_9cs^2o_18o_6o_2^2o_1 1 -$$
$$6o_1 3v_3^2o_18^2o_6^2o_1 1 + 18o_1 3o_9v_3^2o_18o_6o_2^2o_1 1 - 18o_1 3cs^2o_18^2o_6^2o_1 1 + 54o_1 3o_9cs^2o_18^2o_6o_2^2 + 18o_1 3o_9v_3^2o_18^2o_6o_2^2 + 12o_9o_18^2o_6o_2^2 +$$
$$36o_9cs^2o_18^2o_6^2o_2^2 + 12o_9v_3^2o_18^2o_6^2o_2^2 + 3o_1 3o_9o_18o_6^2o_2^2o_1 1 + 36o_1 3o_9cs^2o_18^2o_2^2o_1 1 + 12o_1 3o_9o_18^2o_2^2 + 12o_1 3o_9v_3^2o_18^2o_2^2o_1 1$$

$$C_{27} = -3o_1 3o_9v_3^2o_18o_6^2o_2^2o_1 1 - 5o_1 3o_9cs^2o_18o_6^2o_2^2o_1 1 - 18o_1 3o_9o_18o_6^2o_2^2 - 12o_9cs^2o_18o_6^2o_2^2 - 36o_9v_3^2o_18o_6^2o_2^2 - 12o_1 3o_9cs^2o_18o_6o_2^2 -$$
$$36o_1 3o_9v_3^2o_18o_6o_2^2 - 6o_1 3o_9cs^2o_6^3o_1 1 + 6o_1 3cs^2o_18o_6^3o_2^2 + 18o_1 3v_3^2o_18o_6^3o_2^2 - 6o_1 3o_9o_18o_6^3o_1 1 - 36o_9v_3^2o_18o_6^3o_1 1 - 12o_9cs^2o_18o_6^3o_1 1 -$$
$$12o_1 3o_9cs^2o_18o_2^2o_1 1 + 6o_1 3o_9cs^2o_6^3o_2^2o_1 1 + 18o_1 3o_9v_3^2o_6^3o_2^2o_1 1 - 12o_1 3o_9o_6^2o_1 1 + 36o_1 3o_9v_3^2o_6o_2^2o_1 1 + 12o_1 3o_9cs^2o_6o_2^2o_1 1 +$$
$$12o_1 3o_9cs^2o_6^2o_1 1 + 36o_9cs^2o_18o_6^3o_2^2 + 12o_9cs^2o_18o_6^3o_2^2 + 5o_1 3o_9o_18o_6^3o_2^2 - 6o_1 3cs^2o_18o_6^3o_1 1 - 18o_1 3v_3^2o_18o_6^3o_1 1 + 6o_1 3o_9o_6^3o_1 1 +$$
$$12o_9cs^2o_18o_6^2o_1 1 + 36o_9v_3^2o_18o_6^2o_1 1 + 12o_1 3o_9o_18o_6^2o_1 1 + 18o_1 3o_9o_6^2o_2^2o_1 1 - 36o_1 3o_9v_3^2o_18o_6^2o_1 1 - 12o_9o_18o_6^2o_1 1 - 12o_1 3o_9cs^2o_18o_6^2o_1 1 -$$
$$54o_1 3o_9v_3^2o_6^2o_2^2o_1 1 - 18o_1 3o_9cs^2o_6^2o_2^2o_1 1 - 6o_1 3o_18o_6^3o_2^2 - 12o_18o_6^3o_1 1 - 18o_1 3o_9v_3^2o_6^3o_1 1 - 5o_1 3o_9cs^2o_18o_6^3o_2^2 - 12o_9o_18o_6^3o_2^2 -$$
$$15o_1 3o_9v_3^2o_18o_6^3o_2^2 + 12cs^2o_18o_6^3o_1 1 + 36v_3^2o_18o_6^3o_1 1 - o_1 3o_9cs^2o_18o_6^3o_2^2o_1 1 - 12o_1 3o_9o_6o_2^2o_1 1 + 36o_1 3o_9v_3^2o_6^2o_1 1 +$$
$$18o_1 3o_9cs^2o_18o_6o_2^2o_1 1 - 6o_1 3o_9o_6^3o_2^2o_1 1 - 12cs^2o_18o_6^3o_2^2 - 36v_3^2o_18o_6^3o_2^2 + 6o_1 3o_9cs^2o_18o_6^3o_1 1 + 18o_1 3o_9v_3^2o_18o_6^3o_1 1 + 12o_9o_18o_6^3o_1 1 +$$
$$o_1 3o_9o_18o_6^3o_2^2o_1 1 + 12o_18o_6^3o_2^2 + 12o_1 3o_9o_18o_6o_2^2 + 6o_1 3o_18o_6^3o_1 1 + 12o_9o_18o_6^2o_2^2 + 54o_1 3o_9v_3^2o_18o_6^2o_2^2 + 18o_1 3o_9cs^2o_18o_6^2o_2^2$$

$$C_{28} = -72v_3^2o_18o_6^2 - 3cs^4o_18^2o_6^3 + 12cs^2o_18^2o_6 - 72cs^2v_3^2o_18o_6^3 + 24cs^4o_18^2o_6^2 + 30v_3^2o_18o_6^3 + 144cs^2v_3^2o_18o_6^2 + 72v_3^4o_18o_6^2 + cs^2o_18^2o_6^3 +$$
$$72cs^2v_3^2o_18o_6 + 36v_3^4o_6^3 - 48cs^4o_18^2o_6 - 216cs^2v_3^2o_6^2 - 72v_3^4o_6^2 - 8cs^2o_18^2o_6^2 - 30v_3^4o_18o_6^3 + 108cs^2v_3^2o_6^3 + 24cs^2o_18o_6^2 + 3v_3^4o_18^2o_6^3 -$$
$$12v_3^4o_18^2o_6^2 - 6cs^2o_18o_6^3 - 36cs^2v_3^2o_18o_6 + 24cs^4o_18o_6 - 24cs^4o_18o_6^2 + 72v_3^2o_6^2 - 3v_3^2o_18^2o_6^3 - 12cs^2v_3^2o_18^2o_6^2 + 12v_3^2o_18^2o_6^2 - 36v_3^2o_6^3 +$$
$$6cs^4o_18o_6^3 - 24cs^2o_18o_6 + 6cs^2v_3^2o_18^2o_6^3 + 24cs^4o_18^2$$

2.5.4 Conservation of momentum: ρv_2

📎 attached text file: `output_d3q27_nse_clbm2_symbolic_pde_02.txt`

$$v_2\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_2}{\partial t} + \frac{\delta_l v_1 v_2}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{\delta_l\rho v_2}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l\rho v_1}{\delta_t}\frac{\partial v_2}{\partial x_1} + (v_2^2 + cs^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{2\delta_l\rho v_2}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_3 v_2}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{\delta_l\rho v_3}{\delta_t}\frac{\partial v_2}{\partial x_3} +$$
$$\frac{\delta_l\rho v_2}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 + o_5)\frac{\delta_l^2 cs^2}{2o_5\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_1} + (-2 + o_5)\frac{\delta_l^2 cs^2}{2o_5\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_2} +$$

$$
\begin{aligned}
&(-2 - 2cs^2 o_{10} + 6v_2^2 + 4cs^2 - 3v_2^2 o_{10} + o_{10})\frac{\delta_l^2}{\delta_t o_{10}}\frac{\partial \rho}{\partial x_2}\frac{\partial v_2}{\partial x_2} + (2 - o_{10})\frac{3\delta_l^2 \rho v_2}{\delta_t o_{10}}\left(\frac{\partial v_2}{\partial x_2}\right)^2 + (-2 + o_7)\frac{\delta_l^2 cs^2}{2\delta_t o_7}\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_2} + \\
&(-2 + o_7)\frac{\delta_l^2 cs^2}{2\delta_t o_7}\frac{\partial \rho}{\partial x_3}\frac{\partial v_2}{\partial x_3} + (-2 + o_5)\frac{\delta_l^2 cs^2 \rho}{2o_5 \delta_t}\frac{\partial^2 v_2}{\partial x_1^2} + (-2 + o_5)\frac{\delta_l^2 cs^2 \rho}{2o_5 \delta_t}\frac{\partial^2 v_1}{\partial x_1 \partial x_2} + \\
&(-2 - 3cs^2 o_{10} + 2v_2^2 + 6cs^2 - v_2^2 o_{10} + o_{10})\frac{\delta_l^2 v_2}{2\delta_t o_{10}}\frac{\partial^2 \rho}{\partial x_2^2} + (-2 - cs^2 o_{10} + 6v_2^2 + 2cs^2 - 3v_2^2 o_{10} + o_{10})\frac{\delta_l^2 \rho}{2\delta_t o_{10}}\frac{\partial^2 v_2}{\partial x_2^2} + \\
&(-2 + o_7)\frac{\delta_l^2 cs^2 \rho}{2\delta_t o_7}\frac{\partial^2 v_3}{\partial x_2 \partial x_3} + (-2 + o_7)\frac{\delta_l^2 cs^2 \rho}{2\delta_t o_7}\frac{\partial^2 v_2}{\partial x_3^2} + (-1 + v_1^2 + 3cs^2)\frac{\delta_l^3 v_1 v_2}{12\delta_t}\frac{\partial^3 \rho}{\partial x_1^3} + (-1 + 3v_1^2 + cs^2)\frac{\delta_l^3 \rho v_2}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + \\
&C_1 \frac{\delta_l^3 \rho v_1}{6o_5 o_1 2\delta_t}\frac{\partial^3 v_2}{\partial x_1^3} + (-12 + 12o_5 - o_5^2)\frac{\delta_l^3 cs^4}{6o_5^2 \delta_t}\frac{\partial^3 \rho}{\partial x_1^2 \partial x_2} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} + C_2 \frac{\delta_l^3 \rho v_2}{12o_1 5o_5 \delta_t o_1 0^2}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + C_3 \frac{\delta_l^3}{12\delta_t o_1 0^2}\frac{\partial^3 \rho}{\partial x_2^3} + \\
&(-24 + 5cs^2 o_1 0^2 - 36cs^2 o_1 0 + 60v_2^2 + 11v_2^2 o_1 0^2 + 36cs^2 - 60v_2^2 o_1 0 + 24o_1 0 - 4o_1 0^2)\frac{\delta_l^3 \rho v_2}{6\delta_t o_1 0^2}\frac{\partial^3 v_2}{\partial x_2^3} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} + \\
&C_4 \frac{\delta_l^3 \rho v_2}{12\delta_t o_7 o_1 6o_1 0^2}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} + (-12 - o_7^2 + 12o_7)\frac{\delta_l^3 cs^4}{6\delta_t o_7^2}\frac{\partial^3 \rho}{\partial x_2 \partial x_3^2} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} + \\
&(-1 + v_3^2 + 3cs^2)\frac{\delta_l^3 v_3 v_2}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + C_5 \frac{\delta_l^3 \rho v_3}{6\delta_t o_1 9o_7}\frac{\partial^3 v_2}{\partial x_3^3} + (-1 + 3v_3^2 + cs^2)\frac{\delta_l^3 \rho v_2}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} + \\
&(-6v_1^2 - 3v_1^4 o_9 + 2cs^4 - cs^4 o_9 + 3v_1^2 o_9 - 2cs^2 + 24cs^2 v_1^2 + 6v_1^4 + cs^2 o_9 - 12cs^2 v_1^2 o_9)\frac{\delta_l^4 v_2}{24\delta_t o_9}\frac{\partial^4 \rho}{\partial x_1^4} + \\
&(-4 + 10v_1^2 - 5v_1^2 o_9 + 2o_9 + 6cs^2 - 3cs^2 o_9)\frac{\delta_l^4 \rho v_1 v_2}{12\delta_t o_9}\frac{\partial^4 v_1}{\partial x_1^4} + C_6 \frac{\delta_l^4 \rho}{24o_5^3 o_1 2^2 \delta_t}\frac{\partial^4 v_2}{\partial x_1^4} + C_7 \frac{\delta_l^4 cs^2 v_1}{12o_1 5o_5^2 o_2 1o_1 2^2 \delta_t o_9 o_1 0}\frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} + \\
&C_8 \frac{\delta_l^4 cs^2 \rho}{12o_1 5o_5^3 o_2 1o_1 2\delta_t o_9 o_1 0}\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + \\
&(-o_1 2 + 3cs^2 o_1 2 + 3cs^2 o_1 2o_9 + o_1 2v_1^2 o_9 - 3v_1^2 o_9 + 3o_9 - 9cs^2 o_9 - o_1 2o_9 + o_1 2v_1^2)\frac{\delta_l^4 \rho v_1 v_2}{12o_1 2\delta_t o_9}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + \\
&C_9 \frac{\delta_l^4 cs^2 v_2}{12o_1 5^2 o_5^2 o_2 1o_1 2\delta_t o_1 0^3}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} + C_{10} \frac{\delta_l^4 cs^2 \rho}{12o_1 5o_5^3 o_2 1o_1 2\delta_t o_1 0^2}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} + C_{11} \frac{\delta_l^4 \rho}{12o_1 5^2 o_5^3 \delta_t o_1 0^3}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} + C_{12} \frac{\delta_l^4 v_2}{12\delta_t o_1 0^3}\frac{\partial^4 \rho}{\partial x_2^4} + \\
&C_{13} \frac{\delta_l^4 \rho}{12\delta_t o_1 0^3}\frac{\partial^4 v_2}{\partial x_2^4} + \\
&(-o_9 o_1 3 + v_1^2 o_1 3 + 3cs^2 o_9 o_1 3 + 3cs^2 o_1 3 - 3v_1^2 o_9 + 3o_9 - 9cs^2 o_9 + v_1^2 o_9 o_1 3 - o_1 3)\frac{\delta_l^4 \rho v_1 v_2}{12\delta_t o_9 o_1 3}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} + \\
&C_{14} \frac{\delta_l^4 cs^4 \rho}{12o_8 o_1 5o_5^3 o_1 7o_1 2\delta_t o_7^2 o_6 o_1 6o_1 0o_1 4}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + C_{15} \frac{\delta_l^4 \rho}{12\delta_t o_7^2 o_1 6^2 o_1 0^3}\frac{\partial^4 v_3}{\partial x_3^2 \partial x_3} + C_{16} \frac{\delta_l^4}{12o_8 o_5 o_1 2\delta_t o_1 9o_7 o_6 o_2 0o_1 4}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + \\
&C_{17} \frac{\delta_l^4 \rho}{4o_8 o_5 o_1 2\delta_t o_1 9o_7 o_2 0o_1 4}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} + C_{18} \frac{\delta_l^4 \rho}{4o_8 o_5^2 o_1 2\delta_t o_1 9o_7^2 o_2 0o_1 4}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_3^2} + C_{19} \frac{\delta_l^4 \rho v_3}{2o_8 o_5 o_1 2\delta_t o_1 9o_7 o_2 0o_1 4}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + \\
&C_{20} \frac{\delta_l^4}{2o_8 o_2 3o_1 5o_5 o_1 7\delta_t o_1 9o_7 o_2 0o_1 6o_1 0}\frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} + C_{21} \frac{\delta_l^4 \rho}{12o_8 o_2 3o_1 5o_5^2 o_1 7\delta_t o_1 9o_7^3 o_6 o_2 0o_1 6o_1 0}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + \\
&C_{22} \frac{\delta_l^4 \rho v_2}{o_8 o_2 3o_1 5o_5 o_1 7\delta_t o_1 9o_7 o_2 0o_1 6o_1 0}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} + C_{23} \frac{\delta_l^4 \rho}{2o_8 o_2 3o_1 5o_5 o_1 7\delta_t o_1 9o_7 o_2 0o_1 6o_1 0}\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} + \\
&C_{24} \frac{\delta_l^4 cs^2 v_2}{12o_2 3\delta_t o_1 9o_7^2 o_1 6^2 o_1 0^3}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} + C_{25} \frac{\delta_l^4 cs^2 \rho}{12o_2 3\delta_t o_1 9o_7^3 o_1 6o_1 0^2}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + \\
&(-9cs^2 o_1 1 + 3cs^2 o_1 8o_1 1 + 3cs^2 o_1 8 - o_1 8o_1 1 + o_1 8v_3^2 o_1 1 - o_1 8 - 3v_3^2 o_1 1 + 3o_1 1 + o_1 8v_3^2)\frac{\delta_l^4 \rho v_3 v_2}{12o_1 8\delta_t o_1 1}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + \\
&C_{26} \frac{\delta_l^4 cs^2 v_3}{12o_2 3\delta_t o_1 9^2 o_7^2 o_1 1o_1 6o_1 0}\frac{\partial^4 \rho}{\partial x_2 \partial x_3^3} + \\
&(-9cs^2 o_1 1 + o_1 9v_3^2 o_1 1 + o_1 9v_3^2 - o_1 9 + 3cs^2 o_1 9o_1 1 + 3cs^2 o_1 9 - 3v_3^2 o_1 1 + 3o_1 1 - o_1 9o_1 1)\frac{\delta_l^4 \rho v_3 v_2}{12\delta_t o_1 9o_1 1}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} + \\
&C_{27} \frac{\delta_l^4 cs^2 \rho}{12o_2 3\delta_t o_1 9o_7^3 o_1 1o_1 6o_1 0}\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} + \\
&(cs^2 o_1 1 - 3v_3^4 o_1 1 - 6v_3^2 + 2cs^4 - cs^4 o_1 1 + 6v_3^4 - 2cs^2 + 24cs^2 v_3^2 + 3v_3^2 o_1 1 - 12cs^2 v_3^2 o_1 1)\frac{\delta_l^4 v_2}{24\delta_t o_1 1}\frac{\partial^4 \rho}{\partial x_3^4} + \\
&C_{28} \frac{\delta_l^4 \rho}{24\delta_t o_1 9^2 o_7^3}\frac{\partial^4 v_2}{\partial x_3^4} + (-4 - 3cs^2 o_1 1 + 10v_3^2 + 6cs^2 - 5v_3^2 o_1 1 + 2o_1 1)\frac{\delta_l^4 \rho v_3 v_2}{12\delta_t o_1 1}\frac{\partial^4 v_3}{\partial x_3^4} = 0,
\end{aligned}
$$

where:

$C_1 = 6 - 6v_1^2 - 3o_5 + o_5 o_1 2 + 9o_5 cs^2 - 3o_1 2 - 3o_5 cs^2 o_1 2 + 9cs^2 o_1 2 - 18cs^2 + 3o_5 v_1^2 - o_5 o_1 2v_1^2 + 3o_1 2v_1^2$

$C_2 = 12o_1 5o_5 v_2^2 - 11o_1 5o_5 cs^2 o_1 0^2 - 12o_5 o_1 0^2 - 36cs^2 o_1 0^2 + 36o_5 cs^2 o_1 0^2 + 6o_1 5v_2^2 o_1 0^2 - 36o_5 cs^2 o_1 0 - 6o_1 5o_1 0^2 + 12o_5 o_1 0 - 18o_1 5o_5 cs^2 o_1 0 - 12o_1 5o_5 + 3o_1 5o_5 o_1 0^2 - 3o_1 5o_5 v_2^2 o_1 0^2 + 12o_5 v_2^2 o_1 0^2 - 12v_2^2 o_1 0^2 + 18o_1 5cs^2 o_1 0^2 + 36o_1 5o_5 cs^2 - 12o_5 v_2^2 o_1 0 - 6o_1 5o_5 v_2^2 o_1 0 + 12o_1 0^2 + 6o_1 5o_5 o_1 0$

$C_3 = 7v_2^4 o_1 0^2 - cs^2 o_1 0^2 + 12cs^2 o_1 0 + 12cs^4 - 36v_2^4 o_1 0 - 36v_2^2 + cs^4 o_1 0^2 + 144cs^2 v_2^2 - 7v_2^2 o_1 0^2 + 36v_2^4 - 144cs^2 v_2^2 o_1 0 - 12cs^2 + 24cs^2 v_2^2 o_1 0^2 + 36v_2^2 o_1 0 - 12cs^4 o_1 0$

$C_4 = -18cs^2 o_7 o_1 6o_1 0 - 36cs^2 o_1 0^2 - 11cs^2 o_7 o_1 6o_1 0^2 - 12o_7 o_1 0^2 + 12o_7 v_2^2 o_1 6 + 12o_7 v_2^2 o_1 0^2 - 12o_7 o_1 6 - 3v_2^2 o_1 6o_1 0^2 - 6o_1 6o_1 0^2 - 36cs^2 o_7 o_1 0 - 12v_2^2 o_1 0^2 + 3o_7 o_1 6o_1 0^2 + 6o_7 o_1 6o_1 0 - 12o_7 v_2^2 o_1 0 - 6o_7 v_2^2 o_1 6o_1 0 + 36cs^2 o_7 o_1 0^2 + 6v_2^2 o_1 6o_1 0^2 + 36cs^2 o_7 o_1 6 + 12o_1 0^2 + 18cs^2 o_1 6o_1 0^2 + 12o_7 o_1 0$

$$C_5 = 6 + 3o_7v_3^2 - 3cs^2o_19o_7 + o_19o_7 + 3o_19v_3^2 - 6v_3^2 - 3o_19 + 9cs^2o_19 - 3o_7 - o_19o_7v_3^2 + 9cs^2o_7 - 18cs^2$$

$$\begin{aligned}
C_6 = &\ 144o_5^2cs^2o_12v_1^2 - 6o_5^3cs^2o_12 - 12o_5^2o_12^2v_1^4 - 216o_5^2cs^2v_1^2 + 12o_5cs^2o_12^2 - 24o_5^2cs^4o_12 + 72o_5^2v_1^2 - 72o_5^2o_12v_1^2 - 36o_5^3v_1^2 - 30o_5^3o_12v_1^4 - \\
& 3o_5^3o_12^2v_1^2 + 24o_5^2cs^4o_12^2 - 72o_5^3cs^2o_12v_1^2 + o_5^3cs^2o_12^2 - 36o_5cs^2o_12^2v_1^2 - 24o_5cs^2o_12 + 30o_5^3o_12v_1^2 + 6o_5^3cs^2o_12^2v_1^2 + 72o_5cs^2o_12v_1^2 + \\
& 36o_5^3v_1^4 + 6o_5cs^4o_12 - 48o_5cs^4o_12^2 + 24cs^4o_12^2 + 24o_5^2cs^2o_12 + 3o_5^3o_12^2v_1^4 + 108o_5^3cs^2v_1^2 - 8o_5^2cs^2o_12^2 - 72o_5^2v_1^4 + 12o_5^2o_12^2v_1^2 - \\
& 3o_5^3cs^4o_12^2 + 24o_5cs^4o_12 + 72o_5^2o_12v_1^4 - 12o_5^2cs^2o_12^2v_1^2
\end{aligned}$$

$$\begin{aligned}
C_7 = &\ -36o_15cs^2o_21o_12o_9o_10 - 18o_15o_5^2cs^2o_12o_9o_10 - 6o_15o_5^2o_12v_1^2o_9o_10 - 6o_15o_5^2o_12^2o_9o_10 - 12o_15o_5o_21o_12^2v_1^2o_9o_10 - 36o_5cs^2o_12^2o_9o_10 - \\
& 36o_15cs^2o_21o_12^2o_10 - 36o_15o_5cs^2o_21o_9o_10 + 12o_15o_21o_12o_9o_10 - 12o_5^2o_12^2o_10 - 9o_15o_5^2cs^2o_21o_12o_9o_10 + 18o_15o_5^2cs^2o_21o_9o_10 + \\
& 12o_15o_5o_12v_1^2o_9o_10 + 18o_15o_5^2cs^2o_21o_12^2 + 36o_15o_5cs^2o_12o_9o_10 + 36o_5cs^2o_12^2o_9o_10 - 5o_15o_5^2o_21o_12^2v_1^2o_10 + 6o_15o_5^2o_21v_1^2o_9o_10 + \\
& 12o_15o_5o_21o_12^2o_9o_10 + 12o_15o_21o_12^2v_1^2o_9o_10 + 54o_15o_5cs^2o_21o_12o_9o_10 + 5o_15o_5^2o_21o_12^2o_10 + 36o_5^2cs^2o_21o_12^2o_10 - 12o_5o_12^2v_1^2o_9o_10 - \\
& 12o_15o_5o_12o_9o_10 - 6o_15o_5^2o_21o_12^2 - 36o_5cs^2o_21o_12^2 + o_15o_5^2o_21o_12^2v_1^2o_9o_10 + 12o_5^2o_12^2o_9o_10 + 12o_5o_12^2v_1^2o_9o_10 + 12o_5^2o_21o_12^2 - \\
& 12o_15o_5o_21v_1^2o_9o_10 - o_15o_5^2o_21o_12^2o_9o_10 + 18o_15o_5o_21o_12^2v_1^2o_10 - 36o_5cs^2o_21o_12^2o_10 + 12o_15o_5o_21o_9o_10 - 15o_15o_5^2cs^2o_21o_12^2o_10 - \\
& 36o_15o_5cs^2o_21o_12^2o_9o_10 + 12o_15o_21o_12^2o_10 + 12o_5^2o_21o_12^2v_1^2o_10 - 18o_15o_5o_21o_12o_9o_10 + 6o_15o_5^2o_12^2v_1^2o_9o_10 + 18o_15o_5o_21o_12v_1^2o_9o_10 + \\
& 12o_15o_5o_12^2o_9o_10 - 18o_15o_5^2cs^2o_12^2o_9 - 12o_15o_5o_12^2v_1^2o_9o_10 + 12o_5o_21o_12^2o_10 - 6o_15o_5o_12^2v_1^2o_9 + 54o_15o_5cs^2o_21o_12^2o_10 - \\
& 12o_5o_21o_12^2v_1^2o_10 + 3o_15o_5^2o_21o_12o_9o_10 - 12o_5^2o_12^2v_1^2 + 6o_15o_5^2o_12o_9o_10 + 18o_15o_5^2cs^2o_12^2o_9o_10 + 36o_15cs^2o_21o_12^2o_9o_10 - 12o_5^2o_12^2o_9 - \\
& 18o_15o_5o_21o_12^2o_10 - 12o_15o_21o_12o_12^2v_1^2o_10 + 12o_5^2o_12^2v_1^2o_9 - 12o_15o_21o_12o_12v_1^2o_9o_10 + 6o_15o_5^2o_21o_12^2v_1^2 + 3o_15o_5^2cs^2o_21o_12^2o_9o_10 - \\
& 12o_15o_21o_12^2o_9o_10 - 6o_15o_5^2o_21o_9o_10 - 12o_5o_12^2o_9o_10 - 3o_15o_5^2o_21o_12v_1^2o_9o_10 - 36o_15o_5cs^2o_12^2o_9o_10 + 6o_15o_5^2o_12^2o_9 + 36o_5^2cs^2o_12^2o_9
\end{aligned}$$

$$\begin{aligned}
C_8 = &\ -12o_15cs^2o_21o_12o_9o_10 - 12o_15o_5^2cs^2o_12o_9o_10 - 36o_15o_5^2o_12v_1^2o_9o_10 - 18o_15o_5^3o_12v_1^2o_9 - 6o_15o_5^2cs^2o_12o_9 - 12o_5^3cs^2o_12o_9o_10 - \\
& 36o_5^3o_12v_1^2o_9o_10 + 12o_15o_5cs^2o_21o_9o_10 + 6o_15o_5^3cs^2o_21o_12 - 5o_15o_5^2cs^2o_21o_12o_9o_10 - 18o_15o_5^2cs^2o_21o_9o_10 + 12o_15o_5o_21o_12o_10 - \\
& 36o_5^3o_21o_12v_1^2 + 36o_15o_5^3v_1^2o_9o_10 - 54o_15o_5^2o_21v_1^2o_9o_10 - 12o_5^3cs^2o_21o_12 - 36o_5^2o_21o_12v_1^2o_10 + 18o_15o_5cs^2o_21o_12o_9o_10 - 12o_15o_5cs^2o_21o_12o_10 + \\
& 18o_15o_5^3o_21o_12v_1^2 - 18o_15o_5^3v_1^2o_9o_10 - 15o_15o_5^3o_21o_12v_1^2o_10 + 18o_15o_5^2cs^2o_21o_12o_10 + 6o_15o_5^3o_9o_10 + 36o_15o_5o_5v_1^2o_9o_10 + \\
& 12o_5^3cs^2o_21o_12o_10 + 12o_5^3cs^2o_12o_9 + 36o_5^3o_12v_1^2o_9 - 12o_15o_5o_21o_9o_10 - 6o_15o_5^3o_21o_9o_10 + 54o_15o_5^2o_21o_12v_1^2o_10 - 6o_15o_5^3o_21o_12 + \\
& 18o_15o_5^3o_21v_1^2o_9o_10 - o_15o_5^3o_21o_12o_9o_10 + 36o_15o_5^2o_12v_1^2o_10 - 12o_5^3o_12o_9 - 12o_5^3o_21o_12o_10 - 12o_5^2o_21o_9o_10 - 12o_5^2cs^2o_21o_12o_10 - \\
& 18o_15o_5^2o_21o_12o_10 + 12o_5^3o_21o_12 + 6o_15o_5^3o_12o_9 - 6o_15o_5^3o_12o_9o_10 - 5o_15o_5^3cs^2o_21o_12o_10 + o_15o_5^2o_21o_12o_9o_10 + 12o_15o_5cs^2o_9o_10 - \\
& 36o_15o_5o_21o_12v_1^2o_10 + 36o_5^2o_12v_1^2o_9o_10 + 12o_15o_5^2o_12o_9o_10 + 12o_5^2cs^2o_12o_9o_10 + 5o_15o_5^3o_21o_12o_10 + 12o_5^3o_12o_9o_10 + 12o_5^2o_21o_12o_10 + \\
& 18o_15o_5^3o_12v_1^2o_9o_10 - 6o_15o_5^3cs^2o_9o_10 + 6o_15o_5^3cs^2o_12o_9o_10 - 12o_5^2o_5o_9o_10 + 18o_15o_5^2o_21o_9o_10 - 3o_15o_5^3o_21o_12v_1^2o_9o_10 + 6o_15o_5^3cs^2o_21o_9o_10
\end{aligned}$$

$$\begin{aligned}
C_9 = &\ -36o_15^2o_5cs^2o_21o_20o_10^3 - 12o_15o_5o_21o_20o_10^3 - 36o_15^2o_5^2cs^2o_21o_12o_20o_10 + 12o_5o_21o_12o_20o_10^3 + 54o_15o_5cs^2o_21o_12o_20o_10^3 + \\
& 54o_15o_5cs^2o_21o_20o_12o_10^2 - 6o_15o_5^2o_21o_12v_2^2o_10^3 + 12o_15^2o_5o_21o_10^2 + 18o_15^2o_5^2cs^2o_21o_10^2 + 12o_15^2o_5v_2^2o_10^3 + 18o_15o_5o_21o_12v_2^2o_10^3 - \\
& 12o_15^2o_5^2o_21o_12v_2^2o_10 + 36o_15o_5cs^2o_21o_20o_10^3 + 18o_15o_5^2o_21o_12v_2^2o_10^2 - 18o_15o_5^2cs^2o_21o_12o_20o_10^3 + 12o_15o_21o_12o_20o_10^3 - 12o_15^2o_5o_21o_12v_2^2o_10^3 + \\
& 12o_15o_5o_21o_12v_2^2o_10^2 + 54o_15^2o_5cs^2o_21o_12o_20o_10^2 - 12o_15o_5o_21o_12v_2^2o_10 + 6o_15^2o_5^2o_21v_2^2o_10^2 - 6o_15^2o_5^2o_21o_20o_10^3 + 5o_15^2o_5^2cs^2o_21o_12o_20o_10^3 + \\
& 6o_15^2o_5^2o_21v_2^2o_10^3 - 2o_15^2o_5^2o_21o_12v_2^2o_10^2 + 12o_15^2o_5o_21o_12o_20o_10^3 - 36o_15o_5^2cs^2o_21o_12o_20o_10 - 12o_15o_5^2o_21o_12v_2^2o_10^3 - 40o_15^2o_5cs^2o_21o_12o_20o_10^3 - \\
& 18o_15^2o_5^2cs^2o_21o_10^3 - 18o_15o_5o_21o_12o_20o_10^3 - 12o_15^2o_5o_21o_10^3 + 12o_15^2o_5^2o_21o_12v_2^2 + 18o_15^2o_5o_21o_12v_2^2o_10^2 + o_15^2o_5^2o_21o_12v_2^2o_10^3 - \\
& 18o_15^2o_5o_21o_12o_20o_10^2 - 6o_15^2o_5^2cs^2o_21o_12o_20o_10 - 6o_15^2o_5^2o_21v_2^2o_10^2 + 36o_15^2o_5^2cs^2o_21o_12 + 6o_15^2o_5^2o_21o_20o_10^2 - 12o_15o_21o_12v_2^2o_10^3 + \\
& 36o_15o_5^2cs^2o_21o_20o_10^2 + 12o_15^2o_21o_12o_20o_10^2 + 6o_15^2o_5^2o_10^3 - 12o_5^2o_21o_12o_20o_10^3 + 12o_15^2o_5^2o_21o_12o_20o_10 + 36o_15^2cs^2o_21o_12o_20o_10^3 + \\
& 18o_15^2o_5^2cs^2o_21o_20o_10^3 - 12o_15^2o_21o_12v_2^2o_10^2 + 12o_15o_5o_21o_20o_10^3 + 36o_15^2o_5cs^2o_20o_10^3 - 12o_15^2o_21o_12o_20o_10^3 - 36o_15cs^2o_21o_12o_20o_10^3 + \\
& 12o_15o_5o_20o_10^3 - 36o_5^2o_5cs^2o_21o_12o_20o_10^3 - 18o_15^2o_5^2cs^2o_21o_12o_20o_10^3 - 12o_15^2o_5^2o_5o_21o_12 - \\
& 36o_15^2o_5cs^2o_21o_10^2 + 12o_5o_21o_12o_20o_10^2 - 12o_15^2o_5o_21v_2^2o_10^3 - 36o_5cs^2o_21o_12o_20o_10^3 - o_15^2o_5^2o_21o_12o_20o_10^3 - 12o_15^2o_5o_21v_2^2o_10^2 + \\
& 12o_15o_5^2o_21o_20o_10^3 - 18o_15o_5^2o_21o_12o_20o_10^2 - 36o_5cs^2o_21o_12o_20o_10^2 + 12o_5o_21o_12v_2^2o_10^3 - 12o_15o_5^2o_21o_20o_10^2 + 2o_15^2o_5^2o_21o_12o_20o_10^2 - \\
& 6o_15^2o_5^2v_2^2o_10^3 - 6o_15^2o_5^2o_21o_10^2 - 12o_5o_21o_12v_2^2o_10^3 + 12o_15o_5o_21v_2^2o_10^3 - 12o_5^2o_21o_12v_2^2o_10^2 + 6o_15o_5^2o_21o_12o_20o_10^3 + 36o_5^2cs^2o_21o_12o_20o_10^3
\end{aligned}$$

$$\begin{aligned}
C_{10} = &\ 12o_5^3cs^2o_21o_12o_20o_10^2 + 12o_15o_5^2o_21o_10o_10 + 6o_15o_5^3cs^2o_21o_10o_10 - 12o_5^3o_12o_20o_10 - 4o_15o_5^2cs^2o_21o_12o_20o_10^2 - 36o_15o_5^2o_21v_2^2o_10 + \\
& 36o_5^2o_12v_2^2o_10^2 + 6o_15o_5^3o_12o_20o_10 + 18o_15o_5cs^2o_21o_12o_20o_10^2 - 12o_5o_21o_12o_20o_10^2 + 6o_15o_5^3cs^2o_21o_12 + 18o_15o_5^3o_12v_2^2o_10^2 + 36o_5^3o_21o_12v_2^2o_10^2 + \\
& 12o_5^3cs^2o_21o_12 + 6o_15o_5^3o_10^2 + 18o_15o_5^3o_21o_12v_2^2 + 12o_15o_5o_21o_10o_10 + 36o_5^3o_12v_2^2o_10 - 36o_5o_5o_21v_2^2o_10^2 + 72o_15o_5^2o_21o_12v_2^2o_10 - \\
& 12o_15o_5^2cs^2o_21o_12 - 36o_5^3o_12v_2^2o_10 - 12o_15o_5cs^2o_21o_12o_10o_10 - 6o_15o_5^3cs^2o_21o_10o_10 - 36o_5^3o_12o_20o_10 - 18o_15o_5^3o_12v_2^2o_10 - 36o_5o_5o_21o_12v_2^2 + \\
& 36o_15o_5^2v_2^2o_10^2 + 24o_15o_5^2cs^2o_21o_12o_10o_10 - 12o_15o_5^2cs^2o_21o_10 + 12o_5^3o_12o_10^2 - 12o_15o_5^2o_10^3 - 6o_15o_5^3cs^2o_10^2 - 12o_5^3cs^2o_21o_12o_10o_10 - \\
& 36o_15o_5o_21o_12v_2^2o_10 + 18o_15o_5^3o_21v_2^2o_10 + 36o_5^2o_21o_12v_2^2o_10 - 12o_15o_5cs^2o_21o_10o_10^2 - 12o_15cs^2o_21o_12o_10o_10^2 - 12o_5^3cs^2o_21o_10o_10^2 - \\
& 18o_15o_5^3o_21o_12v_2^2o_10 - 6o_15o_5^3o_21o_12 - 6o_15o_5^3cs^2o_21o_10o_10 + 12o_5^3o_21o_12o_10o_10 + 12o_5^2cs^2o_21o_12o_10o_10 - 24o_15o_5^2o_21o_12o_10o_10 - 6o_15o_5^3o_21o_10o_10 - \\
& 6o_15o_5^3cs^2o_21o_12o_10o_10 + 24o_5^2o_21o_12o_20o_10^2 + 36o_5o_5o_21o_12v_2^2o_10^2 + 6o_15o_5^3o_21o_12o_10o_10 - o_15o_5^3cs^2o_21o_12o_10o_10^2 - 12o_5^2o_21o_12o_10o_10 - \\
& 12o_5^3o_21o_12o_10o_10^2 - 12o_5^3o_12o_10o_10^2 + 12o_15o_5^2cs^2o_10o_10^2 - 24o_5^2cs^2o_21o_12o_10o_10^2 + 12o_5^2cs^2o_21o_12o_10o_10^2 + 12o_15o_5^2o_21o_12o_10o_10^2 - 18o_15o_5^3v_2^2o_10^2 + \\
& 12o_5cs^2o_21o_12o_10o_10^2 + 6o_15o_5^3cs^2o_12o_10o_10 - 72o_5^2o_21o_12v_2^2o_10^2 + 12o_5^3cs^2o_12o_20o_10
\end{aligned}$$

$$\begin{aligned}
C_{11} = &\ -24o_15^2o_5cs^4o_10o_10^3 + 90o_15^2o_5^3v_2^2o_10o_10 + 18o_15^2o_5^2cs^2v_2^2o_10o_10^2 + 54o_15o_5cs^2v_2^2o_10o_10^3 - 306o_15^2o_5^3cs^2v_2^2o_10o_10 + 108o_5^3cs^2v_2^2o_10o_10^3 - \\
& 3o_15^2o_5^2cs^2v_2^2o_10o_10^3 - 108o_15o_5^3cs^2v_2^2o_10o_10 - 12o_15^2o_5^3cs^4o_10o_10 + 12o_15^2o_5^2cs^2o_10o_10 - 108o_5^3cs^2v_2^2o_10o_10^2 - 36o_15o_5^3v_2^4o_10o_10 - 12o_15o_5cs^2o_10o_10^3 - \\
& 36o_15o_5^2cs^2v_2^2o_10o_10^2 + 36o_5^3v_2^2o_10o_10^3 - 6o_15^2o_5^2cs^2o_10o_10^2 - 6o_15o_5^3cs^2o_10o_10^3 - 6o_15^2o_5^2v_2^4o_10o_10^3 + 12o_15^2o_5^3cs^2v_2^2o_10o_10^3 + 72o_15o_5^3v_2^4o_10o_10^2 + 36o_5^3v_2^4o_10o_10^3 + \\
& o_15^2o_5^3cs^4o_10o_10^2 + 198o_15o_5^3cs^2v_2^2o_10o_10^2 - 18o_15o_5^3cs^4o_10o_10^3 - 4o_15^2o_5^3v_2^2o_10o_10^3 + 60o_15^2o_5^3cs^2v_2^2o_10o_10^2 - 39o_15^2o_5^3v_2^4o_10o_10^3 + 12o_15^2o_5^2cs^4 - \\
& 5o_15^2o_5^2cs^2o_10o_10^3 + 6o_15o_5^3cs^2o_10o_10^2 - 19o_15^2o_5^3v_2^2o_10o_10^2 + 252o_15^2o_5^3cs^2v_2^2 - 36o_15o_5^3v_2^2o_10o_10^3 - 108o_5^3cs^2v_2^2o_10o_10^3 - o_15^2o_5^3cs^4o_10o_10^3 - 36o_5^3v_2^4o_10o_10^2 + \\
& 12o_15o_5^3cs^4o_10o_10^2 - 36o_15^2o_5^2cs^2v_2^2o_10o_10 - 99o_15o_5^3cs^2v_2^2o_10o_10^3 - 72o_15^2o_5^3v_2^2 + 12o_15^2o_5^3cs^2o_10o_10 + 36o_15o_5cs^2v_2^2o_10o_10^3 - 12o_15^2o_5^2cs^4o_10o_10 + \\
& 36o_15o_5^3v_2^2o_10o_10 + 12o_15o_5cs^4o_10o_10^3 + 6o_15^2o_5cs^2o_10o_10^3 - 90o_15^2o_5^3v_2^4o_10o_10 + 72o_15^2o_5^3v_2^4 - 12o_15^2o_5^3cs^2 - 18o_15^2o_5cs^2v_2^2o_10o_10^3 + 39o_15o_5^3v_2^2o_10o_10^3 - \\
& 6o_15o_5^3cs^4o_10o_10^2 + 13o_15^2o_5^2cs^4o_10o_10^3 + 36o_15o_5^3v_2^2o_10o_10^3 + 19o_15^2o_5^3v_2^4o_10o_10^2 - 12o_15o_5cs^2o_10o_10^2 + 36o_5^3v_2^2o_10o_10^2 + 6o_15o_5^3cs^4o_10o_10^3 - 36o_5^3v_2^4o_10o_10^3 + \\
& 6o_15^2o_5^2cs^4o_10o_10^2 - 72o_15o_5^3v_2^2o_10o_10^2 + 6o_15^2o_5^2v_2^2o_10o_10^3 + 18o_15o_5cs^2o_10o_10^3 - 36o_5^3v_2^2o_10o_10^3 - o_15^2o_5^3cs^2o_10o_10^2 + 12o_15^2cs^4o_10o_10^3 + 4o_15^2o_5^3v_2^2o_10o_10^3
\end{aligned}$$

$$C_{12} = 12 + 90v_2^4 o_{10}^2 + 6cs^2 o_{10}^3 - 78cs^2 o_{10}^2 - 9v_2^4 o_{10}^3 + 198cs^2 o_{10} + 144cs^4 - 216v_2^4 o_{10} - 156v_2^2 + 82cs^4 o_{10}^2 + 10v_2^2 o_{10}^3 + 672cs^2 v_2^2 - 98v_2^2 o_{10}^2 + 144v_2^4 - 5cs^4 o_{10}^3 - 1008cs^2 v_2^2 o_{10} - 132cs^2 + 404cs^2 v_2^2 o_{10}^2 + 234v_2^2 o_{10} - o_{10}^3 - 18o_{10} - 34cs^2 v_2^2 o_{10}^3 - 216cs^4 o_{10} + 8o_{10}^2$$

$$C_{13} = 12 + 310v_2^4 o_{10}^2 + 2cs^2 o_{10}^3 - 22cs^2 o_{10}^2 - 29v_2^4 o_{10}^3 + 54cs^2 o_{10} + 24cs^4 - 756v_2^4 o_{10} - 252v_2^2 + 14cs^4 o_{10}^2 + 14v_2^2 o_{10}^3 + 432cs^2 v_2^2 - 154v_2^2 o_{10}^2 + 504v_2^4 - cs^4 o_{10}^3 - 648cs^2 v_2^2 o_{10} - 36cs^2 + 252cs^2 v_2^2 o_{10}^2 + 378v_2^2 o_{10} - o_{10}^3 - 18o_{10} - 18cs^2 v_2^2 o_{10}^3 - 36cs^4 o_{10} + 8o_{10}^2$$

$$
\begin{aligned}
C_{14} = {}& 12 o_8 o_{15} o_5 o_{17} o_{12} o_7 o_6 o_{16} o_{10} o_{14} - 12 o_8 o_5^2 o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} - 6 o_8 o_{15} o_5^3 o_{17} o_7 o_6 o_{16} o_{10} o_{14} - 12 o_8 o_5^3 o_{17} o_{12} o_7^2 o_6 o_{10} o_{14} \\
& + 12 o_{15} o_5^3 o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5^3 o_{17} o_{12} o_{16} o_{10} o_{14} - 12 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_{16} o_{14} - 12 o_{15} o_5^2 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} \\
& + 24 o_8 o_{15} o_5 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5^3 o_{17} o_{12} o_7 o_{10} o_{14} - 12 o_{15} o_5^3 o_{12} o_7 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5^3 o_{12} o_7^2 o_6 o_{10} o_{14} \\
& + 12 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} + 6 o_8 o_5 o_5^3 o_{17} o_{12} o_7 o_6 o_{16} o_{10} + 6 o_8 o_5 o_5^3 o_{17} o_{12} o_7 o_6 o_{16} o_{10} o_{14} - 12 o_8 o_{15} o_5^3 o_{17} o_7^2 o_6 o_{16} o_{10} \\
& - 12 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5 o_5^3 o_{17} o_{12} o_7^2 o_{16} o_{10} o_{14} - 12 o_{15} o_5^2 o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_5^2 o_{17} o_{12} o_7^2 o_{16} o_{10} o_{14} \\
& + 12 o_8 o_{15} o_5^2 o_{17} o_7 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_5^3 o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} - 12 o_8 o_5^3 o_{12} o_7^2 o_6 o_{16} o_{14} - 18 o_8 o_{15} o_5^3 o_{17} o_{12} o_7 o_{16} o_{10} o_{14} \\
& - o_8 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 12 o_{15} o_5^3 o_{17} o_{12} o_7 o_6 o_{16} o_{10} o_{14} + 12 o_{15} o_5^2 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5^3 o_{12} o_7^2 o_6 o_{16} o_{14} \\
& - 12 o_8 o_{15} o_5^3 o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} - 18 o_8 o_{15} o_5^2 o_{17} o_{12} o_7 o_6 o_{16} o_{10} o_{14} - 18 o_8 o_{15} o_5^2 o_{17} o_{12} o_7^2 o_{16} o_{10} o_{14} - 6 o_8 o_{15} o_5^3 o_{17} o_{12} o_6 o_{16} o_{10} o_{14} \\
& - 2 o_8 o_{15} o_5^2 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5^3 o_{12} o_7 o_6 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_{14} - 24 o_8 o_{15} o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} \\
& + 12 o_8 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} - 12 o_{15} o_5^3 o_{17} o_{12} o_7 o_6 o_{16} o_{10} - 12 o_8 o_{15} o_5^3 o_{12} o_7 o_6 o_{10} o_{14} - 6 o_8 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_6 o_{16} o_{10} + 12 o_8 o_5^3 o_{17} o_{12} o_7 o_{16} o_{14} \\
& - 12 o_8 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_{10} o_{14} + 10 o_8 o_{15} o_5^3 o_{17} o_{12} o_7^2 o_{16} o_{10} o_{14} + 12 o_8 o_{15} o_5^3 o_{12} o_7^2 o_6 o_{16} o_{10} o_{14} + 6 o_8 o_{15} o_5^3 o_{17} o_7 o_6 o_{16} o_{10} - 12 o_8 o_{15} o_5^3 o_{12} o_7 o_6 o_{14}
\end{aligned}
$$

$$
\begin{aligned}
C_{15} = {}& 108cs^2 o_7^3 v_2^2 o_{10}^3 - 18cs^4 o_7^2 o_{16} o_{10}^3 - 39 o_7^3 v_2^4 o_{16} o_{10}^3 + 60cs^2 o_7^3 v_2^2 o_{16}^2 o_{10}^2 - 12cs^4 o_7^3 o_{16}^2 o_{10} + 6cs^2 o_7^3 o_{16} o_{10}^2 - 36cs^2 o_7^2 v_2^2 o_{16}^2 o_{10} \\
& + 36 o_7^3 v_2^2 o_{16} o_{10} + 72 o_7^3 v_2^4 o_{16}^2 + 12cs^2 o_7^3 v_2^2 o_{16}^2 o_{10}^3 + 72 v_2^4 o_{16} o_{10}^2 - 24cs^4 o_7 o_{16}^2 o_{10}^3 - 108cs^2 o_7^3 v_2^2 o_{10}^2 - 36 o_7^2 v_2^2 o_{16} o_{10}^3 \\
& + 12cs^4 o_7^2 o_{16} o_{10}^2 + 12cs^2 o_7^2 o_{16}^2 o_{10} + 36cs^2 o_7 v_2^2 o_{16} o_{10}^3 - 12cs^2 o_7^2 o_{16}^2 - 6cs^2 o_7^3 o_{16} o_{10}^3 + 39 o_7^3 v_2^2 o_{16} o_{10}^3 - 6cs^2 o_7^2 o_{16}^2 o_{10}^2 - 12cs^2 o_7 o_{16} o_{10}^3 + 252cs^2 o_7^3 v_2^2 o_{16}^2 \\
& - 3cs^2 o_7^3 v_2^2 o_{16}^2 o_{10}^3 - 36 o_7^3 v_2^4 o_{10}^2 - cs^4 o_7^3 o_{16}^2 o_{10}^3 - 36 o_7^3 v_2^4 o_{16} o_{10} + 36 o_7^3 v_2^4 o_{10}^3 + 18cs^2 o_7^2 v_2^2 o_{16}^2 o_{10}^2 + 36 o_7^3 v_2^4 o_{16} o_{10}^3 \\
& - 72 o_7^3 v_2^2 o_{16} o_{10}^2 - 5cs^2 o_7^2 o_{16}^2 o_{10}^3 + 12cs^4 o_{16}^2 o_{10}^3 + 36 o_7^2 v_2^2 o_{10}^3 - 306cs^2 o_7^3 v_2^2 o_{16}^2 o_{10} + 12cs^4 o_7^3 o_{16}^2 + cs^4 o_7^3 o_{16}^2 o_{10}^2 + 36cs^2 o_7^2 v_2^2 o_{16}^2 o_{10}^2 - 72 o_7^3 v_2^2 o_{16}^2 + 12cs^2 o_7^3 o_{16}^2 o_{10} \\
& + 18cs^2 o_7^2 o_{16}^2 o_{10} - 19 o_7^3 v_2^2 o_{16}^2 o_{10}^2 - 6 o_7^2 v_2^4 o_{16}^2 o_{10}^3 - 6cs^4 o_7^3 o_{16} o_{10}^2 - 108cs^2 o_7^3 v_2^2 o_{16} o_{10} + 6cs^2 o_7 o_{16}^2 o_{10}^3 - 12cs^2 o_7^2 o_{16} o_{10}^2 - 4 o_7^3 v_2^2 o_{16}^2 o_{10}^3 + 54cs^2 o_7^2 v_2^2 o_{16} o_{10}^3 + 6cs^4 o_7^3 o_{16} o_{10}^3 - 108cs^2 o_7^2 v_2^2 o_{10}^3 \\
& - 12cs^4 o_7 o_{16}^2 o_{10} - 90 o_7^3 v_2^4 o_{16}^2 o_{10} - 36 o_7^3 v_2^2 o_{10}^3 - 99cs^2 o_7^3 v_2^2 o_{16} o_{10}^3 + 6cs^4 o_7^2 o_{16}^2 o_{10}^2 + 6 o_7^2 v_2^2 o_{16}^2 o_{10}^3 + 19 o_7^3 v_2^4 o_{16}^2 o_{10}^2 + 12cs^4 o_7 o_{16} o_{10}^3 \\
& - 18cs^2 o_7 v_2^2 o_{16}^2 o_{10}^3 - 36 o_7^3 v_2^4 o_{10}^3 + 4 o_7^3 v_2^4 o_{16}^2 o_{10}^3 + 13cs^4 o_7^2 o_{16}^2 o_{10}^3 + 198cs^2 o_7^3 v_2^2 o_{16} o_{10}^2 + 36 o_7^3 v_2^2 o_{10}^2 - cs^2 o_7^3 o_{16}^2 o_{10}^2 + 90 o_7^3 v_2^2 o_{16}^2 o_{10}
\end{aligned}
$$

$$
\begin{aligned}
C_{16} = {}& 12 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2^2 o_{20} - 12 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2^2 o_{14} - 3 o_8 o_5 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{20} o_{14} + 6 o_8 o_5 o_{12} o_{19} v_1 o_6 v_3^2 v_2^2 o_{20} \\
& + 12 o_8 o_5 cs^2 o_{12} v_1^2 o_6 v_2 o_{14} + 12 o_5 cs^2 o_{12} o_{19} v_1^2 o_6 v_2 o_{20} + 2 o_8 o_5 cs^4 o_{12} o_{19} o_7 o_6 v_2 o_{20} o_{14} - 6 o_8 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} \\
& - 6 o_8 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_2 o_{20} o_{14} - 12 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2 o_{20} - 6 o_8 o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 12 o_5 o_{12} o_{19} v_1 o_6 v_3^2 v_2^2 o_{14} \\
& + 6 o_8 o_5 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{20} o_{14} + 6 o_8 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 12 o_8 o_5 cs^2 o_{12} o_{19} v_1^2 o_6 v_2 o_{14} + 3 o_8 o_5 cs^2 o_{20} o_7 v_1^2 o_6 v_2 o_{20} o_{14} \\
& - 6 o_8 o_5 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} + 3 o_8 o_5 o_{19} o_7 o_6 v_3^2 v_2 o_{20} o_{14} - 12 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2 o_{20} o_{14} - 12 cs^2 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{20} o_{14} \\
& + 12 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_2^2 o_{20} o_{14} + 12 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} + 12 o_5 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} - 12 o_8 cs^2 o_{19} o_7 v_1 o_6 v_2^2 o_{20} \\
& - 12 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{14} - 3 o_8 o_5 o_{12} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} + 12 o_5 cs^2 o_{12} o_{19} o_6 v_3^2 v_2 o_{14} + 6 o_8 o_5 o_{12} v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} + 6 o_8 o_5 cs^2 o_{12} v_1 o_6 v_2 o_{20} o_{14} \\
& + 12 o_5 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{20} o_{14} + 3 o_8 o_5 o_{19} o_7 v_1^2 o_6 v_2 o_{20} o_{14} + 12 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{20} o_{14} - 6 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2^2 o_{20} \\
& - 6 o_8 cs^2 o_{19} o_7 o_6 v_3^2 v_2 o_{20} o_{14} - 12 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{14} - 12 o_8 o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} + 12 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} + 12 o_8 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} \\
& - 6 o_8 o_5 o_{12} o_{19} o_6 v_3^2 v_2 o_{20} + 3 o_8 o_5 cs^2 o_{19} o_7 v_1^2 o_6 v_2 o_{20} o_{14} + 6 o_8 o_5 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{14} + 6 o_8 o_5 cs^2 o_{12} v_1 o_6 v_3^2 v_2 o_{20} o_{14} \\
& + 3 o_8 cs^2 o_{20} o_7 o_6 v_3^2 v_2 o_{20} o_{14} + 12 o_5 o_{12} v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 6 o_8 o_7 o_6 v_3^2 v_2 o_{14} - 6 o_8 cs^2 o_{12} o_7 o_6 v_3^2 v_2 o_{14} - 12 o_5 o_{12} o_{19} v_1 o_6 v_3^2 o_{20} - 12 o_8 cs^2 o_{12} v_1 o_6 v_3^2 o_{14} + 12 o_8 o_{19} o_7 v_1^2 o_6 v_2 o_{20} \\
& + 12 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_3^2 o_{20} o_{14} - 12 o_5 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{14} + 12 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{20} - 12 o_8 o_5 o_{12} o_{19} v_1^2 o_6 v_3^2 v_2 o_{14} \\
& - 12 o_5 o_{12} o_{19} v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 3 o_8 o_5 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 3 o_8 o_5 cs^2 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{20} o_{14} + 12 o_8 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_3^2 o_{14} \\
& - 6 o_8 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_3^2 o_{20} o_{14} - 6 o_8 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{14} - 6 o_8 cs^2 o_{12} o_7 v_1^2 o_6 v_2 o_{20} o_{14} + 12 o_8 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_2 o_{14} \\
& - 6 o_8 o_5 cs^2 o_{19} o_7 o_6 v_3^2 v_2 o_{20} + 6 o_8 o_5 o_{12} o_{19} v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 12 o_8 cs^2 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{20} + 6 o_8 o_5 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{14} \\
& + 12 o_5 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{20} o_{14} - 12 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_2^2 o_{20} + 12 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} - 12 o_5 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{14} - 12 o_8 cs^2 o_{12} v_1 o_6 v_2^2 o_{14} \\
& - 12 o_8 o_5 o_{12} v_1 o_6 v_3^2 v_2^2 o_{14} + 6 o_8 o_5 o_{12} o_7 v_1 o_6 v_3^2 v_2^2 o_{14} + 12 cs^2 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{14} - 6 o_8 o_5 o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} - 12 o_5 cs^2 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{20} \\
& - 12 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{20} + 12 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} + 3 o_8 o_5 cs^2 o_{12} o_7 v_1 o_6 v_3^2 v_2 o_{20} o_{14} \\
& - 6 o_8 o_5 o_{12} v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 6 o_8 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{14} - 12 o_5 o_{12} o_{19} o_6 v_3^2 v_2 o_{20} o_{14} - 12 o_8 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{20} \\
& + 12 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} + 12 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{14} + 12 o_8 o_5 o_{12} o_{19} v_1 o_6 v_3^2 v_2^2 o_{14} - 6 o_8 o_5 cs^2 o_{12} v_1^2 o_6 v_2 o_{20} \\
& - 6 o_8 o_5 cs^2 o_{12} o_6 v_3^2 v_2 o_{20} o_{14} - 6 o_8 o_5 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{14} - 3 o_8 o_5 o_{12} o_7 v_1 o_6 v_3^2 o_{20} o_{14} - 12 o_5 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} \\
& - 3 o_8 o_5 o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} - 6 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} o_{14} + 6 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{14} + 6 o_8 cs^2 o_{19} o_7 v_1 o_6 v_2^2 o_{20} o_{14} \\
& - 12 o_5 o_{12} o_{19} v_1 o_6 v_3^2 v_2^2 o_{20} + 6 o_8 o_5 cs^2 o_{12} o_7 v_1 o_6 v_2 o_{14} + 3 o_8 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2^2 o_{20} o_{14} - 12 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} \\
& + 6 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{14} + 12 o_5 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{14} + 6 o_8 cs^2 o_{12} o_7 v_1 o_6 v_3^2 o_{14} + 12 o_5 cs^2 o_{12} o_{19} o_6 v_3^2 v_2 o_{20} + 12 o_8 o_5 cs^2 o_{12} o_6 v_3^2 v_2 o_{14} \\
& + 6 o_8 o_5 o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} + 12 o_8 o_5 o_{12} v_1^2 o_6 v_3^2 v_2 o_{14} - 6 o_8 o_5 o_{12} o_7 v_1^2 o_6 v_3^2 v_2 o_{14} + 12 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{20} o_{14} + 6 o_8 cs^2 o_{12} o_{19} o_6 v_3^2 v_2 o_{20} o_{14} \\
& + 12 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{14} + 6 o_8 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{14} - 6 o_8 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} - 3 o_8 o_5 o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} - 12 o_5 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} o_{14} \\
& - 6 o_8 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{14} + 6 o_8 o_5 cs^2 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{14} + 12 o_5 o_{12} o_{19} v_1^2 o_6 v_3^2 v_2 o_{14} - 12 o_8 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{20} \\
& - 6 o_8 o_5 o_{12} o_{19} v_1^2 o_6 v_3^2 v_2 o_{20} o_{14} - 12 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_3^2 o_{14} - 6 o_8 cs^2 o_{19} o_7 v_1^2 o_6 v_2 o_{20} + 6 o_8 o_5 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} \\
& - 12 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} o_{14} - 3 o_8 o_5 cs^2 o_{19} o_7 v_1 o_6 v_3^2 o_{20} o_{14} - 6 o_8 o_5 cs^2 o_{12} v_1^2 o_6 v_2 o_{20} o_{14} + 12 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{14} \\
& - 12 o_5 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{20} + 3 o_8 o_5 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_3^2 o_{20} o_{14} - 6 o_8 o_5 o_{12} o_{19} v_1^2 o_6 v_3^2 v_2 o_{20} + 6 o_8 o_5 o_{12} o_{19} v_1 o_6 v_3^2 o_{20} \\
& - 12 o_5 cs^2 o_{12} o_{19} v_1^2 o_6 v_2 o_{20} o_{14} + 12 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{20} o_{14} - 6 o_8 o_5 cs^2 o_{12} o_7 v_1^2 o_6 v_2 o_{14} - 3 o_8 o_5 cs^2 o_{12} o_7 v_1 o_6 v_2^2 o_{20} o_{14} \\
& - 6 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2 o_{14} + 6 o_8 o_5 cs^2 o_{12} o_{19} o_7 o_6 v_3^2 v_2 o_{20} + 6 o_8 cs^2 o_{19} o_7 v_1 o_6 v_3^2 o_{20} o_{14} - 6 o_8 cs^2 o_{12} o_{19} o_7 v_1 o_6 v_2^2 o_{20} o_{14} \\
& + 6 o_8 o_5 cs^2 o_{12} o_{19} v_1^2 o_6 v_2 o_{20} o_{14} + 12 o_8 o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} - 12 o_8 o_{12} o_{19} o_7 v_1^2 o_6 v_3^2 v_2 o_{20} + 6 o_8 o_5 cs^2 o_{12} o_{19} v_1 o_6 v_2^2 o_{20} \\
& + 12 o_5 o_{12} o_{19} v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} - 4 o_8 o_5 cs^4 o_{12} o_{19} o_7 v_2 o_{20} o_{14} + 3 o_8 o_5 o_{12} o_{19} o_7 v_1 o_6 v_3^2 v_2^2 o_{20} o_{14} - 12 o_5 cs^2 o_{12} o_{19} o_7 v_1^2 o_6 v_2 o_{14} +
\end{aligned}
$$

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$$12cs^2o_12o_19o_7v_1^2o_6v_2o_20 + 12o_8cs^2o_19o_7o_6v_3^2v_2o_20 - 12o_5cs^2o_12o_19v_1o_6v_2^2o_14 - 12o_5o_12o_19o_7v_1^2o_6v_3^2v_2o_20 + 12o_12o_19o_7v_1^2o_6v_3^2v_2o_14$$

$C_{17} = -4cs^2o_12o_19o_7v_3^2o_20 - 4o_5o_12o_19v_3^2v_2^2o_20 - o_8o_5cs^2o_12o_7v_3^2o_20o_14 + 8o_8o_5o_12v_1v_3^2v_2o_14 - 4o_8o_5o_12o_7v_1v_3^2v_2o_14 - 8o_5cs^2o_12o_19v_1v_2o_20o_14 + 2o_8o_5o_19o_7v_3^2v_2^2o_20 - 2o_8o_5cs^2o_12o_19v_3^2v_2o_20o_14 + 8o_5o_12o_19o_7v_1v_3^2v_2o_20o_14 + o_8o_5cs^2o_12o_19o_7v_3^2o_20o_14 - 4o_8o_5cs^2o_12v_3^2o_14 - 4o_5o_12o_19o_7v_3^2v_2^2o_20o_14 + 4o_5cs^2o_12o_19o_7v_2^2o_20 + 8cs^2o_12o_19o_7v_1v_2o_20 - 2o_8o_12o_19o_7v_3^2v_2^2o_20o_14 - 4o_8o_19o_7v_1v_3^2v_2o_20o_14 + 2o_8cs^2o_19o_7v_3^2o_20o_14 + 4o_8o_12o_19o_7v_1v_3^2v_2o_20o_14 + 4o_8cs^2o_12o_19o_7v_2^2o_20 - 8o_8o_5cs^2o_12o_19v_1v_2o_14 - 4o_8o_5o_19o_7v_1v_3^2v_2o_20 + 4o_5cs^2o_12o_19o_7v_3^2o_20 + 4o_8o_5o_12o_19v_1v_3^2v_2o_20o_14 + 4o_8cs^2o_12o_19o_7v_3^2o_20 - o_8o_5cs^2o_19o_7v_2^2o_20o_14 + 2o_8o_5o_12o_19v_3^2v_2^2o_20 - 4o_8o_19o_7v_3^2v_2^2o_20 - 2o_8o_5o_12o_19o_7v_3^2v_2^2o_14 + 8o_12o_19o_7v_1v_3^2v_2o_14 - 4o_8o_5cs^2o_12v_2^2o_14 + 4o_5cs^2o_12o_19v_3^2o_20o_14 - 2o_8o_5o_12o_19o_7v_1v_3^2v_2o_20o_14 - 4cs^2o_12o_19o_7v_2^2o_20 + 8o_5o_12o_19v_1v_3^2v_2o_14 + 4o_5cs^2o_12o_19o_7v_2^2o_20o_14 - 2o_8o_5cs^2o_12o_19o_7v_1v_2o_20o_14 - 4o_5cs^2o_12o_19v_2^2o_20 - 4o_12o_19o_7v_3^2v_2^2o_14 + 4o_1o_19o_7v_3^2v_2^2o_20o_14 - o_8o_5cs^2o_19o_7v_3^2o_20o_14 - 2o_8o_5cs^2o_12o_19o_7v_2^2o_20 - 8o_8cs^2o_12o_19o_7v_1v_2o_20 + 2o_8o_5cs^2o_12o_7v_2^2o_14 - 4o_8cs^2o_19o_7v_1v_2o_20o_14 + 2o_8o_5cs^2o_12o_19v_3^2o_20 - 4o_8o_5cs^2o_12o_7v_1v_2o_14 - 8o_5cs^2o_12o_19o_7v_1v_2o_20 + 4o_8cs^2o_12o_19o_7v_1v_2o_20o_14 + 2o_8o_5cs^2o_12o_19v_3^2o_20 + o_8o_5cs^2o_12o_19o_7v_2^2o_20o_14 - 4o_8o_12o_19o_7v_1v_3^2v_2o_14 + 2o_8o_12o_19o_7v_3^2v_2^2o_14 + 4o_5o_12o_19o_7v_3^2v_2^2o_14 + 2o_8o_5cs^2o_12o_7v_1v_2o_20o_14 + 8o_8o_19o_7v_1v_3^2v_2o_20 - 8o_5o_12o_19o_7v_1v_3^2v_2o_14 + 8o_5cs^2o_12o_19v_1v_2o_14 + 2o_8cs^2o_19o_7v_2^2o_20o_14 + 2o_8o_5cs^2o_12o_7v_3^2o_14 - 2o_8o_5cs^2o_12o_19o_7v_3^2o_20 - o_8o_5cs^2o_12o_7v_2^2o_20o_14 + 8o_5cs^2o_12o_19o_7v_1v_2o_20o_14 - 4o_8o_5o_12o_19v_1v_3^2v_2o_20 + 2o_8o_5o_12v_3^2v_2^2o_20o_14 - o_8o_5o_12o_7v_3^2v_2^2o_20o_14 + 4o_8o_5o_12o_19o_7v_1v_3^2v_2o_20 - 2o_8o_5cs^2o_12o_19v_3^2o_20o_14 - 4o_5cs^2o_12o_19v_3^2o_20 - 2o_8cs^2o_12o_19o_7v_3^2o_20o_14 - 2o_8o_5o_12o_19v_3^2v_2^2o_20o_14 - 4o_8o_5cs^2o_19o_7v_1v_2o_20 + 2o_8o_5cs^2o_12v_2^2o_20o_14 - 8o_12o_19o_7v_1v_3^2v_2o_20o_14 - 4o_5o_12o_19v_3^2v_2^2o_14 - 4cs^2o_12o_19o_7v_3^2o_14 - 4o_5cs^2o_12o_19o_7v_3^2o_20o_14 - 4o_8o_5o_12v_1v_2o_20o_14 + 2o_8o_5o_12o_19o_7v_1v_3^2v_2o_14 + o_8o_5o_12o_19o_7v_3^2v_2^2o_20o_14 + 4o_5cs^2o_12o_19o_7v_2^2o_14 + 8cs^2o_12o_19o_7v_1v_2o_14 + 2o_8cs^2o_12o_19o_7v_2^2o_14 + 4o_8o_5cs^2o_12o_19v_1v_2o_20o_14 + 2o_8o_19o_7v_3^2v_2^2o_20o_14 - 2o_8o_5o_12o_19o_7v_3^2v_2^2o_20 + 8o_12o_19o_7v_1v_3^2v_2o_20 - 4o_8o_5cs^2o_12o_19v_1v_2o_20 + 8o_8o_5cs^2v_1v_2o_14 + 4o_5cs^2o_12o_19o_7v_3^2o_14 + 4o_8o_5o_12o_19v_3^2v_2^2o_14 + 2o_8cs^2o_12o_19o_7v_3^2o_14 - 4cs^2o_12o_19o_7v_2^2o_14 + 8o_5o_12o_19v_1v_3^2v_2o_14 - 8o_5o_12o_19v_1v_3^2v_2o_20o_14 + 4cs^2o_12o_19o_7v_2^2o_20o_14 + 4o_8o_5cs^2o_12o_19o_7v_1v_2o_20 + 2o_8o_5cs^2o_19o_7v_1v_2o_20o_14 + 8o_8cs^2o_19o_7v_1v_2o_20 + 2o_8o_5cs^2o_19o_7v_3^2o_20 + 4cs^2o_12o_19o_7v_3^2o_20o_14 - 4o_12o_19o_7v_3^2v_2^2o_20 + 4o_5o_12o_19v_3^2v_2^2o_20o_14 - 4o_5cs^2o_12o_19v_2^2o_14 + 4o_8o_5cs^2o_12o_19v_3^2o_14 - 4o_8cs^2o_19o_7v_2^2o_20 + 2o_8o_5o_12o_7v_3^2v_2^2o_14 - 4o_8o_5o_12v_3^2v_2^2o_14 + 2o_8o_5o_12o_7v_1v_3^2v_2o_20o_14 - 4o_8o_5o_12v_1v_3^2v_2o_20o_14 - o_8o_5o_19o_7v_3^2v_2^2o_20o_14 - 8o_5cs^2o_12o_19o_7v_1v_2o_14 - 2o_8o_5cs^2o_12o_19o_7v_2^2o_14 - 4o_8cs^2o_12o_19o_7v_1v_2o_14 - 8o_5o_12o_19o_7v_1v_3^2v_2o_20 + 8o_5cs^2o_12o_19v_1v_2o_20 - 2o_8o_5cs^2o_12o_19o_7v_3^2o_14 - 8o_8o_12o_19o_7v_1v_3^2v_2o_20 - 4o_8cs^2o_19o_7v_3^2o_20 + 4o_8o_12o_19o_7v_3^2v_2^2o_20 + 4o_8o_5cs^2o_12o_19v_2^2o_14 + 4o_5o_12o_19o_7v_3^2v_2^2o_20 - 2o_8o_5cs^2o_12o_19o_7v_2^2o_20o_14 - 4o_8o_5o_12o_19o_7v_1v_3^2v_2o_14 + 2o_8o_5cs^2o_19o_7v_2^2o_20 + 2o_8o_5cs^2o_12v_3^2o_20o_14 - 4o_5cs^2o_12o_19v_3^2o_14 - 8cs^2o_12o_19o_7v_1v_2o_20o_14 - 4o_8cs^2o_12o_19o_7v_2^2o_20o_14 - 8o_8o_5o_12o_19v_1v_3^2v_2o_14$

$C_{18} = 4o_8o_5cs^2o_19o_7^2v_3^2o_20 - 2o_8o_5cs^4o_12o_7o_20o_14 + o_8o_5^2cs^2o_19o_7^2v_3^2o_20o_14 - 4o_5^2o_12o_19o_7v_1^2v_3^2o_20o_14 + o_8o_5^2o_12o_7^2v_1^2v_3^2o_20o_14 + 4o_8o_5^2cs^2o_12o_7v_3^2o_14 + 4o_8o_5^2cs^2o_12o_7^2v_1v_2o_14 - 4o_5cs^2o_12o_19o_7v_3^2o_20o_14 + 4o_5cs^2o_12o_19o_7v_1^2o_20 - 4o_5cs^4o_12o_19o_7^2o_14 - 8o_8o_5o_19o_7^2v_1v_3^2v_2o_20 - 2o_8o_5^2cs^4o_12o_19o_20o_14 - 4o_8o_5^2o_12o_19o_7v_1v_3^2v_2o_20o_14 + 4o_5cs^2o_12o_19o_7v_1^2o_20 - 4o_5cs^4o_12o_19o_7o_20 - 8o_5o_5o_19o_7^2v_1v_2o_20 - o_8o_5^2o_12o_19o_7v_1^2v_3o_14 + 2o_8o_5^2cs^2o_12o_19o_7v_1^2o_14 - 4o_5cs^2o_12o_19o_7v_3^2o_20o_14 + 8o_5o_12o_19o_7v_1v_3^2v_2o_20o_14 - 4o_5^2cs^2o_12o_19o_7^2v_3^2o_20 - 4o_8o_5^2o_12o_19o_7v_1^2v_3o_14 - 2o_8o_5^2o_12o_7v_1v_3^2v_2o_20o_14 - 2o_8o_5cs^2o_12o_19o_7^2v_3^2o_14 - 4o_8o_5o_12o_19o_7v_3^2o_14 - 4o_5^2cs^4o_12o_19o_7^2o_20o_14 - 2o_8o_5cs^2o_19o_7^2v_2^2o_20o_14 + 4o_8o_5cs^4o_12o_19o_7o_20o_14 + 2o_8o_5cs^4o_12o_19o_7^2o_14 - 2o_8o_5^2cs^2o_12o_7v_2^2o_20o_14 - 2o_8o_5^2o_19o_7^2v_1^2v_3^2o_20 + 2o_8o_5^2o_12o_19o_7^2v_1^2v_3^2o_20 + 2o_8o_5o_12o_19o_7^2v_1^2v_3o_20o_14 - 2o_8o_5^2o_12o_7v_1^2v_3o_20o_14 - 2o_8o_5cs^2o_12o_7^2v_1o_14 + 4o_5o_12o_19o_7^2v_1^2v_3o_14 + 4o_5^2o_12o_19o_7^2v_1^2v_3o_20o_14 + 2o_8o_5^2cs^4o_12o_19o_7o_20 - 8o_5^2cs^2o_12o_19o_7v_1v_2o_14 + 8o_5o_5o_12o_19o_7^2v_1v_2o_20o_14 + 4o_8o_5^2o_12o_7v_1v_3^2v_2o_20o_14 - 4o_8o_5^2cs^2o_12o_19o_7v_1v_2o_14 + 2o_8o_5^2cs^4o_19o_7^2o_20 + 8o_5o_12o_19o_7v_1v_3^2v_2o_20 - 8o_5o_12o_19o_7v_1v_3^2v_2o_20o_14 + 8o_8o_5o_12o_19o_7^2v_1v_3^2v_2o_20 - 8o_5o_5cs^2o_12o_19o_7v_1v_2o_14 + 8o_5^2cs^2o_12o_19o_7v_1v_2o_20 + 4o_8o_5o_19o_7^2v_1^2v_3o_20 - 2o_8o_5^2cs^4o_12o_19o_7o_14 + o_8o_5^2cs^2o_12o_7^2v_3^2o_20o_14 + 4o_8o_5^2cs^2o_12o_19o_7v_1v_2o_20 - 4o_5cs^2o_12o_19o_7v_1^2o_14 - 4o_8o_5o_12o_19o_7^2v_1v_3^2v_2o_14 - 8o_5o_12o_19o_7^2v_1v_3^2v_2o_14 - 2o_8o_5^2cs^2o_12o_19o_7v_1^2o_20 + 2o_8o_5^2o_12o_19o_7^2v_1v_2o_20o_14 - 4o_8o_5o_12o_19o_7v_1^2v_3o_20o_14 + 8o_8o_5o_12o_19o_7^2v_1v_2o_20 + 8o_5^2o_12o_19o_7^2v_1v_2o_20o_14 + 2o_8o_5cs^4o_12o_7o_14 + 4o_5^2o_12o_19o_7v_3^2o_14 - 2o_8o_5cs^2o_19o_7^2v_3^2o_20 + 8o_8o_5o_12o_19o_7v_1v_3^2v_2o_14 + 4o_5cs^2o_12o_19o_7v_3^2o_14 + 2o_8o_5cs^2o_12o_19o_7^2v_3^2o_20 - 4o_8o_5cs^2o_12o_19o_7v_1v_2o_20o_14 + 8o_5o_12o_19o_7^2v_1v_3^2v_2o_20o_14 + 4o_5^2o_12o_19o_7v_1^2v_3o_14 - 2o_8o_5o_19o_7^2v_1^2v_3o_20o_14 - 8o_5^2cs^2o_12o_19o_7^2v_1v_2o_20o_14 - 2o_8o_5^2cs^2o_19o_7^2v_1v_2o_20o_14 + 2o_8o_5^2o_12o_19o_7^2v_1v_3^2v_2o_20o_14 - 4o_8o_5cs^4o_19o_7^2o_20 + 4o_8o_5^2o_12o_7v_1^2v_3o_14 - 2o_8o_5o_12o_19o_7^2v_1^2v_3o_14 + 4o_8o_5cs^4o_12o_19o_20o_14 - 4o_8o_5cs^2o_12o_19o_7v_1v_2o_20o_14 + 2o_8o_5cs^2o_12o_19o_7^2v_1^2o_20o_14 - 8o_5o_12o_19o_7v_1v_3^2v_2o_20 + 4o_5^2cs^4o_12o_19o_7^2o_14 + 2o_8o_5cs^2o_12o_19o_7v_1^2o_20o_14 - 12o_8o_5cs^4o_12o_19o_7o_20o_14 + 4o_5^2cs^2o_12o_19o_7^2v_1^2o_20o_14 - 4o_5^2o_12o_19o_7v_1^2v_3o_20 - 2o_8o_5o_19o_7^2v_1v_3^2v_2o_20o_14 + 2o_8o_5cs^2o_12o_19o_7v_3^2o_20o_14 + 4o_5^2cs^2o_12o_19o_7v_3^2o_20o_14 - 2o_8o_5^2cs^4o_19o_7o_20o_14 + 2o_8o_5cs^2o_12o_19o_7^2v_3^2o_20o_14 - 4o_5^2cs^4o_12o_19o_7o_14 + 2o_8o_5o_12o_19o_7v_1^2v_3o_20o_14 + 2o_8o_5cs^2o_12o_19o_7^2v_1^2o_20 - 8o_8o_5^2o_12o_7v_1v_2o_14 + 4o_5o_12o_19o_7v_1^2o_14 - o_8o_5o_12o_19o_7^2v_1^2v_3^2o_20o_14 - 4o_8o_5o_12o_19o_7^2v_3^2o_20 - 2o_8o_5^2o_12o_19o_7v_3^2o_20 + o_8o_5o_12o_19o_7^2v_3^2o_20o_14 - 4o_5o_12o_19o_7^2v_1^2v_3o_20o_14 - 4o_5^2cs^2o_12o_19o_7^2v_3^2o_14 + o_8o_5cs^2o_12o_7^2v_1^2o_20o_14 - 2o_8o_5^2o_12o_19o_7v_1^2v_3o_20 + 4o_5o_12o_19o_7^2v_1^2v_3o_20 + 2o_8o_5cs^4o_12o_19o_7o_20o_14 + 2o_8o_5cs^4o_12o_19o_7o_20o_14 + 4o_8o_5cs^4o_12o_19o_7o_14 - 4o_8o_5cs^4o_12o_7o_14 + 4o_8o_5cs^4o_12o_19o_7^2o_20 + 2o_8o_5o_12o_19o_7^2v_1^2v_3o_14 + 4o_8o_5o_12o_19o_7v_1v_3^2v_2o_14 - 2o_8o_5^2cs^2o_12o_7v_1v_2o_20o_14 - 8o_5cs^2o_12o_19o_7v_1v_2o_20 - 2o_8o_5^2cs^2o_12o_7v_3^2o_14 - 2o_8o_5^2cs^2o_12o_7v_3^2o_20o_14 + 4o_5o_5cs^4o_12o_7o_20o_14 - 8o_5^2cs^2o_12o_19o_7v_1v_2o_20 - 4o_8o_5^2cs^2o_12o_19o_7v_1v_2o_20 + 8o_5^2o_12o_19o_7^2v_1v_3^2v_2o_14 - 2o_8o_5cs^2o_19o_7^2v_3^2o_20o_14 - 8o_8o_5^2o_12o_7v_1v_3^2v_2o_14 + 4o_8o_5cs^2o_19o_7^2v_1v_2o_20 - 8o_5o_12o_19o_7^2v_1v_3^2v_2o_20 - 4o_8o_5cs^2o_12o_19o_7v_1^2o_14 - 2o_8o_5cs^2o_12o_19o_7^2v_1^2o_14 + 4o_8o_5cs^2o_12o_19o_7^2v_1v_2o_14 + 4o_8o_5^2o_19o_7^2v_1v_3^2v_2o_20 - 2o_8o_5^2cs^4o_12o_19o_7o_20 + 8o_5cs^2o_12o_19o_7^2v_1v_2o_14 + 8o_8o_5^2cs^2o_12o_19o_7v_1v_2o_14 - 4o_5^2cs^2o_12o_19o_7^2v_1^2o_20 - 4o_8o_5o_12o_19o_7^2v_1v_3^2v_2o_20 + 2o_8o_5^2cs^2o_12o_7v_3^2o_14 - o_8o_5cs^2o_12o_7^2v_1^2o_20o_14 + 4o_5^2o_12o_19o_7v_1^2v_3o_20 + 4o_8o_5cs^4o_19o_7^2o_20 - 4o_5^2cs^2o_12o_19o_7^2v_1o_20o_14 + 4o_5^2cs^2o_12o_19o_7v_3^2o_20 - 2o_8o_5^2o_12o_7v_1^2v_3o_20 + 4o_8o_5o_12o_19o_7v_1v_3^2v_2o_20 + 4o_8o_5^2o_12o_19o_7v_1v_3^2v_2o_20 - 4o_5o_12o_19o_7^2v_1^2o_20o_14 + 4o_5cs^2o_12o_19o_7v_3^2o_20 + 4o_8o_5cs^2o_12o_7v_1v_2o_20o_14 - 4o_5o_12o_19o_7^2v_1^2v_3o_14 + 4o_8o_5^2cs^2o_12o_7v_2^2o_14 + 4o_8o_5cs^2o_19o_7^2v_1v_2o_20o_14 + 4o_5cs^4o_12o_19o_7^2o_20o_14 + o_8o_5cs^2o_19o_7^2v_1^2o_20o_14 + 4o_8o_5o_12o_7v_1v_3^2v_2o_14 + 4o_5cs^4o_12o_19o_7o_20o_14 - 4o_8o_5o_12o_19o_7^2v_1^2v_3o_20 + 4o_8o_5cs^2o_19o_7^2v_1^2o_20 - 8o_5^2o_12o_19o_7v_1v_3^2v_2o_14 + 4o_5cs^4o_12o_19o_7^2o_20 - 2o_8cs^4o_12o_19o_7^2o_20o_14$

$C_{19} = 4o_5cs^2o_12o_19v_1o_20o_14 - 4o_8o_5cs^2o_12v_1o_14 - 4o_8o_5cs^2o_12o_19v_2o_14 - 2o_8o_5cs^2o_19o_7v_2o_20 - 2o_8o_5o_19o_7v_1^2v_2o_20 + 2o_8o_5o_12o_19v_1v_2^2o_20 - 4cs^2o_12o_19o_7v_1o_20 - o_8o_5o_12o_7v_1v_2^2o_20o_14 + 2o_8o_5o_12v_1v_2^2o_20o_14 - 2o_8o_5o_12o_19o_7v_1v_2^2o_14 - 4o_8o_19o_7v_1v_2^2o_20 +$

$$4o_5o_12o_19v_1^2v_2o_20 + 4o_5o_12o_19o_7v_1^2v_2o_20o_14 + o_8o_5cs^2o_12o_19o_7v_1o_20o_14 + 2o_8o_12o_19o_7v_1^2v_2o_20o_14 + 4o_5cs^2o_12o_19v_2o_14 +$$
$$2o_8cs^2o_19o_7v_1o_20o_14 + 4o_12o_19o_7v_1o_20o_14 - 4o_5o_12o_19v_1v_2^2o_20 + 4o_8o_19o_7v_1^2v_2o_20 + 2o_8o_5o_12o_19o_7v_1^2v_2o_14 - o_8o_5cs^2o_12o_7v_1o_20o_14 +$$
$$4o_5cs^2o_12o_19o_7v_2o_20o_14 + 4o_8cs^2o_19o_7v_2o_20 + 2o_8o_5cs^2o_12o_19o_7v_2o_14 + 4o_5cs^2o_12o_19o_7v_1o_20 + 2o_8o_5o_19o_7v_1v_2^2o_20 -$$
$$2o_8o_5o_12o_19v_1^2v_2o_20 + 2o_8cs^2o_12o_19o_7v_2o_20o_14 + 4o_8cs^2o_12o_19o_7v_1o_20 + 2o_8o_5cs^2o_12o_19v_1o_20 - 2o_8o_5cs^2o_12v_2o_20o_14 -$$
$$2o_8o_5o_12v_1^2v_2o_20o_14 + o_8o_5o_12o_7v_1^2v_2o_20o_14 - 2o_8o_5cs^2o_12o_19v_1o_20o_14 + 2o_8o_12o_19o_7v_1v_2^2o_14 + 4o_5o_12o_19o_7v_1v_2^2o_14 + 4cs^2o_12o_19o_7v_2o_14 +$$
$$4o_12o_19o_7v_1^2v_2o_14 - 4o_12o_19o_7v_1^2v_2o_20o_14 - o_8o_5cs^2o_19o_7v_1o_20o_14 - 4o_5cs^2o_12o_19v_1o_20 - 2o_8cs^2o_12o_19o_7v_2o_14 - 4cs^2o_12o_19o_7v_2o_20o_14 -$$
$$4o_5cs^2o_12o_19o_7v_2o_14 - 4o_5o_12o_19o_7v_1v_2^2o_20o_14 + 2o_8o_5cs^2o_12o_7v_1o_14 - 4o_12o_19o_7v_1v_2^2o_14 - 2o_8o_5cs^2o_12o_19o_7v_1o_20 -$$
$$2o_8o_12o_19o_7v_1^2v_2o_14 - 2o_8o_12o_19o_7v_1v_2^2o_20o_14 - 4o_5o_12o_19o_7v_1^2v_2o_14 - 2o_8o_5cs^2o_12o_19v_2o_20 - 4o_5cs^2o_12o_19v_2o_20o_14 -$$
$$4cs^2o_12o_19o_7v_1o_14 - 2o_8o_5o_12o_19o_7v_1v_2^2o_20 + 4o_5o_12o_19v_1^2v_2o_14 + 4o_8o_5o_12o_19v_1v_2^2o_14 + 4o_5cs^2o_12o_19v_2o_20 - 2o_8cs^2o_19o_7v_2o_20o_14 -$$
$$2o_8o_19o_7v_1^2v_2o_20o_14 - o_8o_5cs^2o_12o_7v_2o_20o_14 + 4o_5o_12o_19v_1v_2^2o_20o_14 - 2o_8cs^2o_12o_19o_7v_2o_20o_14 + 2o_8o_5cs^2o_19o_7v_2o_20 -$$
$$2o_8o_5cs^2o_12o_7v_2o_14 + 4o_5cs^2o_12o_19o_7v_1o_14 - 4o_8o_5o_12o_19v_1^2v_2o_14 - 4o_8o_5o_12o_19v_1^2v_2o_20o_14 + 2o_8o_5cs^2o_12o_19v_1^2v_2o_20o_14 + 2o_8cs^2o_12o_19v_1^2v_2o_20o_14 +$$
$$2o_8cs^2o_12o_19o_7v_1o_14 - 4o_5o_12o_19v_1v_2o_14 - 4o_5cs^2o_12o_19o_7v_1o_20o_14 + 2o_8o_5o_12o_19o_7v_1^2v_2o_20 - o_8o_5o_12o_19o_7v_1^2v_2o_20o_14 +$$
$$o_8o_5cs^2o_12o_7v_2o_20o_14 + 2o_8o_5cs^2o_12o_19v_2o_20o_14 + 2o_8o_5cs^2o_12v_1o_20o_14 + 4o_8o_5cs^2o_12o_19v_1o_14 - 2o_8o_5o_12o_7v_1^2v_2o_14 +$$
$$4o_8o_5o_12v_1^2v_2o_14 + 4o_8o_5cs^2o_12v_2o_14 + 2o_8cs^2o_19o_7v_1o_20 + 4o_12o_19o_7v_1^2v_2o_20 + 4o_8o_12o_19o_7v_1v_2^2o_20 + 4o_5o_12o_19o_7v_1v_2^2o_20 +$$
$$4cs^2o_12o_19o_7v_2o_20 + o_8o_5o_19o_7v_1^2v_2o_20o_14 - 4o_8o_5o_12v_1v_2^2o_14 - 2o_8o_5o_12o_19v_1v_2^2o_20o_14 + 2o_8o_5o_12o_7v_1v_2^2o_14 + o_8o_5o_19o_7v_2o_20o_14 +$$
$$o_8o_5o_12o_19o_7v_1v_2^2o_20o_14 - 4o_5cs^2o_12o_19v_1o_14 - 4o_8cs^2o_19o_7v_1o_20 - 4o_8o_12o_19o_7v_1^2v_2o_20 - 4o_5o_12o_19o_7v_1^2v_2o_20 - 4o_8cs^2o_12o_19o_7v_2o_20 -$$
$$4o_5o_12o_19v_1^2v_2o_20o_14 + 2o_8o_19o_7v_1v_2^2o_20o_14 + 4cs^2o_12o_19o_7v_1o_20o_14 - 4o_5cs^2o_12o_19o_7v_2o_20 - 4o_12o_19o_7v_1v_2^2o_20 - 2o_8o_5cs^2o_12o_19o_7v_1o_14$$

$C_{20} = 2o_23o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_16o_10 - o_8o_15o_5cs^2o_17o_19o_7v_1v_3^2o_20o_16 + o_8o_23o_15cs^2o_17o_19o_7v_1v_2^2o_20o_16o_10 -$
$o_8o_23o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16 + o_8o_23o_15o_5cs^2o_17o_7v_1v_3^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_19o_7v_1v_2^2o_20 +$
$2o_23o_15o_5o_17o_19v_1^2v_3v_2^2o_20o_16o_10 + 2o_8o_23o_15o_5o_19o_7v_1^2v_3v_2^2o_20o_10 - 2o_8o_23o_15o_5cs^2o_17v_3v_2^2o_16o_10 + 2o_8o_23cs^2o_19o_7v_1v_3^2o_20o_16o_10 +$
$2o_8o_23o_15o_5cs^2o_19o_7v_1v_3^2o_20o_16o_10 + 2o_23o_15o_5cs^2o_17o_19o_7v_1^2v_3o_16o_10 - 2o_23o_15o_19o_7v_1^2v_3v_2^2o_20o_16o_10 +$
$o_8o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16o_10 - o_8o_23o_15o_5o_17v_1v_3^2v_2^2o_16o_10 - o_8o_23o_15o_5cs^2o_17o_19o_7v_3v_2^2o_16o_10 +$
$2o_8o_15o_5cs^2o_17o_19v_1^2v_3o_20o_16o_10 - o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2v_3o_20o_16 - 2o_8o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_10 -$
$2o_8o_23o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_20 - 2o_8o_23cs^2o_19o_7v_3v_2^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19v_1v_2^2o_20o_16o_10 +$
$2o_23o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_16o_10 - 2o_8o_23o_15o_5cs^2o_19o_7v_1^2v_3o_20o_10 -$
$2o_8o_23o_15o_5o_19o_7v_3v_2^2o_20o_16o_10 - 2o_8o_23o_15o_5cs^2o_17o_19v_1v_2^2o_20o_10 + 2o_8o_23o_15o_5cs^2o_19o_7v_3v_2^2o_20o_10 -$
$o_8o_23o_15o_5cs^2o_17o_7v_3v_2^2o_20o_16o_10 + 2o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16o_10 - 2o_23o_15o_5o_17o_19v_1^2v_3v_2^2o_16o_10 -$
$o_8o_23o_15o_5cs^2o_17o_7v_1v_3^2o_16o_10 - 2o_23o_15o_5cs^2o_17o_19v_1v_3^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_3^2o_20o_10 -$
$o_8o_15o_5o_17o_7v_1v_3^2v_2^2o_20o_16o_10 + o_8o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_20o_16o_10 + 2o_23o_15cs^2o_17o_19o_7v_3v_2^2o_20o_16o_10 - 2o_8o_23o_5o_19o_7v_1^2v_3v_2^2o_20o_16 +$
$2o_23o_15cs^2o_19o_7v_1v_3^2o_20o_16o_10 - 2o_8o_23o_15o_19o_7v_1v_3^2v_2^2o_20o_16o_10 + 2o_23o_15o_5cs^2o_19v_1v_3^2o_20o_16o_10 + 2o_8o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_10 +$
$o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16 + 2o_8o_23o_15o_5cs^2o_19v_1v_3^2o_20o_10 + 2o_8o_23o_15o_5cs^2o_19o_7v_1v_3^2o_20 + 2o_23o_15o_5cs^2o_17o_19v_3v_2^2o_20o_16o_10 +$
$2o_8o_23o_5cs^2o_19o_7v_1^2v_3o_20o_16o_10 - 2o_23o_15o_5cs^2o_19o_7v_1v_2^2o_20o_16o_10 - 2o_23o_15cs^2o_17o_19o_7v_3v_2^2o_16o_10 - 2o_8o_23o_19o_7v_1^2v_3v_2^2o_20o_16o_10 -$
$2o_8o_23o_15o_5o_19o_7v_1^2v_3v_2^2o_20o_16o_10 - 2o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16o_10 + 2o_8o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_20o_16 - o_8o_23o_5o_17o_19o_7v_1v_3^2v_2^2o_20o_16 +$
$o_8o_23o_15o_17o_19o_7v_1v_3^2v_2^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19v_1^2v_3o_20o_10 - 2o_23o_15o_5cs^2o_19v_3v_2^2o_20o_16o_10 -$
$o_8o_23o_15o_17o_19o_7v_1v_3^2v_2^2o_16o_10 - 2o_23o_15cs^2o_17o_19o_7v_1v_3^2o_20o_16o_10 + 2o_8o_15o_5cs^2o_17o_19v_1v_2^2o_20o_10 - 2o_23o_15cs^2o_19o_7v_3v_2^2o_20o_16o_10 -$
$o_8o_23o_15o_5o_17o_7v_1^2v_3v_2^2o_20o_16o_10 - 2o_8o_23o_5cs^2o_19o_7v_3v_2^2o_20o_16 - 2o_23o_15o_5cs^2o_17o_19v_3v_2^2o_16o_10 + 2o_8o_15o_5cs^2o_17o_19o_7v_1^2v_3o_20o_10 -$
$2o_8o_23o_15o_5cs^2o_19v_1v_3^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_19v_1v_2^2o_20o_10 + o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_3^2o_20o_16 -$
$2o_8o_23o_15o_5cs^2o_17v_1v_3^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2v_3o_20 - 2o_23o_15o_5cs^2o_17o_19o_7v_1v_3^2o_16o_10 + o_8o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16 -$
$2o_8o_23o_15cs^2o_19o_7v_1v_3^2o_20o_16o_10 + 2o_23o_15o_19o_7v_1v_3^2v_2^2o_20o_16o_10 - 2o_8o_23o_15o_5o_19v_1^2v_3v_2^2o_20o_10 - o_8o_15o_5cs^2o_17o_7v_1v_3^2o_20o_16o_10 +$
$2o_8o_23o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20 - o_8o_23o_5cs^2o_17o_19o_7v_3v_2^2o_20o_16o_10 - o_8o_23o_15cs^2o_17o_19o_7v_1^2v_3o_20o_16o_10 -$
$2o_23o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10 + 2o_8o_15o_5cs^2o_17o_19v_1^2v_3o_20o_16o_10 + 2o_8o_23o_15o_5o_17o_19v_1^2v_3v_2^2o_16o_10 -$
$o_8o_5o_5cs^2o_17o_7v_1v_2^2o_16o_10 + 2o_8o_23o_15cs^2o_19o_7v_3v_2^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19v_3v_2^2o_16o_10 -$
$2o_8o_23o_15o_5o_17o_19v_1v_3^2v_2^2o_20o_10 - 2o_8o_23o_15o_5cs^2o_17o_19v_1^2v_3o_20o_16o_10 + o_8o_15o_5cs^2o_17o_19o_7v_1^2v_3o_20o_16 +$
$2o_8o_23o_15o_5cs^2o_17v_3v_2^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_17v_1v_3^2o_20o_16o_10 + 2o_23o_15o_5o_17o_19o_7v_1v_3^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_19v_3v_2^2o_20o_16o_10 -$
$2o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20 - 2o_8o_15o_5cs^2o_17o_19v_1v_2^2o_20o_16o_10 + o_8o_23o_5cs^2o_17o_19o_7v_1v_3^2o_20o_16o_10 +$
$2o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_10 + o_8o_15o_5cs^2o_17o_7v_3v_2^2o_20o_16o_10 + o_8o_23o_5cs^2o_17o_19o_7v_3v_2^2o_20o_16 +$
$o_8o_23o_15cs^2o_17o_19o_7v_3v_2^2o_16o_10 - 2o_23o_15o_5o_17o_19v_1v_3^2v_2^2o_20o_16o_10 - o_8o_15o_5cs^2o_17o_19o_7v_1^2v_3o_20o_16o_10 +$
$2o_8o_23o_15o_5o_19o_7v_1v_3^2v_2^2o_20o_16o_10 + 2o_8o_23o_19o_7v_1v_3^2v_2^2o_20o_16o_10 + 2o_8o_23o_15o_5o_19o_7v_1^2v_3v_2^2o_20o_16 + 2o_8o_15o_5cs^2o_17v_1v_3^2o_20o_16o_10 +$
$o_8o_23cs^2o_17o_19o_7v_3v_2^2o_20o_10 - 2o_8o_23o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20o_16o_10 + o_8o_23o_15o_5o_17o_19o_7v_3v_2^2o_20o_16o_10 -$
$2o_8o_15o_5o_17o_19o_7v_1v_3^2o_20o_10 + o_8o_23o_15o_5o_17o_7v_1v_3^2v_2^2o_20o_16o_10 - 2o_23o_15o_5o_17o_19o_7v_1^2v_3o_20o_16o_10 -$
$2o_8o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20 - o_8o_23o_15o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10 - 2o_8o_23o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_10 - 2o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20 -$
$2o_8o_23o_15o_5cs^2o_17o_19v_1v_3^2o_20o_10 + o_8o_23o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_16o_10 - o_8o_23o_15o_5cs^2o_17o_19v_1v_3^2o_20o_16o_10 -$
$o_8o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16 - o_8o_23cs^2o_17o_19o_7v_1v_3^2o_20o_16o_10 + 2o_8o_15o_5o_17o_19v_1v_3^2v_2^2o_20o_10 - 2o_8o_15o_5cs^2o_17v_3v_2^2o_20o_16o_10 +$
$2o_8o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20 + 2o_8o_23o_15o_5cs^2o_19o_7v_3v_2^2o_20o_16 + o_8o_23o_15o_5cs^2o_17o_7v_1^2v_3o_16o_10 + 2o_8o_23o_15o_5o_19o_7v_1^2v_3v_2^2o_20o_16o_10 -$
$2o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2v_3o_20o_10 - 2o_8o_23o_5cs^2o_19o_7v_1v_2^2o_20o_16o_10 + 2o_23o_15o_5cs^2o_19o_7v_1^2v_3o_20o_16o_10 -$
$o_8o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10 + o_8o_15o_5o_17o_7v_1^2v_3v_2^2o_20o_16o_10 - 2o_23o_15cs^2o_19o_7v_1^2v_3o_20o_16o_10 + 2o_8o_23o_5o_19o_7v_1v_3^2v_2^2o_20o_16 +$
$o_8o_23o_15o_5o_17o_19o_7v_1^2v_3o_16o_10 + o_8o_23o_5o_17o_7v_1^2v_3o_20o_16 - 2o_8o_15o_5o_17o_19o_7v_1v_3^2o_20o_10 +$
$2o_8o_23o_15o_5o_17o_19v_1v_3^2v_2^2o_20o_16o_10 + 2o_8o_23o_15o_5cs^2o_17v_1v_3^2o_16o_10 + o_8o_23o_5o_17o_19o_7v_1v_3^2v_2^2o_20o_16o_10 -$
$2o_23o_15o_5cs^2o_19v_1^2v_3o_20o_16o_10 + 2o_8o_15o_5cs^2o_17v_1v_2^2o_20o_16o_10 + 2o_23o_15o_5o_17o_19v_1v_3^2v_2^2o_16o_10 - 2o_8o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20 +$
$o_8o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20o_16 + 2o_8o_23o_15o_5cs^2o_17o_19v_1^2v_3o_16o_10 + 2o_23o_15o_5o_19v_1v_3^2v_2^2o_20o_16o_10 + 2o_8o_23o_5cs^2o_19v_3v_2^2o_20o_16o_10 -$
$2o_8o_23o_15o_5cs^2o_19o_7v_1v_2^2o_20o_16 + 2o_23o_15o_5cs^2o_17o_19v_1^2v_3o_20o_16o_10 + 2o_8o_15o_5o_17o_19v_1^2v_3v_2^2o_20o_16o_10 +$
$o_8o_23o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_16o_10 - 2o_8o_15o_5o_5o_17v_1^2v_3v_2^2o_20o_16o_10 + o_8o_23o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16 - o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16o_10 -$
$2o_8o_23o_15o_5cs^2o_19o_7v_1v_3^2o_20o_10 - o_8o_23cs^2o_17o_19o_7v_1v_2^2o_20o_16o_10 + 2o_23o_15cs^2o_17o_19o_7v_1^2v_3o_20o_16o_10 -$

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$$2o_8o_23o_5cs^2o_19o_7v_1v_3^2o_20o_16o_10+o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_3^2o_16o_10-2o_8o_23o_15o_5o_19o_7v_1v_3^2v_2^2o_20o_10+2o_8o_23o_5o_19o_7v_1^2v_3v_2^2o_20o_16o_10-$$
$$2o_8o_23o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20o_10-o_8o_23o_15o_5cs^2o_17o_7v_1^2v_3o_20o_16o_10-2o_8o_23o_15cs^2o_19o_7v_1v_2^2o_20o_16o_10-$$
$$2o_8o_23o_15o_5cs^2o_19v_1v_2^2o_20o_16o_10-o_8o_23o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16-2o_8o_23o_15o_5cs^2o_19o_7v_1^2v_3o_20o_16o_10-$$
$$2o_8o_23o_15o_5cs^2o_17v_1v_2^2o_20o_16o_10-2o_8o_23cs^2o_19o_7v_1^2v_3o_20o_16o_10-o_8o_23o_15cs^2o_17o_19o_7v_1v_2^2o_16o_10+2o_8o_23o_15o_5cs^2o_19o_7v_1^2v_3o_20o_16+$$
$$o_8o_23o_15o_5cs^2o_17o_7v_3v_2^2o_16o_10+2o_8o_23o_15o_5o_19o_7v_1v_3^2v_2^2o_20+2o_8o_23o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20+2o_8o_15o_5cs^2o_17o_19v_3v_2^2o_20o_16o_10-$$
$$2o_8o_23o_15o_5cs^2o_17o_19v_1v_2^2o_16o_10-2o_23o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_16o_10-o_8o_23o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_20o_16o_10+$$
$$o_8o_23o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_20o_16-o_8o_15o_5cs^2o_17o_7v_1v_2^2o_20o_16o_10-o_8o_23o_17o_19o_7v_1v_3^2v_2^2o_20o_16o_10+2o_8o_23o_15o_5o_17v_1^2v_3v_2^2o_20o_16o_10+$$
$$2o_8o_23o_15o_5o_19v_1^2v_3v_2^2o_20o_16o_10+2o_23o_15o_5cs^2o_17o_19v_1v_3^2o_16o_10+2o_23o_15o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10+2o_8o_23o_5cs^2o_19o_7v_1v_3^2o_20o_16+$$
$$o_8o_23o_15o_5o_17o_7v_1^2v_3v_2^2o_16o_10+2o_23o_15cs^2o_17o_19o_7v_1v_3^2o_16o_10-2o_23o_15o_5o_19o_7v_1v_3^2v_2^2o_20o_16o_10-2o_8o_23o_15o_5cs^2o_19v_3v_2^2o_20o_10-$$
$$2o_8o_15o_5cs^2o_17o_19v_1v_3^2o_20o_16o_10+o_8o_23o_5cs^2o_17o_19o_7v_1v_2^2o_20o_16-2o_23o_15o_5cs^2o_19o_7v_3v_2^2o_20o_16o_10-$$
$$2o_23o_15o_5cs^2o_17o_19v_1v_2^2o_20o_16o_10+2o_8o_23o_15o_5cs^2o_19o_7v_1^2v_3o_20o_10+2o_8o_23o_5cs^2o_19o_7v_1v_2^2o_20o_16-2o_8o_15o_5o_17o_19v_1v_3^2v_2^2o_20o_16o_10+$$
$$2o_8o_15o_5o_17v_1v_3^2v_2^2o_20o_16o_10+2o_23o_15o_5cs^2o_17o_19o_7v_1v_3^2o_20o_16o_10-o_8o_23o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20o_16-$$
$$2o_8o_15o_5cs^2o_17v_1^2v_3o_20o_16o_10+2o_23o_15o_5cs^2o_19v_1v_2^2o_20o_16o_10+2o_23o_15cs^2o_17o_19o_7v_1v_2^2o_16o_10-2o_8o_23o_15o_5o_19o_7v_1v_3^2v_2^2o_20o_16-$$
$$o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2v_3o_16o_10+2o_23o_15o_5cs^2o_17o_19o_7v_3v_2^2o_16o_10+2o_23o_15cs^2o_19o_7v_1v_2^2o_20o_16o_10-$$
$$o_8o_23o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10-2o_23o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20o_16o_10-2o_8o_23o_15o_5o_17o_19v_1^2v_3v_2^2o_20o_16o_10-$$
$$2o_8o_23o_15o_5cs^2o_17v_1^2v_3o_16o_10-o_8o_23o_15cs^2o_17o_19o_7v_1v_3^2o_16o_10-2o_23o_15o_5cs^2o_19o_7v_1v_3^2o_20o_16o_10-o_8o_23o_5cs^2o_17o_19o_7v_1v_3^2o_20o_16-$$
$$2o_8o_15o_5o_17o_19v_1^2v_3v_2^2o_20o_10+o_8o_23cs^2o_17o_19o_7v_1^2v_3o_20o_16o_10-2o_23o_15o_5o_19v_1^2v_3v_2^2o_20o_16o_10-2o_8o_23o_15o_5cs^2o_17o_19v_1v_3^2o_16o_10-$$
$$2o_23o_15cs^2o_17o_19o_7v_1v_3^2o_20o_16o_10+o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2v_3o_20o_16o_10-$$
$$2o_23o_15o_5cs^2o_17o_19v_1^2v_3o_16o_10+2o_8o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20o_10-2o_23o_15o_17o_19o_7v_1v_3^2v_2^2o_20o_16o_10+o_8o_15o_5cs^2o_17o_7v_1^2v_3o_20o_16o_10+$$
$$2o_8o_23o_15o_5o_19v_1v_3^2v_2^2o_20o_10-o_8o_15o_5cs^2o_17o_19o_7v_3v_2^2o_20o_16o_10-2o_8o_23o_5cs^2o_19o_7v_1^2v_3o_20o_16-2o_8o_23o_15o_5o_19v_1v_3^2v_2^2o_20o_16o_10-$$
$$2o_8o_23o_15o_5cs^2o_19o_7v_1v_2^2o_20o_10-2o_8o_23o_15o_5o_17o_19v_1v_3^2v_2^2o_16o_10+2o_8o_23o_15o_5cs^2o_17o_19v_3v_2^2o_20o_10-$$
$$2o_8o_23o_15o_5o_17v_1v_3^2v_2^2o_20o_16o_10+o_8o_23o_15cs^2o_17o_19o_7v_1v_3^2o_20o_16o_10+2o_8o_23o_15o_5cs^2o_17v_1^2v_3o_20o_16o_10+$$
$$2o_8o_23o_15o_5cs^2o_19o_7v_1v_2^2o_20o_16o_10-2o_8o_23o_15o_5cs^2o_17o_19v_3v_2^2o_20o_16o_10+2o_8o_23cs^2o_19o_7v_1v_2^2o_20o_16o_10+$$
$$2o_8o_23o_15o_5cs^2o_19v_1^2v_3o_20o_16o_10+2o_23o_15o_5o_19o_7v_1^2v_3v_2^2o_20o_16o_10+o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_2^2o_16o_10-$$
$$2o_23o_15cs^2o_17o_19o_7v_1^2v_3o_16o_10+2o_8o_23o_15cs^2o_19o_7v_1^2v_3o_20o_16o_10+o_8o_23o_15o_5cs^2o_17o_7v_1v_2^2o_20o_16o_10-o_8o_15o_5o_17o_19o_7v_1v_3^2v_2^2o_20o_16-$$
$$o_8o_23o_5cs^2o_17o_19o_7v_1^2v_3o_20o_16o_10-o_8o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10-$$
$$2o_8o_23o_15o_5o_19o_7v_3v_2^2o_20-2o_8o_23o_5o_19o_7v_1v_3^2v_2^2o_20o_16o_10+2o_8o_23o_15o_5o_17v_1v_2^2o_16o_10+o_8o_23o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10+$$
$$2o_8o_23o_15o_5o_17o_19v_1^2v_3v_2^2o_20o_10+o_8o_23o_15o_5o_17o_19o_7v_1^2v_3v_2^2o_20o_16o_10-2o_8o_23o_15o_5cs^2o_19o_7v_1v_3^2o_20o_16-$$
$$2o_23o_15o_17o_19o_7v_1^2v_3v_2^2o_16o_10-2o_8o_23o_15o_5o_17v_1^2v_3v_2^2o_16o_10-2o_8o_23o_15o_5o_19o_7v_1^2v_3v_2^2o_20+2o_8o_23o_15o_5cs^2o_17o_19v_1v_3^2o_20o_16o_10$$

$C_{21} = 12o_8o_23o_15o_5^2o_19o_7^3o_6v_3^2v_2^2o_20o_16o_10 + 12o_8o_23o_15cs^4o_17o_19o_7^3o_20o_16o_10 + 24o_8o_23o_5^2o_19o_7^3v_1o_6v_3v_2^2o_20o_16o_10 +$
$6o_8o_23o_15o_5^2cs^2o_17o_7^3o_6v_3^2o_20o_16o_10 - 12o_23o_15o_5cs^2o_17o_19o_7^3o_6v_2^2o_20o_16o_10 - 12o_8o_23o_15o_5^2cs^4o_17o_7^3o_6o_16o_10 +$
$24o_8o_23o_15o_5^2o_19o_7^3v_1o_6v_3v_2^2o_20o_10 + 12o_8o_23o_15o_5^2cs^2o_17o_19o_7^3o_6v_3^2o_20o_16o_10 - 12o_23o_15o_5cs^2o_17o_19o_7^3o_6v_3^2o_20o_16o_10 -$
$6o_8o_23o_15o_5cs^4o_17o_7^3o_6o_20o_16o_10 - 12o_23o_15o_5cs^2o_17o_19o_7^3o_6v_3^2o_16o_10 - 12o_8o_23o_15o_5o_19o_7^3v_1o_6v_3v_2^2o_16o_10 +$
$24o_23o_15o_5cs^2o_17o_19o_7^3v_1o_6v_3o_20o_16o_10 + 6o_8o_23o_15o_5^2o_17o_7^3o_6v_3^2v_2^2o_20o_16o_10 + 12o_8o_23o_15o_5cs^4o_19o_7^3o_6o_20o_16o_10 -$
$12o_8o_23o_15o_5^2cs^2o_19o_7^3o_6v_2^2o_20o_16 - 12o_23o_15o_5cs^2o_17o_19o_7^2o_6v_3^2o_20o_16o_10 + 12o_23o_15o_5o_17o_19o_7^3o_6v_3^2v_2^2o_20o_16o_10 +$
$12o_8o_23o_15o_5^2cs^2o_17o_7^2o_6v_2^2o_16o_10 + 6o_8o_23o_15o_5^2cs^2o_17o_19o_7^3o_6v_2^2o_20o_16 - 12o_8o_23o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20o_16o_10 -$
$6o_8o_23o_15o_5cs^2o_17o_19o_7^3o_6v_3^2o_20o_16o_10 - 12o_8o_23o_15o_5^2o_19o_7^3o_6v_3^2v_2^2o_20o_10 - 12o_8o_23o_15o_5cs^2o_17o_19o_7^3v_1o_6v_3o_20o_16 +$
$12o_8o_15o_5^2cs^2o_17o_7^2o_6v_3^2o_20o_16o_10 - 12o_8o_23o_15o_5^2cs^2o_19o_7^3o_6v_3^2o_20o_10 - 6o_8o_23o_15cs^4o_17o_19o_7^3o_6o_20o_16o_10 +$
$12o_8o_23o_15o_5^2o_17o_7^2o_6v_3^2v_2^2o_16o_10 + 12o_23o_15o_5cs^2o_19o_7^3o_6v_2^2o_20o_16o_10 + 12o_23o_15o_5o_17o_19o_7^2o_6v_3^2v_2^2o_16o_10 +$
$12o_8o_23o_15o_5^2cs^2o_17o_19o_7^3o_6v_3^2o_20o_16 - 12o_23o_15o_5cs^4o_17o_7^3o_6o_16o_10 -$
$6o_8o_23o_15o_5cs^4o_17o_19o_7^3o_6o_16o_10 - 24o_23o_15o_5cs^2o_19o_7^3v_1o_6v_3o_20o_16o_10 - 24o_23o_15o_5cs^2o_17o_19o_7^3v_1o_6v_3o_16o_10 +$
$12o_23o_15o_5cs^2o_17o_19o_7^3o_6v_2^2o_16o_10 + 6o_8o_23o_5^2cs^2o_17o_19o_7^3o_6v_3^2o_20o_16o_10 + 24o_8o_23o_15o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20 -$
$18o_8o_23o_15o_5cs^4o_17o_19o_7^3o_20o_16o_10 - 24o_8o_15o_5^2cs^2o_17o_7^3v_1o_6v_3o_20o_16o_10 + 12o_8o_15o_5^2o_17o_7^2o_6v_3^2v_2^2o_20o_16o_10 -$
$12o_8o_15o_5^2cs^2o_17o_19o_7^3o_6v_2^2o_20o_10 - 24o_23o_15o_5cs^2o_19o_7^3v_1o_6v_3o_20o_16o_10 - 24o_8o_23o_15o_5o_19o_7^3v_1o_6v_3v_2^2o_20o_16o_10 -$
$12o_23o_15o_5^2cs^4o_19o_7^3o_6o_20o_16o_10 - 12o_8o_23o_15o_5cs^2o_19o_7^3o_6v_3^2o_20o_16o_10 - 12o_8o_23o_15o_5o_19o_7^3o_6v_3^2v_2^2o_20o_16o_10 +$
$12o_8o_23o_5^2o_19o_7^3o_6v_3^2v_2^2o_20o_16 + 12o_8o_23o_5cs^2o_17o_19o_7^3v_1o_6v_3o_20o_16o_10 - 6o_8o_23o_5^2o_17o_19o_7^3o_6v_3^2v_2^2o_20o_16 +$
$12o_8o_23o_5^2cs^2o_19o_7^3o_6v_3^2o_20o_16 - 24o_23o_15o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20o_16o_10 + 24o_8o_15o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20o_10 +$
$12o_8o_15o_5^2o_17o_19o_7^2o_6v_3^2v_2^2o_20o_16 - 12o_23o_15o_5cs^2o_19o_7^3o_6v_3^2o_20o_16o_10 + 12o_8o_23o_5^2cs^2o_17o_19o_7^3o_6v_3^2o_20o_16 -$
$12o_8o_15o_5^2o_17o_7^3v_1o_6v_3v_2^2o_20o_16o_10 - 12o_8o_15o_5^2cs^2o_17o_19o_7^2o_6v_3^2o_20o_16o_10 + 6o_8o_15o_5o_17o_19o_7^3o_6v_3^2v_2^2o_20o_16o_10 -$
$6o_8o_15o_5^2cs^2o_17o_19o_7^3o_6v_3^2o_20o_16 - 12o_8o_23o_15cs^4o_19o_7^3o_6o_20o_16o_10 - 6o_8o_15o_5^2cs^2o_17o_7^3o_6v_3^2o_20o_16o_10 + 12o_8o_23o_5^2cs^2o_19o_7^3o_6v_2^2o_20o_16 -$
$24o_23o_15o_5^2o_19o_7^3v_1o_6v_3v_2^2o_20o_16o_10 + 12o_8o_23o_15o_5^2cs^4o_17o_19o_7o_20o_16o_10 + 12o_8o_23o_15o_5^2cs^4o_19o_7^2o_6o_20o_16o_10 +$
$12o_8o_15o_5^2cs^2o_17o_7^3v_1o_6v_3o_20o_16o_10 - 6o_8o_15o_5^2o_17o_7^3o_6v_3^2v_2^2o_20o_16o_10 - 24o_8o_15o_5^2cs^2o_17o_19o_7^3v_1o_6v_3o_20o_10 -$
$6o_8o_15o_5^2cs^2o_17o_19o_7^3o_6v_2^2o_20o_16 - 12o_8o_23o_15o_5cs^2o_17o_7^2o_6v_2^2o_20o_16o_10 + 12o_8o_23o_15o_5o_17o_19o_7^3v_1o_6v_3v_2^2o_16o_10 -$
$12o_8o_15o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20o_16o_10 + 12o_8o_15o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20o_16 - 12o_8o_15o_5^2o_17o_19o_7^3o_6v_3^2v_2^2o_20o_16o_10 -$
$12o_8o_15o_5^2cs^2o_17o_19o_7^3o_6v_3^2o_20o_10 - 12o_23o_15o_5^2cs^2o_19o_7^2o_6v_2^2o_20o_16o_10 + 12o_23o_15o_5cs^2o_17o_19o_7^3o_6v_3^2o_16o_10 -$
$6o_8o_23o_15o_5o_17o_19o_7^3o_6v_3^2v_2^2o_20o_16o_10 - 12o_23o_15o_5o_17o_19o_7^3o_6v_3^2v_2^2o_20o_16o_10 + 6o_8o_23o_15o_5cs^2o_17o_19o_7^3o_6v_3^2o_20o_16o_10 -$
$24o_8o_15o_5^2o_17o_7^3v_1o_6v_3v_2^2o_20o_10 + 12o_8o_15o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20o_16 - 24o_23o_15o_5o_19o_7^3v_1o_6v_3v_2^2o_20o_16o_10 +$
$12o_8o_23o_5cs^2o_19o_7^3o_6v_2^2o_20o_16o_10 + 12o_23o_15o_5cs^2o_17o_19o_7^3o_6v_2^2o_20o_16o_10 + 12o_8o_23o_15o_5cs^2o_17o_19o_7^2o_6v_2^2o_20o_16o_10 +$
$6o_8o_23o_15o_5cs^4o_17o_19o_7^3o_6o_20o_16o_10 - 12o_23o_15o_5o_17o_19o_7^2o_6v_3^2v_2^2o_20o_16o_10 - 12o_23o_15o_5cs^2o_19o_7^3o_6v_2^2o_20o_10 +$
$24o_8o_23o_15o_5^2o_17o_19o_7^2v_1o_6v_3v_2^2o_16o_10 - 12o_8o_23o_15o_5^2o_17o_7^2o_6v_3^2v_2^2o_20o_16o_10 + 12o_8o_23o_15o_5cs^2o_17o_19o_7^3o_6v_2^2o_20o_10 -$
$24o_8o_15o_5^2o_17o_7^2o_6v_3^2v_2^2o_20o_16o_10 - 24o_8o_15o_5^2o_17o_19o_7^3v_1o_6v_3v_2^2o_20 - 12o_23o_15o_5cs^2o_17o_19o_7^3v_1o_6v_3o_20o_16o_10 -$
$12o_23o_15o_5cs^4o_19o_7^3o_6o_20o_16o_10 + 6o_8o_23o_15o_5^2cs^4o_17o_7^3o_6o_16o_10 - 24o_8o_23o_15o_5^2o_19o_7^3v_1o_6v_3v_2^2o_20o_10 +$

$$
\begin{aligned}
&12o_{23}o_{15}o_5^2cs^2o_{19}o_2^2o_6v_3^2o_{20}o_{16}o_{10} + 24o_8o_{23}o_{15}o_5^2o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16} + 12o_8o_{23}o_5cs^4o_{17}o_{19}o_7^3o_{20}o_{16}o_{10} - \\
&12o_8o_{23}o_{15}o_5o_{19}o_2^2o_6v_3^2v_2^2o_{20}o_{16}o_{10} + 6o_8o_{15}o_5cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} + 24o_{23}o_{15}o_5^2cs^2o_{19}o_7^3v_1o_6v_3o_{20}o_{16}o_{10} + \\
&24o_8o_{23}o_{15}o_5o_{19}o_7^3v_1o_6v_3^2o_{20}o_{16}o_{10} + 12o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^2o_6o_{16}o_{10} + 12o_8o_{23}o_{15}o_5^2o_{19}o_7^3o_6v_3^2v_2^2o_{20} + \\
&12o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^3o_6o_{16}o_{10} + 12o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^2o_6o_{20}o_{16}o_{10} + 24o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^3v_1o_6v_3o_{20}o_{10} - \\
&o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^2o_6o_{20}o_{16}o_{10} - 12o_8o_{23}o_5^2cs^2o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} - 24o_{23}o_{15}o_5^2cs^2o_{17}o_7^2v_1o_6v_3o_{16}o_{10} - \\
&12o_8o_{23}o_{15}o_5o_{19}o_7^3o_6v_3^2o_{20}o_{16} - 12o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{16}o_{10} + 24o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_{16}o_{10} - \\
&12o_8o_{23}o_{15}o_5o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16} + 6o_8o_{23}o_{15}o_5^2o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{16} - 12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_3^2o_{16}o_{10} - \\
&24o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{20}o_{10} + 24o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2o_{17}o_{19}o_7^2o_6v_3^2v_2^2o_{20}o_{16}o_{10} - \\
&24o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{20} + 12o_8o_{23}o_5^2cs^4o_{17}o_{19}o_7^3o_{20}o_{16} + 6o_8o_{23}o_{15}o_5o_5cs^4o_{17}o_{19}o_7^3o_6o_{16}o_{10} + \\
&6o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{20}o_{16}o_{10} - 24o_8o_{23}o_5^2cs^2o_{19}o_7^3v_1o_6v_3o_{20}o_{16} - 24o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_6o_{20}o_{16}o_{10} - \\
&6o_8o_{23}o_{15}o_5o_5cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{16}o_{10} + 12o_{23}o_{15}o_5o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{16}o_{10} + 12o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_3^2o_{20}o_{10} + \\
&12o_{23}o_{15}o_5^2cs^2o_{19}o_7^2o_6v_2^2o_{20}o_{16}o_{10} - 12o_8o_{15}o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{10} + 24o_8o_{15}o_5o_{17}o_{19}o_7^2v_1o_6v_3v_2^2o_{20}o_{16}o_{10} - \\
&12o_8o_{23}o_5^2cs^4o_{19}o_7^3o_6o_2o_{16} - 12o_8o_{23}o_5^2cs^2o_{19}o_7^3o_6v_3^2o_{20}o_{16}o_{10} + 6o_8o_{23}o_5^2o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16}o_{10} + \\
&12o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{20}o_{16} + 12o_8o_{23}o_{15}o_5o_5cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{16}o_{10} - 12o_8o_{23}o_5^2o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16}o_{10} - \\
&12o_8o_{23}o_{15}o_5^2o_6 - 6o_8o_{23}o_5cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} + 6o_8o_{23}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_2^2o_{20}o_{16} + \\
&24o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7o_6o_{20}o_{16}o_{10} - 12o_8o_{23}o_{15}o_5o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20} - 12o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^3o_6o_{20}o_{16}o_{10} + \\
&12o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^3o_{20} + 24o_8o_{23}o_{15}o_5o_5cs^2o_{19}o_7^3v_1o_6v_3o_{20}o_{16}o_{10} + 24o_{23}o_{15}o_5^2cs^2o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16}o_{10} + \\
&6o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{16}o_{10} - 12o_{23}o_{15}o_5^2o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{16}o_{10} + 12o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_3^2o_{16}o_{10} + \\
&24o_8o_{23}o_{15}o_5^2cs^2o_{17}o_7^2v_1o_6v_3o_{20}o_{16}o_{10} - 6o_8o_{23}o_{15}o_5^2o_{17}o_7^3o_6v_3^2v_2^2o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^3o_{20}o_{16} - \\
&6o_8o_{15}o_5^2cs^2o_{17}o_7^3o_6v_2^2o_{20}o_{16}o_{10} + 6o_8o_{23}o_{15}o_5^2o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16} + 12o_8o_{23}o_{15}o_5^2o_{19}o_7^2o_6v_3^2v_2^2o_{20}o_{10} - \\
&6o_8o_{23}o_{15}o_5^2cs^2o_{17}o_7^3o_6v_3^2o_{16}o_{10} - 2o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^2o_6o_{20}o_{16}o_{10} - 12o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^3o_6o_{20}o_{16}o_{10} + \\
&24o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^2v_1o_6v_3o_{20}o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^2o_6v_3^2o_{20}o_{16}o_{10} + 24o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_{20}o_{16}o_{10} + \\
&6o_8o_{23}o_{15}o_5o_5cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} + 10o_8o_{23}o_{15}o_5^2cs^4o_{17}o_9o_7^3o_6o_{20}o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2cs^4o_{17}o_9o_7^2o_6o_{20}o_{10} - \\
&24o_8o_{23}o_{15}o_5^2o_{19}o_7^3v_1o_6v_3o_{20}o_{16}o_{10} + 12o_8o_{23}o_{15}o_5o_5cs^4o_{17}o_9o_7^3o_6o_2o_{10} - 12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_7^2o_6v_3^2o_{20}o_{16}o_{10} + \\
&12o_{23}o_{15}o_5o_{19}o_2^2o_6v_3^2v_2^2o_{20}o_{16}o_{10} + 12o_8o_{23}o_{15}o_5cs^4o_{17}o_{19}o_7o_6o_2o_{16}o_{10} - 24o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_{20}o_{16}o_{10} + \\
&12o_8o_{23}o_{15}o_5o_{17}o_7^3v_1o_6v_3^2v_2^2o_{16}o_{10} + 12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_3^2o_{20}o_{16}o_{10} - 6o_8o_{23}o_{15}o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16}o_{10} + \\
&12o_8o_{15}o_5^2o_{17}o_7^3v_1o_6v_3v_2^2o_{20}o_{16}o_{10} + 12o_8o_{23}o_5o_{19}o_2^2o_6v_3^2v_2^2o_{20}o_{16}o_{10} + 12o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_3^2o_{20}o_{16}o_{10} + \\
&12o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^2o_6v_2^2o_{20}o_{10} - 24o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{20}o_{16}o_{10} + 24o_{23}o_{15}o_5^2o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{16}o_{10} - \\
&24o_8o_{23}o_{15}o_5o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{10} + 12o_8o_{15}o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20} + 12o_8o_{23}o_5cs^2o_{19}o_7^3o_6v_3^2o_{20}o_{16}o_{10} - \\
&12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_2^2o_{20}o_{10} + 12o_8o_{23}o_5o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16}o_{10} + 12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_7^3v_1o_6v_3o_{16}o_{10} + \\
&6o_8o_{23}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_3^2o_{20}o_{16}o_{10} - 24o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^3v_1o_6v_3o_{20} - 24o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^2v_1o_6v_3o_{20}o_{10} + \\
&24o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^3v_1o_6v_3o_2o_{20} - 24o_{23}o_5o_{15}o_5o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16}o_{10} + 12o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^2o_6v_2^2o_{20}o_{10} - \\
&12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{20} - 12o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^3o_2o_{10} + \\
&12o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^3o_6v_2^2o_{20} - 6o_8o_{23}o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16}o_{10} + 24o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_{20}o_{10} - \\
&24o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_3^2o_{20}o_{10} + 12o_8o_{23}o_{15}o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{10} - \\
&12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_7^3v_1o_6v_3o_2o_{20}o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2o_{17}o_{19}o_7^2o_6v_3^2v_2^2o_{16}o_{10} - \\
&12o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} + 12o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{20} + 24o_8o_{23}o_{15}o_5^2o_{17}o_{19}o_7^2v_1o_6v_3v_2^2o_{20}o_{10} - \\
&24o_{23}o_{15}o_5^2o_{17}o_{19}o_7^2v_1o_6v_3v_2^2o_{16}o_{10} + 12o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_2^2o_{16}o_{10} + 6o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{16}o_{10} + \\
&12o_8o_{15}o_5^2cs^4o_{17}o_7^2o_6o_2o_{16}o_{10} + 24o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_2o_{16}o_{10} - 6o_8o_{23}o_{15}o_5^2cs^2o_{17}o_7^3o_6v_2^2o_{16}o_{10} - \\
&12o_8o_{23}o_{15}o_5^2o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16} + 12o_8o_{23}o_5cs^4o_{17}o_9o_7^3o_6o_2o_{20}o_{16} + 12o_8o_{23}o_5o_5cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_2o_{20}o_{16}o_{10} - \\
&24o_8o_{23}o_{15}o_5^2o_{17}o_7^2v_1o_6v_3v_2^2o_{16}o_{10} + 12o_8o_{23}o_{15}o_5^2o_{17}o_{19}o_7^3o_6v_3^2o_{20} - 12o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_2^2o_{20}o_{16}o_{10} - \\
&12o_{23}o_{15}o_5o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16}o_{10} - 12o_{23}o_{15}o_5^2cs^2o_9o_{19}o_7^3o_6v_3^2o_{20}o_{16}o_{10} - 12o_8o_{15}o_5^2cs^2o_{17}o_9o_7^3v_1o_6v_3o_{20}o_{16}o_{10} + \\
&12o_8o_{23}o_{15}o_5^2cs^4o_{19}o_7^3o_6o_2o_{10} - 18o_8o_{23}o_{15}o_5^2cs^4o_{17}o_{19}o_7^2o_2o_{20}o_{16}o_{10} + 6o_8o_{23}o_{15}o_5o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16}o_{10} + \\
&24o_8o_{23}o_{15}o_5^2o_{17}o_7^2v_1o_6v_3v_2^2o_{20}o_{16}o_{10} - 12o_{23}o_{15}o_5o_5cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{20}o_{16}o_{10} + 12o_8o_{23}o_{15}o_5^2cs^2o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} - \\
&24o_{23}o_{15}o_5o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{16}o_{10} - 6o_8o_{15}o_5^2o_{17}o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16} - 12o_{23}o_{15}o_5cs^4o_{17}o_{19}o_7^3o_6o_{16}o_{10} + \\
&6o_8o_{23}o_5^2cs^2o_{17}o_7^3o_6v_2^2o_{20}o_{16}o_{10} - 12o_8o_{23}o_{15}o_5o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16}o_{10} + 24o_{23}o_{15}o_5^2o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16}o_{10} - \\
&6o_8o_{23}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{20}o_{16} + 12o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_2^2o_{20} - 6o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} - \\
&12o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{20}o_{16}o_{10} + 24o_8o_{23}o_5^2cs^2o_{17}o_{19}o_7^2v_1o_6v_3o_{20}o_{16}o_{10} + 12o_{23}o_{15}o_5^2cs^2o_{19}o_7^2o_6v_3^2o_{20}o_{16}o_{10} - \\
&12o_{23}o_{15}o_5^2cs^4o_{19}o_7^3o_6o_2o_{20}o_{16}o_{10} - 12o_8o_{23}o_{15}o_5^2cs^2o_{17}o_{19}o_7^3o_6v_3^2o_{20} + 12o_8o_{23}o_{15}o_5^2o_{19}o_7^3o_6v_3^2o_{20} + \\
&24o_8o_{23}o_{15}o_5^2o_9o_2^2v_1o_6v_3^2o_{20}o_{16}o_{10} + 12o_8o_{15}o_5cs^2o_{17}o_7^2o_6v_3^2o_{20}o_{16}o_{10} + 12o_{23}o_{15}o_5o_{19}o_7^3o_6v_3^2v_2^2o_{20}o_{16}o_{10} - \\
&12o_8o_{23}o_5^2cs^4o_{17}o_{19}o_7^3o_2o_{16}o_{10} - 24o_8o_{23}o_{15}o_5o_{19}o_7^3v_1o_6v_3v_2^2o_{20} - 24o_8o_{23}o_5^2o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16} + 12o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^2o_6v_2^2o_{20}o_{10} + \\
&12o_8o_{23}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3v_2^2o_{20}o_{16} + 24o_8o_{15}o_5^2cs^2o_{17}o_{19}o_7^3v_1o_6v_3o_{20}o_{20}o_{10} - 6o_8o_{23}o_{15}o_5cs^2o_{17}o_{19}o_7^3o_6v_2^2o_{16}o_{10}
\end{aligned}
$$

$C_{22} = -2o_8o_{15}o_5o_{17}o_{19}o_7v_1v_3^2o_{20}o_{10} + o_8o_{23}o_{15}cs^2o_{17}o_{19}o_7v_3o_{16}o_{10} - o_8o_{23}o_5o_{17}o_{19}o_7v_1v_3^2o_{20}o_{16} + o_8o_{23}o_{15}o_5o_{17}o_7v_1v_3^2o_{20}o_{16}o_{10} +$
$2o_8o_{23}o_{19}o_7v_1v_3^2o_{20}o_{16}o_{10} + 2o_8o_{23}o_{15}o_5o_{19}o_7v_1v_3^2o_{20}o_{16}o_{10} + 2o_8o_{23}o_{15}o_5o_{17}v_1v_3^2o_{16}o_{10} + o_8o_{23}o_5cs^2o_{17}o_{19}o_7v_1o_{20}o_{16} +$
$2o_8o_{23}cs^2o_{17}o_{19}v_3o_{16}o_{10} + o_8o_{23}cs^2o_{17}o_{19}o_7v_3o_{20}o_{16}o_{10} + o_8o_{23}cs^2o_{17}o_{19}o_7v_3o_{20}o_{16}o_{10} - 2o_8o_{23}o_5o_{19}o_7v_1o_{20}o_{16}o_{10} -$
$2o_{23}o_{15}o_5o_{17}o_{19}o_7v_1^2v_3o_{20}o_{16}o_{10} + 2o_{23}o_{15}o_9o_7v_1v_3^2o_{20}o_{16}o_{10} - o_8o_{23}o_{15}o_5o_{17}o_{19}o_7v_1^2v_3o_{20}o_{16} + 2o_8o_{23}o_{15}o_5cs^2o_{17}v_3o_{20}o_{16}o_{10} +$
$2o_8o_{23}o_{15}o_5cs^2o_{19}v_3o_{20}o_{16}o_{10} + o_8o_{15}o_5o_{17}o_{19}o_7v_1v_3^2o_{20}o_{16}o_{10} - 2o_8o_{15}o_5cs^2o_{17}o_{19}v_3o_{20}o_{10} - o_8o_{15}o_5o_{17}v_1v_3^2o_{20}o_{16}o_{10} -$
$2o_8o_{23}o_{15}o_9o_7v_1v_3^2o_{20}o_{16}o_{10} + 2o_8o_{23}o_{15}o_5o_{17}o_{19}o_7v_1v_3^2o_{20}o_{10} + 2o_{23}o_{15}cs^2o_{17}o_{19}o_7v_3o_{20}o_{16}o_{10} - 2o_8o_{15}o_5cs^2o_{17}o_{19}o_7v_3o_{20} -$
$o_8o_{15}o_5cs^2o_{17}o_{19}o_7v_1o_{20}o_{16} - o_8o_{23}o_{15}o_5cs^2o_{17}o_{19}o_7v_3o_{16} + 2o_{23}o_{15}o_5cs^2o_{17}o_{19}o_7v_1o_{20}o_{16}o_{10} - o_8o_{23}o_{15}o_5o_{17}v_1v_3^2o_{16}o_{10} +$
$o_8o_{23}o_{15}o_5o_{17}o_{19}o_7v_1v_3^2o_{20}o_{16}o_{10} - 2o_{23}o_{15}o_5cs^2o_{19}v_3o_{20}o_{16}o_{10} - 2o_{23}o_{15}o_5cs^2o_{19}o_7v_1o_{20}o_{16}o_{10} + 2o_{23}o_{15}o_5cs^2o_{17}o_{19}v_3o_{20}o_{16}o_{10} -$

$$2o_23o_15o_5cs^2o_17o_19v_3o_16o_10 - 2o_8o_23o_15o_5cs^2o_19o_7v_1o_2o_10 + 2o_23o_15o_5o_17o_19v_1^2v_3o_2o_16o_10 - 2o_23o_15cs^2o_17o_19o_7v_3o_16o_10 +$$
$$2o_8o_23o_15o_5o_17o_19v_1^2v_3o_2o_10 + o_8o_15o_5o_17o_19o_7v_1^2v_3o_2o_16 - 2o_8o_23o_15o_5cs^2o_17o_19v_3o_2o_16o_10 + 2o_8o_23cs^2o_19o_7v_1o_2o_16o_10 +$$
$$2o_8o_23o_15o_5o_17o_19o_7v_1^2v_3o_20 + 2o_8o_23o_15o_5cs^2o_19o_7v_1o_2o_16o_10 + o_8o_23o_15o_5cs^2o_17o_7v_1o_2o_16o_10 - 2o_23o_15o_17o_19o_7v_1v_3^2o_2o_16o_10 -$$
$$2o_8o_23o_15o_5o_19v_1v_3^2o_2o_16o_10 - o_8o_15o_5cs^2o_17o_19o_7v_3o_2o_16o_10 - 2o_8o_23o_15o_5o_17v_1v_3^2o_2o_16o_10 + 2o_23o_15o_5cs^2o_17o_19o_7v_3o_16o_10 +$$
$$o_8o_23o_15o_5o_17o_19o_7v_1v_3^2o_2o_16 - o_8o_23o_15cs^2o_17o_19o_7v_3o_2o_16o_10 - 2o_8o_23o_15o_5cs^2o_17o_19v_1o_2o_10 - 2o_8o_23o_15o_5cs^2o_17o_19o_7v_1o_20 -$$
$$2o_8o_15o_5cs^2o_17o_19o_7v_1o_2o_10 - 2o_8o_23o_5o_19o_7v_1v_3^2o_2o_16o_10 - o_8o_23o_5cs^2o_17o_19o_7v_1o_2o_16 - 2o_8o_23o_15o_5o_17v_1^2v_3o_16o_10 +$$
$$2o_23o_15cs^2o_19o_7v_1o_2o_16o_10 + o_8o_23o_5o_17o_19o_7v_1^2v_3o_2o_16 + 2o_8o_23o_15o_5cs^2o_17v_1o_16o_10 + 2o_8o_15o_5o_17o_19o_7v_1^2v_3o_2o_10 -$$
$$2o_8o_23o_15o_5cs^2o_19o_7v_1o_2o_16 - o_8o_23o_5o_17o_19o_7v_1^2v_3o_2o_16o_10 - 2o_8o_23o_15o_5o_17o_19v_1^2v_3o_2o_16o_10 + 2o_8o_15o_5cs^2o_17o_19v_3o_2o_16o_10 -$$
$$o_8o_23o_15o_5o_17o_19o_7v_1v_3^2o_2o_16o_10 + 2o_8o_23o_15o_5cs^2o_19o_7v_1o_20 - o_8o_15o_5cs^2o_17o_7v_1o_2o_16o_10 - o_8o_23o_17o_19o_7v_1v_3^2o_2o_16o_10 +$$
$$2o_8o_23o_15o_5cs^2o_19v_1o_2o_10 - 2o_23o_15cs^2o_19o_7v_1o_2o_16o_10 - 2o_23o_15o_5o_19o_7v_1v_3^2o_2o_16o_10 - 2o_8o_23o_15o_5o_17o_19o_7v_1v_3^2o_20 -$$
$$o_8o_15o_5o_17o_19o_7v_1v_3^2o_2o_16 - 2o_8o_23o_15o_5o_17o_19v_1v_3^2o_2o_10 + o_8o_23o_15o_5cs^2o_17o_19o_7v_1o_2o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19o_7v_1o_2o_2o_10 +$$
$$2o_23o_15o_5o_19v_1v_3^2o_2o_16o_10 + o_8o_23o_15o_5o_17o_7v_1^2v_3o_16o_10 - 2o_8o_23o_15o_5o_17o_19o_7v_1^2v_3o_2o_10 + 2o_8o_15o_5cs^2o_17v_1o_2o_16o_10 +$$
$$o_8o_23o_15o_5cs^2o_17o_7v_3o_16o_10 + 2o_8o_15o_5o_17o_19v_1^2v_3o_2o_16o_10 - 2o_8o_15o_5o_17v_1^2v_3o_2o_16o_10 + 2o_8o_23o_5cs^2o_19o_7v_1o_2o_16 -$$
$$o_8o_23o_15o_17o_19o_7v_1^2v_3o_2o_16o_10 - 2o_8o_23o_5cs^2o_19o_7v_3o_2o_16 + 2o_23o_15o_17o_19o_7v_1v_3^2o_16o_10 - o_8o_23o_15o_5cs^2o_17o_7v_1o_16o_10 -$$
$$2o_8o_23o_5o_19o_7v_1^2v_3o_2o_16 + 2o_8o_23o_15o_5o_17o_19v_1^2v_3o_16o_10 + 2o_8o_23o_15o_19o_7v_1^2v_3o_2o_16o_10 + o_8o_15o_5o_17o_7v_1^2v_3o_2o_16o_10 -$$
$$o_8o_15o_5o_17o_19o_7v_1^2v_3o_2o_16o_10 - 2o_8o_15o_5cs^2o_17v_3o_2o_16o_10 - 2o_8o_23o_15o_5o_19o_7v_1v_3^2o_2o_10 - o_8o_23o_5cs^2o_17o_19o_7v_3o_2o_16o_10 -$$
$$2o_8o_23o_15o_5cs^2o_17o_19o_7v_3o_2o_10 + o_8o_23o_15o_5o_17o_19o_7v_1v_3^2o_16o_10 - 2o_8o_15o_5cs^2o_17o_19v_1o_2o_16o_10 - 2o_8o_23o_15o_5o_19o_7v_1^2v_3o_20 +$$
$$o_8o_15o_5cs^2o_17o_7v_3o_2o_16o_10 - 2o_23o_15o_5o_17o_19v_1v_3^2o_2o_10 + 2o_8o_23o_15o_5cs^2o_19o_7v_3o_2o_16 - 2o_8o_23o_15cs^2o_19o_7v_3o_20 -$$
$$2o_8o_23o_5cs^2o_19v_3o_2o_10 + 2o_8o_23o_15o_5cs^2o_19o_7v_3o_2o_16 - 2o_8o_23cs^2o_17v_3o_16o_10 - 2o_23o_15cs^2o_19o_7v_3o_2o_10 - 2o_8o_23o_15o_5o_19v_3o_2o_16o_10 -$$
$$o_8o_23o_15o_5o_17o_7v_1^2v_3o_2o_16o_10 + 2o_8o_23o_15o_5o_19o_7v_1^2v_3o_2o_16 - 2o_8o_15o_5o_17o_19v_1^2v_3o_2o_10 - 2o_8o_23o_15o_5o_19o_7v_1^2v_3o_2o_16o_10 +$$
$$2o_23o_15o_5o_17o_19o_7v_1^2v_3o_16o_10 - 2o_8o_23o_19o_7v_1^2v_3o_2o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19v_3o_2o_2o_10 - o_8o_23o_5o_17o_19o_7v_1v_3^2o_16o_10 +$$
$$2o_8o_23o_15o_5o_19v_1v_3^2o_2o_2o_10 + 2o_8o_15o_5cs^2o_17o_19o_7v_3o_2o_2o_10 + 2o_8o_23o_15o_5cs^2o_17o_19o_7v_3o_20 + 2o_8o_23o_15o_5o_19o_7v_1v_3^2o_20 +$$
$$o_8o_23o_5cs^2o_17o_19o_7v_3o_2o_2o_16 - 2o_23o_15o_5cs^2o_17o_19o_7v_1o_16o_10 + o_8o_23o_15cs^2o_17o_19o_7v_1o_2o_16o_10 - 2o_8o_23o_15o_5cs^2o_19o_7v_3o_2o_16o_10 -$$
$$2o_8o_23cs^2o_19o_7v_3o_2o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19v_1o_2o_16o_10 + 2o_23o_15o_5o_17o_19o_7v_1v_3^2o_2o_16o_10 - o_8o_23o_15o_5cs^2o_17o_7v_3o_2o_16o_10 -$$
$$2o_23o_15o_19o_7v_1^2v_3o_2o_16o_10 + o_8o_15o_5cs^2o_17o_19o_7v_1o_2o_16o_10 - 2o_23o_15o_5o_17o_19o_7v_1^2v_3o_16o_10 + 2o_23o_15o_5o_5o_19o_7v_1^2v_3o_2o_10 +$$
$$2o_23o_15o_5o_17o_19o_7v_1^2v_3o_2o_16o_10 + 2o_8o_23o_15o_5o_19o_7v_1^2v_3o_2o_10 + o_8o_23o_17o_19o_7v_1^2v_3o_2o_16o_10 + o_8o_23o_15o_5o_17o_19o_7v_1^2v_3o_2o_16o_10 +$$
$$2o_23o_15cs^2o_17o_19o_7v_1o_16o_10 + 2o_8o_23o_15o_5cs^2o_19o_7v_3o_2o_2o_10 + 2o_23o_15o_5cs^2o_17o_19v_1o_16o_10 - 2o_8o_15o_5o_17o_19o_7v_1^2v_3o_20 +$$
$$2o_23o_15o_5cs^2o_19v_1o_2o_16o_10 - 2o_23o_15o_17o_19o_7v_1^2v_3o_16o_10 - 2o_23o_15o_5cs^2o_17o_19v_1o_2o_16o_10 + 2o_23o_15o_5cs^2o_19o_7v_3o_2o_2o_16o_10 -$$
$$2o_8o_15o_5o_17o_19v_1v_3^2o_2o_16o_10 + 2o_8o_15o_5o_17v_1v_3^2o_2o_16o_10 - 2o_23o_15o_5o_19v_1^2v_3o_2o_16o_10 + o_8o_15o_5cs^2o_17o_19o_7v_3o_2o_2o_16 -$$
$$2o_23o_15cs^2o_17o_19o_7v_1o_2o_16o_10 + o_8o_23o_15o_5cs^2o_17o_19o_7v_1o_16o_10 - 2o_23o_15o_5cs^2o_17o_19o_7v_3o_2o_16o_10 + 2o_8o_15o_5cs^2o_17o_19v_1o_2o_2o_10 +$$
$$2o_8o_15o_5cs^2o_17o_19o_7v_1o_20 + 2o_8o_23o_5o_19o_7v_1v_3^2o_2o_16 - 2o_8o_23o_15o_5o_17o_19v_1v_3^2o_16o_10 + 2o_8o_23o_5o_19o_7v_1^2v_3o_2o_16o_10 -$$
$$2o_8o_23o_15o_5cs^2o_19v_1o_2o_16o_10 - 2o_8o_23o_15o_5o_19v_1^2v_3o_2o_2o_10 + o_8o_23o_5o_17o_19o_7v_1^2v_3o_16o_10 - 2o_8o_7v_1o_2o_16o_10 +$$
$$2o_23o_15o_5o_17o_19v_1v_3^2o_16o_10 + 2o_8o_23o_5o_17v_1^2v_3o_2o_16o_10 + 2o_8o_23o_5o_19v_1^2v_3o_2o_16o_10 + 2o_23o_15o_17o_19o_7v_1^2v_3o_2o_16o_10 +$$
$$2o_8o_23o_5cs^2o_19o_7v_3o_2o_2o_16o_10 + 2o_8o_23o_15o_5o_17o_19v_1v_3^2o_2o_16o_10 + o_8o_23o_5o_17o_19o_7v_1v_3^2o_2o_16o_10 - 2o_8o_23o_15o_5o_19o_7v_1v_3^2o_2o_16 -$$
$$o_8o_23o_15o_5cs^2o_17o_19o_7v_3o_2o_2o_16 - 2o_8o_23o_15o_5cs^2o_17o_19v_1o_16o_10 - 2o_23o_15o_5o_17o_19o_7v_1v_3^2o_16o_10 + 2o_8o_15o_5o_17o_19o_7v_1v_3^2o_20 +$$
$$2o_8o_15o_5o_17o_19v_1v_3^2o_2o_2o_10 - o_8o_23o_15cs^2o_17o_19o_7v_1o_16o_10 - o_8o_23o_15o_5cs^2o_17o_19o_7v_1o_2o_16o_10 - o_8o_23cs^2o_17o_19o_7v_1o_2o_16o_10$$

$C_{23} = 2o_8o_15o_5o_17o_19v_1^2v_2^2o_2o_16o_10 - 2o_23o_15o_5cs^2o_17o_19v_1^2o_16o_10 - 2o_8o_15o_5o_17v_1^2v_2^2o_2o_16o_10 - 2o_23o_15o_5o_17o_19v_1^2v_2^2o_16o_10 +$
$2o_8o_15o_5cs^2o_17o_19v_1^2o_2o_16o_10 - 4o_8o_23o_5cs^2o_19o_7v_1v_3o_2o_16o_10 - 2o_23o_15cs^2o_17o_19o_7v_1^2o_16o_10 + 2o_8o_23o_15o_17o_19o_7v_1^2v_2o_2o_16o_10 +$
$2o_8o_15o_5cs^2o_17o_19o_7v_2^2o_2o_10 + o_8o_23o_5cs^2o_17o_19o_7v_2^2o_2o_16 + 2o_8o_23o_15o_5cs^2o_17o_19v_2^2o_2o_10 - 2o_8o_15o_5o_17o_19o_7v_1^2v_2^2o_20 -$
$2o_8o_15o_5o_17o_19v_1^2v_2^2o_2o_2o_10 + 4o_23o_15o_5o_17o_19v_1v_3v_2^2o_16o_10 - 2o_8o_15o_5cs^2o_17o_19v_1^2o_2o_10 + 2o_23o_15o_5o_17o_19o_7v_1^2v_2^2o_16o_10 +$
$2o_8o_23o_15o_5o_19o_7v_1^2v_2^2o_2o_16 - o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2o_16o_10 - 4o_8o_23o_15o_5cs^2o_17o_19v_1v_3o_16o_10 - 2o_8o_23o_15o_5cs^2o_17v_2^2o_16o_10 +$
$2o_8o_23o_15o_5cs^2o_19o_7v_2^2o_2o_16 - 4o_8o_23o_15o_19o_7v_1v_3v_2^2o_2o_16o_10 + 4o_8o_23o_5o_19o_7v_1v_3v_2^2o_2o_16 - 2o_8o_23o_15cs^2o_17o_19o_7v_1v_3o_16o_10 -$
$2o_8o_15o_5o_17o_7v_1v_3v_2^2o_2o_16o_10 - 2o_8o_23o_5cs^2o_17o_19o_7v_1v_3o_2o_2o_16 + 2o_8o_15o_5o_17o_19o_7v_1v_3v_2^2o_2o_16o_10 +$
$2o_8o_15o_5cs^2o_17o_19v_2^2o_2o_16o_10 - 4o_8o_15o_5o_17o_19o_7v_1v_3v_2^2o_2o_2o_10 - o_8o_23o_5o_17o_19o_7v_1^2v_2^2o_2o_16o_10 - 2o_8o_23o_15o_5cs^2o_17o_19v_1^2o_2o_16o_10 -$
$2o_8o_23o_15o_5o_17o_19v_1^2v_2^2o_2o_16o_10 - 2o_8o_23o_15o_5cs^2o_19v_2^2o_2o_2o_10 - 4o_8o_15o_5cs^2o_17o_19v_1v_3o_2o_16o_10 - o_8o_15o_5cs^2o_17o_19o_7v_1^2o_2o_16o_10 +$
$4o_23o_15o_5o_17o_19o_7v_1v_3v_2^2o_2o_2o_10 - o_8o_23o_15cs^2o_17o_19o_7v_1^2o_2o_2o_10 - 2o_8o_23o_5cs^2o_17o_19o_7v_2^2o_2o_2o_10 -$
$4o_8o_23o_15o_5cs^2o_19o_7v_1v_3o_2o_2o_16 + o_8o_23o_15cs^2o_17o_19o_7v_1^2o_16o_10 - o_8o_23o_15cs^2o_17o_19o_7v_2^2o_2o_2o_16o_10 -$
$4o_23o_15o_5o_17o_19o_7v_1v_3v_2^2o_16o_10 + 2o_8o_23o_15o_5o_17o_19o_7v_1v_3v_2^2o_2o_16 - 2o_8o_23o_5o_19o_7v_1^2v_2^2o_2o_16 + 2o_8o_23o_15o_5o_17o_19v_1^2v_2^2o_16o_10 +$
$2o_8o_23o_15o_5cs^2o_17o_19v_1^2o_16o_10 - 4o_8o_23o_15o_5o_19o_7v_1v_3v_2^2o_2o_2o_10 - o_8o_15o_5cs^2o_17o_19o_7v_2^2o_2o_16o_10 - 2o_8o_15o_5cs^2o_17o_19o_7v_1^2o_20 -$
$2o_8o_23o_15o_5cs^2o_17o_19v_2^2o_2o_16o_10 - 2o_8o_23o_5cs^2o_19o_7v_2^2o_2o_16 + 2o_23o_15cs^2o_17o_19o_7v_1^2o_2o_16o_10 - 2o_8o_23o_15o_5cs^2o_19o_7v_2^2o_20 -$
$2o_8o_23o_15o_5o_19o_7v_1^2v_2^2o_20 - o_8o_23o_5cs^2o_17o_19o_7v_2^2o_2o_16 - 2o_23o_15o_5cs^2o_19v_1^2o_2o_16o_10 + o_8o_23o_15o_5cs^2o_17o_7v_1^2o_16o_10 +$
$4o_8o_23o_15o_5cs^2o_17v_1v_3o_16o_10 + 2o_23o_15o_5o_17o_19v_1^2v_2^2o_2o_16o_10 + 2o_23o_15o_5cs^2o_17o_19v_1^2o_2o_16o_10 - 4o_23o_15o_5cs^2o_19o_7v_1v_3o_2o_2o_16o_10 +$
$2o_23o_15o_5cs^2o_17o_19v_2^2o_2o_16o_10 + 4o_8o_23o_15o_5o_5o_19o_7v_1v_3v_2^2o_2o_2o_10 + 2o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_3o_16o_10 -$
$4o_8o_23o_15o_5o_19o_7v_1v_3v_2^2o_16 + 4o_8o_23o_19o_7v_1v_3v_2^2o_2o_16o_10 - 2o_23o_15o_5cs^2o_19v_2^2o_2o_16o_10 + 2o_8o_23o_15o_5o_5o_7v_1v_3v_2^2o_2o_16o_10 -$
$2o_8o_23o_15cs^2o_19v_1^2v_2^2o_2o_2o_10 + 2o_8o_23o_15o_17o_19o_7v_1^2v_2^2o_16o_10 - 4o_23o_15o_5cs^2o_19o_7v_1v_3o_2o_2o_10 + 2o_23o_15cs^2o_17o_19o_7v_2^2o_2o_16o_10 +$
$4o_23o_15o_5cs^2o_17o_19o_7v_1v_3o_2o_16o_10 + 4o_8o_23o_15o_5o_5o_17o_19o_7v_1v_3v_2^2o_2o_2o_10 + 2o_8o_23o_15o_5cs^2o_17v_2^2o_2o_16o_10 +$
$2o_8o_23o_15o_5cs^2o_19v_2^2o_2o_16o_10 + 4o_8o_23o_15o_5o_5o_19o_7v_1v_3v_2^2o_20 + o_8o_15o_5cs^2o_17o_19o_7v_2^2o_2o_16 + o_8o_23cs^2o_17o_19o_7v_1^2o_2o_16o_10 +$
$4o_8o_23o_15o_5cs^2o_17o_19v_1v_3o_2o_16o_10 + o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2o_2o_16o_10 - 4o_23o_15o_5o_17o_19v_1v_3v_2^2o_2o_2o_16o_10 +$
$2o_8o_23o_15o_5cs^2o_17o_19o_7v_2^2o_20 + 2o_8o_15o_5cs^2o_17o_19o_7v_1v_3o_2o_2o_16o_10 - 2o_23o_15o_5o_5o_17o_19o_7v_1^2v_2^2o_2o_16o_10 - 2o_23o_15o_17o_19o_7v_1^2v_2^2o_16o_10 +$
$2o_8o_23o_15o_5cs^2o_19o_7v_2^2o_2o_2o_10 + 4o_23o_15cs^2o_17o_19o_7v_1v_3o_16o_10 + 4o_23o_15o_5o_19o_7v_1v_3v_2^2o_2o_2o_16o_10 - 2o_8o_15o_5o_17o_19o_7v_1v_3v_2^2o_2o_16 +$
$4o_23o_15o_5cs^2o_17o_19v_1v_3o_16o_10 + 4o_8o_23o_15o_5o_5o_19v_1v_3v_2^2o_2o_2o_10 + 2o_23o_15o_5cs^2o_17o_19o_7v_1^2o_16o_10 + 2o_8o_23o_15o_5o_19o_7v_1^2v_2^2o_2o_10 +$
$o_8o_23cs^2o_17o_19o_7v_2^2o_2o_16o_10 + 4o_8o_23o_5cs^2o_19o_7v_1v_3o_2o_16 + o_8o_23o_15o_5cs^2o_17o_19o_7v_2^2o_2o_16o_10 - o_8o_23o_15o_5o_17o_19o_7v_1^2v_2^2o_16o_10 -$
$4o_8o_23o_15o_5o_17o_19v_1v_3v_2^2o_16o_10 + 2o_8o_23o_15cs^2o_17o_19o_7v_1v_3o_2o_16o_10 + 2o_8o_23o_15o_5cs^2o_17v_1^2o_2o_16o_10 +$

$2o_8o_23o_15o_5cs^2o_19v_1^2o_2o_0o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19v_1^2o_2o_0o_10 + 2o_8o_23o_15o_5o_17o_19v_1^2v_2^2o_2o_0o_10 + o_8o_15o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_16 +$

$4o_8o_15o_5cs^2o_17o_19v_1v_3o_2o_0o_10 + 2o_8o_15o_5cs^2o_17o_19o_7v_1^2o_2o_0o_10 + o_8o_23cs^2o_17o_19o_7v_1^2o_2o_0o_16 - 2o_8o_23o_15o_5cs^2o_19o_7v_1^2o_2o_0 -$

$2o_23o_15cs^2o_17o_19o_7v_2^2o_16o_10 - 4o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_3o_2o_0 - 4o_23o_15o_5o_19o_7v_1v_3v_2^2o_2o_0o_16o_10 - 4o_23o_15o_5o_5cs^2o_17o_19o_7v_1v_3o_16o_10 -$

$2o_8o_23o_15o_5o_17o_7v_1v_3v_2^2o_16o_10 - 2o_23o_15o_5o_5cs^2o_17o_19v_2^2o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_19o_7v_1v_3o_2o_0o_16 + 2o_8o_23o_5o_5cs^2o_19o_7v_2^2o_2o_0o_16o_10 +$

$2o_8o_23o_15o_5o_5o_17v_1^2v_2^2o_2o_0o_16o_10 + 2o_8o_23o_15o_5cs^2o_17o_7v_1v_3o_2o_0o_16o_10 + 2o_8o_23o_15o_5o_5o_19v_1^2v_2^2o_2o_0o_16o_10 +$

$2o_23o_15o_17o_19o_7v_1^2v_2^2o_2o_0o_16o_10 + 2o_8o_23o_5o_5cs^2o_19o_7v_1^2o_2o_0o_16o_10 + 4o_8o_23o_15o_5o_5cs^2o_19o_7v_1v_3o_2o_0o_16o_10 + 4o_8o_23cs^2o_19o_7v_1v_3o_2o_0o_16o_10 +$

$2o_8o_23o_15o_5o_5cs^2o_19o_7v_1^2o_2o_0o_16 + 2o_8o_23o_5o_5o_19o_7v_1^2v_2^2o_2o_0o_16o_10 - 2o_8o_23o_15o_5o_5cs^2o_17v_1^2o_16o_10 - o_8o_23o_15o_5o_5cs^2o_17o_19o_7v_2^2o_16o_10 -$

$2o_8o_23o_15o_17o_19o_7v_1v_3v_2^2o_2o_0o_16o_10 - 2o_8o_15o_5o_5cs^2o_17o_19v_2^2o_2o_0o_10 - 2o_8o_23o_15o_5o_5o_17o_19o_7v_1v_3v_2^2o_2o_0o_16o_10 +$

$2o_8o_23o_15o_5o_5o_17o_19o_7v_1^2v_2^2o_2o_0 - o_8o_23o_15o_5o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_16 - 2o_8o_23o_5o_5o_17o_19o_7v_1v_3v_2^2o_2o_0o_16 - 2o_23o_15o_5o_5cs^2o_17o_19o_7v_2^2o_2o_0o_16o_10 -$

$2o_8o_23o_15o_17o_19o_7v_1v_3v_2^2o_16o_10 - 4o_8o_23o_15o_5cs^2o_17o_19o_7v_1^2o_2o_0o_10 - 2o_23o_15o_5o_5o_19v_1^2v_2^2o_2o_0o_16o_10 -$

$4o_23o_15cs^2o_17o_19o_7v_1v_3o_2o_0o_16o_10 - 4o_8o_15o_5o_5cs^2o_17o_19o_7v_1v_3o_2o_0 + 2o_23o_15o_5o_5cs^2o_19o_7v_1v_3o_2o_0o_16o_10 + 4o_8o_15o_5o_5cs^2o_17o_19o_7v_1v_3o_2o_0 +$

$2o_8o_23o_15o_5o_5cs^2o_17o_19o_7v_1^2o_2o_0 - 2o_8o_23o_15o_5cs^2o_19v_1^2o_2o_0o_10 + 4o_23o_15cs^2o_19o_7v_1v_3o_2o_0o_16o_10 - 2o_8o_23o_5o_5cs^2o_19o_7v_1^2o_2o_0o_16 +$

$2o_23o_15o_5cs^2o_19o_7v_1^2o_2o_0o_16o_10 + o_8o_23o_17o_19o_7v_1^2v_2^2o_2o_0o_16o_10 + 4o_23o_15o_5cs^2o_19v_1v_3o_2o_0o_16o_10 + o_8o_23o_15o_5o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_16o_10 +$

$2o_8o_23o_5o_5o_17o_19o_7v_1v_3v_2^2o_2o_0o_16o_10 + 4o_8o_23o_15o_5o_5o_17o_19v_1v_3v_2^2o_2o_0o_16o_10 + 2o_8o_23o_5o_5cs^2o_17o_19v_2^2o_16o_10 +$

$4o_23o_15o_5o_5o_19v_1v_3v_2^2o_2o_0o_16o_10 - 2o_23o_15o_5o_5cs^2o_17o_19o_7v_1^2o_2o_0o_16o_10 - 4o_23o_15o_5o_5cs^2o_17o_19v_1v_3o_2o_0o_16o_10 +$

$2o_23o_15o_5o_5o_19o_7v_1^2v_2^2o_2o_0o_16o_10 + o_8o_23o_15cs^2o_17o_19o_7v_2^2o_16o_10 - 2o_23o_15o_5o_19o_7v_1^2v_2^2o_2o_0o_16o_10 + 2o_8o_23o_5o_5cs^2o_17o_19o_7v_1v_3o_2o_0o_16o_10 +$

$o_8o_23o_15o_5o_5cs^2o_17o_7v_2^2o_16o_10 - 2o_8o_23cs^2o_19o_7v_2^2o_2o_0o_16o_10 - 2o_8o_23o_15o_5cs^2o_19o_7v_2^2o_2o_0o_16o_10 - o_8o_23o_15o_5o_5cs^2o_17o_7v_2^2o_2o_0o_16o_10 -$

$4o_8o_23o_5o_5o_19o_7v_1v_3v_2^2o_2o_0o_16o_10 - o_8o_23o_15o_5o_5cs^2o_17o_19o_7v_1^2o_16 - 2o_23o_15cs^2o_19o_7v_1^2o_2o_0o_16o_10 - 2o_8o_23o_15o_5o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_10 -$

$4o_8o_23o_15o_5o_5o_19v_1^2v_2^2o_2o_0o_10 - 2o_8o_15o_5o_5cs^2o_17o_19o_7v_1^2v_2^2o_16o_10 + 4o_8o_23o_15o_5o_5o_17o_7v_1v_3v_2^2o_16o_10 + o_8o_23o_5o_5o_17o_7v_1^2v_2^2o_16o_10 +$

$4o_23o_15o_17o_19o_7v_1v_3v_2^2o_16o_10 - 4o_8o_23o_15o_5o_5o_19v_1v_3v_2^2o_2o_0o_16o_10 - 2o_8o_23o_19o_7v_1^2v_2^2o_2o_0o_16o_10 - 4o_23o_15o_17o_19o_7v_1v_3v_2^2o_2o_0o_16o_10 -$

$2o_8o_15o_5cs^2o_17o_7v_1v_3o_2o_0o_16o_10 - 2o_8o_23o_15o_5o_5o_19o_7v_1^2v_2^2o_2o_0o_16o_10 - 4o_8o_23o_15o_5o_17v_1v_3v_2^2o_2o_0o_16o_10 - 4o_8o_23o_15o_5o_5o_17o_19o_7v_1v_3v_2^2o_2o_0 -$

$o_8o_23o_15o_5o_5o_17o_7v_1^2v_2^2o_2o_0o_16o_10 - 2o_23o_15cs^2o_19o_7v_2^2o_2o_0o_16o_10 + 4o_8o_23o_15o_5cs^2o_19o_7v_1v_3o_2o_0 - 4o_8o_23o_15o_5cs^2o_19v_1v_3o_2o_0o_16o_10 -$

$2o_8o_23cs^2o_19o_7v_1^2o_2o_0o_16o_10 - 2o_8o_23o_15o_5cs^2o_19o_7v_1^2o_2o_0o_16o_10 - 4o_8o_23o_15o_5cs^2o_17v_1v_3o_2o_0o_16o_10 - o_8o_23o_15o_5cs^2o_17o_7v_1^2o_2o_0o_16o_10 -$

$4o_8o_23o_15cs^2o_19o_7v_1v_3o_2o_0o_16o_10 + 2o_8o_23o_15cs^2o_19o_7v_2^2o_2o_0o_16o_10 + 4o_8o_23o_15o_5o_5cs^2o_17o_19o_7v_1v_3o_2o_0o_10 + o_8o_15o_5o_5cs^2o_17o_7v_2^2o_2o_0o_16o_10 -$

$2o_8o_23o_15o_5o_5cs^2o_17o_19o_7v_1v_3o_2o_0o_16o_10 + o_8o_15o_5o_5cs^2o_17o_19o_7v_1^2o_2o_0o_16 + 2o_8o_23o_15o_5o_5o_17o_19o_7v_1v_3v_2^2o_16o_10 +$

$o_8o_23o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_16 + 4o_8o_15o_5o_5o_17o_19v_1v_3v_2^2o_2o_0o_10 - 2o_8o_23cs^2o_17o_19o_7v_1v_3o_2o_0o_16o_10 + 2o_8o_15o_5o_5o_17o_19o_7v_1^2v_2^2o_16o_10 -$

$2o_8o_23o_15o_5cs^2o_17o_7v_1v_3o_2o_0o_16o_10 - 2o_8o_15o_5cs^2o_17v_1^2o_2o_0o_16o_10 - 2o_8o_23o_5o_5cs^2o_17v_2^2o_2o_0o_16o_10 +$

$o_8o_23o_5o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_16o_10 - 2o_8o_15o_5o_5cs^2o_17o_7v_2^2o_2o_0o_16o_10 + 4o_8o_15o_5o_5cs^2o_17v_1v_3o_2o_0o_16o_10 + 4o_8o_15o_5o_17v_1v_3v_2^2o_2o_0o_16o_10 -$

$4o_8o_15o_5o_5o_17o_19v_1v_3v_2^2o_2o_0o_16o_10 + 2o_8o_23o_15o_5o_19o_7v_1^2v_2^2o_2o_0o_16o_10 + 2o_23o_15o_5o_5cs^2o_17o_19o_7v_2^2o_16o_10 - o_8o_15o_5o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_16o_10 +$

$o_8o_15o_5o_5o_7o_7v_1^2v_2^2o_2o_0o_16o_10 + o_8o_15o_5cs^2o_17o_7v_1^2o_2o_0o_16o_10 + 4o_8o_15o_5cs^2o_17v_1v_3o_2o_0o_16o_10 + 2o_8o_23o_15cs^2o_19o_7v_1^2o_2o_0o_16o_10 +$

$4o_8o_23o_15o_5o_5cs^2o_19v_1v_3o_2o_0o_10 - 2o_8o_15o_5o_5cs^2o_17o_19o_7v_2^2o_2o_0 + 2o_8o_23o_15o_5o_5cs^2o_19o_7v_1^2o_2o_0o_10 - o_8o_23o_15o_5o_17o_19o_7v_1^2v_2^2o_2o_0o_16o_10$

$C_{24} = -12o_1 9o_7^2v_2^2o_16o_10^3 - 36o_23cs^2o_19o_7^2o_16^2o_10 - 12o_23o_19o_16^2o_10^3 - o_23o_19o_7^2o_16^2o_10^3 + 36cs^2o_19o_7o_16o_10^3 - 18cs^2o_19o_7^2o_16^2o_10^2 - 12o_23o_19o_7^2o_10^3 - 12o_23o_19o_7v_2^2o_16^2o_10^3 - 12o_23o_19o_7v_2^2o_10^3 - 18o_23o_19o_7o_16o_10^3 + 2o_23o_19o_7^2o_16^2o_10^2 + 12o_23o_19o_16^2o_10^2 + 12o_1 9o_7^2v_2^2o_16o_10^2 + 18o_23o_19o_7v_2^2o_16^2o_10^2 + 18cs^2o_19o_7^2o_16^2o_10^3 - 12o_23o_19o_7^2v_2^2o_16o_10 + 12o_23o_19o_7^2o_10^2 - 36o_23cs^2o_7o_16^2o_10^2 - 36o_23cs^2o_19o_16o_10^3 + 18o_23o_19o_7^2v_2^2o_16o_10^2 - 12o_23o_19o_7^2o_16^2 + 12o_7v_2^2o_16^2o_10^3 + 6o_23o_7^2v_2^2o_16^2o_10^2 + 12o_23o_19o_7^2o_16^2o_10 - 6o_23o_7^2o_16^2o_10^2 - 36o_23cs^2o_19o_7o_10^3 + 12o_1 9o_7^2o_16o_10^3 + 5o_23cs^2o_19o_7^2o_16^2o_10^3 - 12o_7o_16^2o_10^3 - 6o_23o_19o_7^2v_2^2o_16o_10^3 - 18cs^2o_7^2o_16^2o_10^3 - 6o_23cs^2o_19o_7^2o_16^2o_10^2 - 12o_1 9o_7^2o_16o_10^2 + 12o_1 9o_7o_16^2o_10^3 + 54o_23cs^2o_19o_7o_16o_10^3 - 12o_23o_19v_2^2o_16o_10^3 - 12o_1 9o_7v_2^2o_16^2o_10^3 + o_23o_19o_7^2v_2^2o_16^2o_10^3 - 36o_23cs^2o_19o_16^2o_10^2 - 36o_23cs^2o_19o_7^2o_10^2 - 12o_1 9o_7o_16o_10^3 - 40o_23cs^2o_19o_7o_16^2o_10^3 + 54o_23cs^2o_19o_7^2o_16o_10^2 + 12o_23o_19o_7^2v_2^2o_16^2 + 6o_1 9o_7^2o_16^2o_10^2 + 12o_23o_7o_16^2o_10^2 + 12o_1 9o_7v_2^2o_16o_10^3 + 12o_23o_19v_2^2o_16^2o_10^3 + 36cs^2o_7o_16^2o_10^3 - 2o_23o_19o_7^2v_2^2o_16^2o_10^2 + 6o_7^2o_16^2o_10^3 + 36o_23cs^2o_19o_16^2o_10^3 - 12o_23o_19v_2^2o_16^2o_10^2 + 12o_23o_19o_7o_16o_10 - 6o_1 9o_7^2o_16o_10^3 - 18o_23cs^2o_19o_7^2o_16o_10^3 + 54o_23cs^2o_19o_7^2o_10^2 - 18o_23o_19o_7^2o_16o_10^2 + 12o_23o_19o_7^2v_2^2o_16^2o_10^3 - 6o_7^2v_2^2o_16^2o_10^3 - 6o_1 9o_7^2v_2^2o_16^2o_10^2 - 12o_23o_7v_2^2o_16^2o_10^2 + 12o_23o_19o_7^2v_2^2o_10^3 - 36cs^2o_19o_7o_16o_10^2 - 12o_23o_19o_7^2o_16^2o_10 + 12o_23o_19o_16o_10^3 + 6o_1 9o_7^2v_2^2o_16^2o_10^3 - 36o_23cs^2o_19o_7^2o_16o_10 - 18o_23o_19o_7o_16^2o_10^2 + 6o_23o_19o_7^2o_16o_10^3 + 18o_23cs^2o_7^2o_16^2o_10^2 + 12o_23o_19o_7o_7o_10^3 + 36cs^2o_19o_7^2o_16o_10^2 - 36o_23cs^2o_19o_7o_16^2o_10^3 + 36o_23cs^2o_19o_7^2o_16^2 + 18o_23o_19o_7v_2^2o_16o_10^3 - 12o_23o_19o_7^2v_2^2o_10^2$

$C_{25} = 36o_7^2v_2^2o_16o_10^2 + 6o_23o_19o_7^2o_16o_10 + 12cs^2o_19o_7^3o_10 + 12o_23o_19o_7^3o_10 - 6cs^2o_7^2o_16o_10^2 - o_23cs^2o_19o_7^3o_16o_10^2 + 12o_23o_19o_7^2o_16 + 12cs^2o_19o_7^2o_10^2 - 12o_23o_19o_7o_16o_10 - 36o_19o_7^2v_2^2o_16o_10^2 + 36o_23o_19o_7v_2^2o_10^2 - 18o_19o_7^2v_2^2o_16o_10 - 6cs^2o_19o_7^3o_16o_10 + 72o_23o_19o_7^2v_2^2o_16o_10 - 36o_23o_19o_7^3o_7v_2^2o_10^2 + 24o_23o_19o_7^2o_10^2 + 18o_19o_7^3v_2^2o_16o_10^2 + 6cs^2o_19o_7^2o_16o_10^2 + 36o_23o_19o_7^3v_2^2o_10^2 - 12o_23o_19o_7^2o_10 + 36o_1 9o_7^2v_2^2o_10^2 + 18o_23o_19o_7^3v_2^2o_16 - 6o_23o_19o_7^2o_16o_10 - 18o_23o_19o_7^3v_2^2o_16o_10 + 18o_23cs^2o_19o_7o_16o_10^2 - 12o_23o_19o_7^2o_10^2 - 12o_23cs^2o_19o_16o_10^2 - 12o_23cs^2o_7^2o_16o_10 - 12o_7^2o_16o_10^2 - 18o_7^2v_2^2o_16o_10^2 + 12o_1 9o_7o_16o_10^2 + 12o_23cs^2o_19o_7o_10^2 - 6o_23o_19o_7^3o_16 - 12cs^2o_19o_7^3o_10^2 - 6o_23o_7o_16o_10 + 12o_23o_19o_7o_16o_10 - 12o_23cs^2o_19o_7^2o_16 + 36o_1 9o_7^3v_2^2o_10 + 36o_23o_19o_7^2v_2^2o_10 - 24o_23cs^2o_19o_7^2o_10^2 - 4o_23cs^2o_19o_7^2o_16o_10^2 - 36o_23o_19o_7v_2^2o_16o_10 + 12cs^2o_7^2o_16o_10^2 + 18o_23o_7^2v_2^2o_16o_10 - 24o_23o_19o_7^2o_16o_10 + 6o_1 9o_7^3o_16o_10 + 12o_1 9o_7^3o_10^2 - 12o_23cs^2o_19o_7^3o_10 - 36o_23o_7^2v_2^2o_16o_10 - 6o_1 9o_7^3o_16o_10^2 - 12o_1 9o_7^3o_10 + 12o_23cs^2o_19o_7^3o_10^2 + 12o_23o_7^2o_16o_10 + 6o_23cs^2o_19o_7^3o_16 + 6o_7^3o_16o_10^2 + 6o_23cs^2o_7^3o_16o_10 - 12o_23o_19o_7o_10^2 - 12o_1 9o_7^2o_10^2 + 12o_23cs^2o_19o_7^2o_10 - 36o_23o_19o_7^2v_2^2o_16 + 24o_23cs^2o_19o_7^2o_16o_10 - 12cs^2o_19o_7^2o_16o_10^2 - 36o_1 9o_7^3v_2^2o_10^2 - 72o_23o_19o_7^2v_2^2o_10^2$

$C_{26} = -18cs^2o_19^2o_7^2o_11o_16 - 12o_19^2o_7^2o_11 - 6o_1 9^2o_7^2v_3^2o_11o_16 - 12o_23o_19^2o_7v_3^2o_11o_16o_10 - 9o_23cs^2o_19o_7^2o_11o_16o_10 + 12o_19^2o_7o_11o_16o_10 + 18o_23cs^2o_7^2o_11o_16o_10 + o_23o_19^2o_7v_3^2o_11o_16o_10 - 18o_23o_19o_7o_11o_16o_10 + 5o_23o_19^2o_7^2o_16o_10 + 3o_23cs^2o_19^2o_7^2o_11o_16o_10 + 12o_23o_19^2o_7v_3^2o_10 - 12o_19^2o_7o_11o_10 + 36o_23cs^2o_19^2o_7^2o_10 - 12o_23o_19^2o_11o_16o_10 - 3o_23o_19o_7^2v_3^2o_11o_16o_10 + 18o_23cs^2o_19^2o_7^2o_16 + 6o_23o_19^2o_7^2v_3^2o_16 - 6o_23o_7^2o_11o_16o_10 + 12o_23o_19^2v_3^2o_11o_16o_10 + 36cs^2o_19o_7o_11o_16o_10 - 12o_1 9o_7o_11o_16o_10 + 36o_23o_19^2o_11o_16o_10 - 36cs^2o_19^2o_7^2o_11o_10 + 12o_23o_19^2o_7o_10 - 12o_1 9^2o_7^2v_3^2o_11o_10 - 12o_23o_19^2o_7v_3^2 - 36o_23cs^2o_19^2o_7^2 + 12o_23o_19^2o_16o_10 + 18o_23o_19o_7v_3^2o_11o_16o_10 - 12o_23o_19v_3^2o_11o_16o_10 - 5o_23o_19^2o_7^2v_3^2o_16o_10 - 36o_23cs^2o_19o_7o_11o_16o_10 + 12o_19^2o_7o_11o_16o_10 - 15o_23cs^2o_19^2o_7^2o_16o_10 + 54o_23cs^2o_19o_7o_11o_16o_10 - 12o_23o_7v_3^2o_11o_16o_10 - o_23o_19^2o_7^2o_11o_16o_10 - 36o_23cs^2o_7o_11o_16o_10 -$

$$12o_2 3o_1 9^2 o_7^2 o_1 0 + 6o_1 9^2 o_7^2 o_1 1o_1 6 - 6o_1 9o_7^2 v_3^2 o_1 1o_1 6o_1 0 + 12o_2 3o_1 9o_1 1o_1 6o_1 0 + 36cs^2 o_1 9^2 o_7 o_1 1o_1 0 + 3o_2 3o_1 9o_7^2 o_1 1o_1 6o_1 0 +$$
$$6o_2 3o_7^2 v_3^2 o_1 1o_1 6o_1 0 + 54o_2 3cs^2 o_1 9^2 o_7 o_1 6o_1 0 - 36o_2 3cs^2 o_1 9^2 o_7^2 o_1 1o_1 6o_1 0 + 12o_2 3o_1 9^2 o_7^2 + 12o_1 9o_7 v_3^2 o_1 1o_1 6o_1 0 + 12o_1 9^2 o_7^2 v_3^2 o_1 1 -$$
$$36o_2 3cs^2 o_1 9^2 o_7 o_1 0 + 36cs^2 o_1 9^2 o_7^2 o_1 1 - 12o_2 3o_1 9^2 v_3^2 o_1 6o_1 0 + 12o_2 3o_7 o_1 1o_1 6o_1 0 + 6o_1 9o_7^2 o_1 1o_1 6o_1 0 - 18cs^2 o_1 9o_7^2 o_1 1o_1 6o_1 0 -$$
$$12o_1 9^2 o_7 v_3^2 o_1 1o_1 6o_1 0 - 36o_2 3cs^2 o_1 9^2 o_1 6o_1 0 - 12o_2 3o_1 9^2 o_7 v_3^2 o_1 0 + 18o_2 3o_1 9^2 o_7 v_3^2 o_1 6o_1 0 + 12o_1 9^2 o_7^2 o_1 1o_1 0 - 6o_1 9^2 o_7^2 o_1 1o_1 6o_1 0 +$$
$$18cs^2 o_1 9^2 o_7^2 o_1 1o_1 6o_1 0 - 18o_2 3o_1 9^2 o_7 o_1 6o_1 0 + 6o_1 9^2 o_7^2 v_3^2 o_1 1o_1 6o_1 0 - 6o_2 3o_1 9^2 o_7^2 o_1 6 - 36o_2 3cs^2 o_1 9o_1 1o_1 6o_1 0 + 12o_1 9^2 o_7 v_3^2 o_1 1o_1 0$$

$$C_{27} = 36o_2 3o_1 9o_7^3 v_3^2 o_1 0 + 5o_2 3o_1 9o_7^3 o_1 6o_1 0 - 18o_7^3 v_3^2 o_1 1o_1 6o_1 0 - 12o_2 3o_1 9o_7^3 o_1 0 - 6cs^2 o_7^3 o_1 1o_1 6o_1 0 - 5o_2 3cs^2 o_1 9o_7^2 o_1 1o_1 6o_1 0 -$$
$$18o_2 3cs^2 o_7^2 o_1 1o_1 6o_1 0 - 6o_2 3o_7^3 o_1 1o_1 6o_1 0 - 15o_2 3o_1 9o_7^3 v_3^2 o_1 6o_1 0 - 6cs^2 o_1 9o_7^3 o_1 1o_1 6 - 12o_2 3cs^2 o_1 9o_7 o_1 6o_1 0 - 36o_1 9o_7^3 v_3^2 o_1 1o_1 0 -$$
$$3o_2 3o_1 9o_7^2 v_3^2 o_1 1o_1 6o_1 0 + 18o_2 3o_7^2 v_3^2 o_1 1o_1 6o_1 0 + 12o_2 3o_1 9o_7^2 v_3^2 o_1 6o_1 0 + 54o_2 3o_1 9o_7^2 v_3^2 o_1 6o_1 0 - 18o_1 9o_7^3 v_3^2 o_1 1o_1 6 -$$
$$5o_2 3cs^2 o_1 9o_7^3 o_1 6o_1 0 + 18o_1 9o_7^2 v_3^2 o_1 1o_1 6o_1 0 + 36o_1 9o_7^2 v_3^2 o_1 1o_1 0 + 12cs^2 o_1 9o_7^3 o_1 1 + 18o_2 3o_1 9o_7^3 v_3^2 o_1 6 + 18o_2 3o_7^3 v_3^2 o_1 1o_1 6o_1 0 +$$
$$6o_2 3cs^2 o_7^3 o_1 1o_1 6o_1 0 + 12o_2 3o_1 9o_7^3 - o_2 3cs^2 o_1 9o_7^3 o_1 1o_1 6o_1 0 - 6o_2 3o_1 9o_7^3 o_1 6 + 12cs^2 o_7^2 o_1 1o_1 6o_1 0 - 12o_1 9o_7^2 o_1 1o_1 0 + 12o_2 3o_1 9o_7 o_1 6o_1 0 +$$
$$18o_2 3cs^2 o_1 9o_7 o_1 1o_1 6o_1 0 + 36o_2 3o_7 v_3^2 o_1 1o_1 6o_1 0 + 12o_2 3cs^2 o_7 o_1 1o_1 6o_1 0 - 36o_1 9o_7^2 v_3^2 o_1 1o_1 6o_1 0 + 6o_7^3 o_1 1o_1 6o_1 0 - 12o_1 9o_7^3 o_1 1 -$$
$$12o_2 3cs^2 o_1 9o_7^3 + 6o_1 9o_7^3 o_1 1o_1 6 + o_2 3o_1 9o_7^2 o_1 1o_1 6o_1 0 - 54o_2 3o_7^2 v_3^2 o_1 1o_1 6o_1 0 - 18o_2 3o_1 9o_7^2 o_1 6o_1 0 - 36o_2 3o_1 9o_7^2 v_3^2 o_1 0 +$$
$$12o_2 3cs^2 o_1 9o_7^2 o_1 0 + 6cs^2 o_1 9o_7^3 o_1 1o_1 6o_1 0 - 6o_1 9o_7^2 o_1 1o_1 6o_1 0 + 12o_1 9o_7^3 o_1 1o_1 0 - 12o_2 3o_7 o_1 1o_1 6o_1 0 + 6o_2 3cs^2 o_1 9o_7^3 o_1 6 -$$
$$36o_2 3o_1 9o_7 v_3^2 o_1 6o_1 0 + 12o_1 9o_7^2 o_1 1o_1 6o_1 0 + 36o_7^2 v_3^2 o_1 1o_1 6o_1 0 - 12cs^2 o_1 9o_7^2 o_1 1o_1 6o_1 0 - 12o_2 3cs^2 o_1 9o_7^2 o_1 0 + 36o_1 9o_7^2 v_3^2 o_1 1 +$$
$$18o_2 3cs^2 o_1 9o_7^2 o_1 6o_1 0 - 12o_2 3cs^2 o_1 9o_1 1o_1 6o_1 0 - 12o_7^2 o_1 1o_1 6o_1 0 - 36o_2 3o_1 9o_7^3 v_3^2 + 12cs^2 o_1 9o_7^2 o_1 1o_1 0$$

$$C_{28} = -24cs^4 o_1 9o_7^2 - 24cs^2 o_1 9o_7 + 30o_1 9o_7^3 v_3^2 - 72o_7^2 v_3^4 + 6cs^2 o_1 9^2 o_7^3 v_3^2 + 6cs^4 o_1 9o_7^3 + 3o_1 9^2 o_7^3 v_3^4 + 24cs^4 o_1 9^2 + 24cs^2 o_1 9o_7^2 +$$
$$72cs^2 o_1 9o_7 v_3^2 + 24cs^4 o_1 9o_7 - 12o_1 9^2 o_7^2 v_3^4 - 12cs^2 o_1 9^2 o_7^2 v_3^2 + 36o_7^3 v_3^4 - 72o_1 9o_7^2 v_3^2 - 6cs^2 o_1 9o_7^3 - 48cs^4 o_1 9^2 o_7 - 216cs^2 o_7^2 v_3^2 -$$
$$36cs^2 o_1 9^2 o_7 v_3^2 + cs^2 o_1 9^2 o_7^3 + 72o_1 9o_7^2 v_3^4 - 36o_7^3 v_3^2 - 8cs^2 o_1 9^2 o_7^2 + 12o_1 9^2 o_7^2 v_3^2 + 144cs^2 o_1 9o_7^2 v_3^2 + 12cs^2 o_1 9^2 o_7 + 108cs^2 o_7^3 v_3^2 -$$
$$3cs^4 o_1 9^2 o_7^2 - 72cs^2 o_1 9o_7^3 v_3^2 - 3o_1 9^2 o_7^3 v_3^2 + 24cs^4 o_1 9^2 o_7^2 + 72o_7^2 v_3^2 - 30o_1 9o_7^3 v_3^4$$

2.5.5 Conservation of momentum: ρv_3

📎 attached text file: `output_d3q27_nse_clbm2_symbolic_pde_03.txt`

$$v_3 \frac{\partial \rho}{\partial t} + \rho \frac{\partial v_3}{\partial t} + \frac{\delta_l v_1 v_3}{\delta_t} \frac{\partial \rho}{\partial x_1} + \frac{\delta_l \rho v_3}{\delta_t} \frac{\partial v_1}{\partial x_1} + \frac{\delta_l \rho v_1}{\delta_t} \frac{\partial v_3}{\partial x_1} + \frac{\delta_l v_3 v_2}{\delta_t} \frac{\partial \rho}{\partial x_2} + \frac{\delta_l \rho v_3}{\delta_t} \frac{\partial v_2}{\partial x_2} + \frac{\delta_l \rho v_2}{\delta_t} \frac{\partial v_3}{\partial x_2} + (cs^2 + v_3^2) \frac{\delta_l}{\delta_t} \frac{\partial \rho}{\partial x_3} +$$
$$\frac{2\delta_l \rho v_3}{\delta_t} \frac{\partial v_3}{\partial x_3} + (-2 + o_6) \frac{\delta_l^2 cs^2}{2\delta_t o_6} \frac{\partial \rho}{\partial x_1} \frac{\partial v_3}{\partial x_1} + (-2 + o_6) \frac{\delta_l^2 cs^2}{2\delta_t o_6} \frac{\partial \rho}{\partial x_1} \frac{\partial v_1}{\partial x_3} + (-2 + o_7) \frac{\delta_l^2 cs^2}{2o_7 \delta_t} \frac{\partial \rho}{\partial x_2} \frac{\partial v_3}{\partial x_2} + (-2 + o_7) \frac{\delta_l^2 cs^2}{2o_7 \delta_t} \frac{\partial \rho}{\partial x_2} \frac{\partial v_2}{\partial x_3} +$$
$$(-2 + o_1 1 + 4cs^2 + 6v_3^2 - 2o_1 1cs^2 - 3o_1 1v_3^2) \frac{\delta_l^2}{o_1 1\delta_t} \frac{\partial \rho}{\partial x_3} \frac{\partial v_3}{\partial x_3} + (2 - o_1 1) \frac{3\delta_l^2 \rho v_3}{o_1 1\delta_t} \left(\frac{\partial v_3}{\partial x_3} \right)^2 + (-2 + o_6) \frac{\delta_l^2 \rho cs^2}{2\delta_t o_6} \frac{\partial^2 v_3}{\partial x_1^2} +$$
$$(-2 + o_7) \frac{\delta_l^2 \rho cs^2}{2o_7 \delta_t} \frac{\partial^2 v_3}{\partial x_2^2} + (-2 + o_6) \frac{\delta_l^2 \rho cs^2}{2\delta_t o_6} \frac{\partial^2 v_1}{\partial x_1 \partial x_3} + (-2 + o_7) \frac{\delta_l^2 \rho cs^2}{2o_7 \delta_t} \frac{\partial^2 v_2}{\partial x_2 \partial x_3} +$$
$$(-2 + o_1 1 + 6cs^2 + 2v_3^2 - 3o_1 1cs^2 - o_1 1v_3^2) \frac{\delta_l^2 v_3}{2o_1 1\delta_t} \frac{\partial^2 \rho}{\partial x_3^2} + (-2 + o_1 1 + 2cs^2 + 6v_3^2 - o_1 1cs^2 - 3o_1 1v_3^2) \frac{\delta_l^2 \rho}{2o_1 1\delta_t} \frac{\partial^2 v_3}{\partial x_3^2} +$$
$$(-1 + v_1^2 + 3cs^2) \frac{\delta_l^3 v_1 v_3}{12\delta_t} \frac{\partial^3 \rho}{\partial x_1^3} + (-1 + 3v_1^2 + cs^2) \frac{\delta_l^3 \rho v_3}{12\delta_t} \frac{\partial^3 v_1}{\partial x_1^3} + C_1 \frac{\delta_l^3 \rho v_1}{6\delta_t o_6 o_1 3} \frac{\partial^3 v_3}{\partial x_1^3} - \frac{\delta_l^3 \rho v_3 cs^2}{6\delta_t} \frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} - \frac{\delta_l^3 \rho v_3 cs^2}{6\delta_t} \frac{\partial^3 v_1}{\partial x_1 \partial x_2^2}$$
$$+ (-1 + 3cs^2 + v_2^2) \frac{\delta_l^3 v_3 v_2}{12\delta_t} \frac{\partial^3 \rho}{\partial x_2^3} + (-1 + cs^2 + 3v_2^2) \frac{\delta_l^3 \rho v_3}{12\delta_t} \frac{\partial^3 v_2}{\partial x_2^3} + C_2 \frac{\delta_l^3 \rho v_2}{6o_1 6o_7 \delta_t} \frac{\partial^3 v_3}{\partial x_2^3} + (-12 - o_6^2 + 12o_6) \frac{\delta_l^3 cs^4}{6\delta_t o_6^2} \frac{\partial^3 \rho}{\partial x_1^2 \partial x_3}$$
$$- \frac{\delta_l^3 \rho v_3 cs^2}{6\delta_t} \frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} + (-12 + 12o_7 - o_7^2) \frac{\delta_l^3 cs^4}{6o_7^2 \delta_t} \frac{\partial^3 \rho}{\partial x_2^2 \partial x_3} - \frac{\delta_l^3 \rho v_3 cs^2}{6\delta_t} \frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} + C_3 \frac{\delta_l^3 \rho v_3}{12o_1 1^2 \delta_t o_1 8o_6} \frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} +$$
$$C_4 \frac{\delta_l^3 \rho v_3}{12o_1 9o_1 1^2 o_7 \delta_t} \frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} + C_5 \frac{\delta_l^3}{12o_1 1^2 \delta_t} \frac{\partial^3 \rho}{\partial x_3^3} +$$
$$(-24 + 11o_1 1^2 v_3^2 + 5o_1 1^2 cs^2 + 24o_1 1 + 36cs^2 + 60v_3^2 - 4o_1 1^2 - 36o_1 1cs^2 - 60o_1 1v_3^2) \frac{\delta_l^3 \rho v_3}{6o_1 1^2 \delta_t} \frac{\partial^3 v_3}{\partial x_3^3} +$$
$$(-cs^4 o_9 - 6v_1^2 + 3v_1^2 o_9 - 12v_1^2 cs^2 o_9 - 2cs^2 + 2cs^4 - 3v_1^4 o_9 + cs^2 o_9 + 6v_1^4 + 24v_1^2 cs^2) \frac{\delta_l^4 v_3}{24\delta_t o_9} \frac{\partial^4 \rho}{\partial x_1^4} +$$
$$(-4 + 10v_1^2 - 5v_1^2 o_9 + 6cs^2 - 3cs^2 o_9 + 2o_9) \frac{\delta_l^4 \rho v_1 v_3}{12\delta_t o_9} \frac{\partial^4 v_1}{\partial x_1^4} + C_6 \frac{\delta_l^4 \rho}{24\delta_t o_6^3 o_1 3^2} \frac{\partial^4 v_3}{\partial x_1^4} +$$
$$(3o_1 2cs^2 o_9 - 3v_1^2 o_9 + o_1 2v_1^2 - o_1 2 + 3o_1 2cs^2 - o_1 2o_9 - 9cs^2 o_9 + o_1 2v_1^2 o_9 + 3o_9) \frac{\delta_l^4 \rho v_1 v_3}{12o_1 2\delta_t o_9} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} +$$
$$(-2 + o_5) \frac{\delta_l^4 v_3 cs^4}{6\delta_t o_5} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} + C_7 \frac{\delta_l^4 \rho cs^4}{2o_1 7o_1 6o_7^2 \delta_t o_6^2 o_1 4o_8 o_1 3} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2^2} +$$
$$(-3o_1 0v_2^2 - 9o_1 0cs^2 - o_1 5 + 3o_1 0 + o_1 5o_1 0v_2^2 + 3o_1 5o_1 0cs^2 - o_1 5o_1 0 + o_1 5v_2^2 + 3o_1 5cs^2) \frac{\delta_l^4 \rho v_3 v_2}{12o_1 5\delta_t o_1 0} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$$
$$(24v_2^2 cs^2 + 3o_1 0v_2^2 + o_1 0cs^2 - 12o_1 0v_2^2 cs^2 - 2cs^2 - 6v_2^2 + 2cs^4 + 6v_2^4 - 3o_1 0v_2^4 - o_1 0cs^4) \frac{\delta_l^4 v_3}{24\delta_t o_1 0} \frac{\partial^4 \rho}{\partial x_2^4} +$$
$$(-4 - 5o_1 0v_2^2 - 3o_1 0cs^2 + 6cs^2 + 10v_2^2 + 2o_1 0) \frac{\delta_l^4 \rho v_3 v_2}{12\delta_t o_1 0} \frac{\partial^4 v_2}{\partial x_2^4} + C_8 \frac{\delta_l^4 \rho}{24o_1 6^2 o_7^2 \delta_t} \frac{\partial^4 v_3}{\partial x_2^4} + C_9 \frac{\delta_l^4 v_1 cs^2}{12o_1 1o_2 2\delta_t o_1 8o_6^2 o_9 o_1 3^2} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_3}$$
$$+ C_{10} \frac{\delta_l^4 \rho cs^2}{12o_1 1o_2 2\delta_t o_1 8o_6^3 o_9 o_1 3} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} +$$

$$(v_1^2 o_1 3 - 3v_1^2 o_9 - o_9 o_1 3 + 3cs^2 o_9 o_1 3 - 9cs^2 o_9 + v_1^2 o_9 o_1 3 + 3cs^2 o_1 3 + 3o_9 - o_1 3)\frac{\delta_l^4 \rho v_1 v_3}{12\delta_t o_9 o_1 3}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$$

$$C_{11}\frac{\delta_l^4}{2o_1 9 o_1 1 o_7 o_2 2\delta_t o_2 0 o_1 8 o_6 o_1 4 o_8 o_1 3}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2 \partial x_3} + C_{12}\frac{\delta_l^4 \rho}{2o_1 9 o_1 1 o_7 o_2 2\delta_t o_2 0 o_1 8 o_6 o_1 4 o_8 o_1 3}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2 \partial x_3} +$$

$$C_{13}\frac{\delta_l^4 \rho}{12 o_1 9 o_1 1 o_7^2 o_2 2\delta_t o_2 0 o_1 8 o_6^3 o_1 4 o_5 o_8 o_1 3}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} + C_{14}\frac{\delta_l^4 \rho v_3}{o_1 9 o_1 1 o_7 o_2 2\delta_t o_2 0 o_1 8 o_6 o_1 4 o_8 o_1 3}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} +$$

$$C_{15}\frac{\delta_l^4}{2o_1 9 o_1 1 o_1 7 o_2 3 o_1 6 o_7 \delta_t o_2 0 o_1 8 o_6 o_8}\frac{\partial^4 \rho}{\partial x_1 \partial x_2^2 \partial x_3} + C_{16}\frac{\delta_l^4 \rho}{12 o_1 9 o_1 1 o_1 7 o_2 3 o_1 6 o_2^3 \delta_t o_2 0 o_1 8 o_6^2 o_5 o_8}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$C_{17}\frac{\delta_l^4 \rho v_2}{o_1 9 o_1 1 o_1 7 o_2 3 o_1 6 o_7 \delta_t o_2 0 o_1 8 o_6 o_8}\frac{\partial^4 v_2}{\partial x_1 \partial x_2^2 \partial x_3} + C_{18}\frac{\delta_l^4 \rho}{2o_1 9 o_1 1 o_1 7 o_2 3 o_1 6 o_7 \delta_t o_2 0 o_1 8 o_6 o_8}\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$C_{19}\frac{\delta_l^4 v_2 cs^2}{12 o_1 9 o_1 1 o_2 3 o_1 6^2 o_7^2 \delta_t o_1 0}\frac{\partial^4 \rho}{\partial x_2^3 \partial x_3} + C_{20}\frac{\delta_l^4 \rho cs^2}{12 o_1 9 o_1 1 o_2 3 o_1 6 o_7^2 \delta_t o_1 0}\frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} +$$

$$(-3o_1 0 v_2^2 - 9o_1 0cs^2 - o_1 6 + 3o_1 0 + 3o_1 6cs^2 + o_1 6 o_1 0 v_2^2 - o_1 6 o_1 0 + 3o_1 6 o_1 0cs^2 + o_1 6 v_2^2)\frac{\delta_l^4 \rho v_3 v_2}{12 o_1 6\delta_t o_1 0}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$$

$$C_{21}\frac{\delta_l^4 v_3 cs^2}{12 o_1 1^3 o_2 2\delta_t o_1 8^2 o_6^2 o_1 3}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + C_{22}\frac{\delta_l^4 \rho cs^2}{12 o_1 1^2 o_2 2\delta_t o_1 8 o_6^3 o_1 3}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + C_{23}\frac{\delta_l^4 v_3 cs^2}{12 o_1 9^2 o_1 1^3 o_2 3 o_1 6 o_7^2 \delta_t}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$$

$$C_{24}\frac{\delta_l^4 \rho cs^2}{12 o_1 9 o_1 1^2 o_2 3 o_1 6 o_7^3 \delta_t}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} + C_{25}\frac{\delta_l^4 \rho}{12 o_1 1^3 \delta_t o_1 8^2 o_6^3}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + C_{26}\frac{\delta_l^4 \rho}{12 o_1 9^2 o_1 1^3 o_7^3 \delta_t}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} + C_{27}\frac{\delta_l^4 v_3}{12 o_1 1^3 \delta_t}\frac{\partial^4 \rho}{\partial x_3^4} +$$

$$C_{28}\frac{\delta_l^4 \rho}{12 o_1 1^3 \delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 6 - 6v_1^2 + 3v_1^2 o_1 3 - v_1^2 o_6 o_1 3 + 3v_1^2 o_6 - 18cs^2 - 3cs^2 o_6 o_1 3 + o_6 o_1 3 + 9cs^2 o_1 3 - 3o_6 + 9cs^2 o_6 - 3o_1 3$

$C_2 = 6 + o_1 6 o_7 - 3o_1 6 o_7 cs^2 - 18cs^2 - 3o_1 6 - 3o_7 - 6v_2^2 - o_1 6 o_7 v_2^2 + 9o_7 cs^2 + 3o_7 v_2^2 + 9o_1 6cs^2 + 3o_1 6 v_2^2$

$C_3 = 12v_3^2 o_1 8 o_6 - 12 o_1 1^2 v_3^2 - 12 o_1 8 o_6 - 36 o_1 1 cs^2 o_6 - 36 o_1 1 cs^2 o_6 + 3 o_1 1^2 o_1 8 o_6 - 12 o_1 1 v_3^2 o_6 - 6 o_1 1^2 o_1 8 + 12 o_1 1 o_1 6 - 18 o_1 1 o_1 8 cs^2 o_6 + 6 o_1 1^2 v_3^2 o_1 8 + 12 o_1 1^2 - 3 o_1 1^2 v_3^2 o_1 8 o_6 + 12 o_1 1^2 v_3^2 o_6 + 36 o_1 8 cs^2 o_6 - 12 o_1 1^2 o_6 + 18 o_1 1^2 o_1 8 cs^2 + 6 o_1 1 o_1 8 o_6 - 6 o_1 1 v_3^2 o_1 8 o_6 + 36 o_1 1^2 cs^2 o_6 - 11 o_1 1^2 o_1 8 cs^2 o_6$

$C_4 = -3 o_1 9 o_1 1^2 o_7 v_3^2 - 12 o_1 1^2 v_3^2 - 6 o_1 9 o_1 1^2 - 11 o_1 9 o_1 1^2 o_7 cs^2 - 36 o_1 1^2 cs^2 + 12 o_1 1 o_7 - 12 o_1 1 o_7 v_3^2 + 6 o_1 9 o_1 1^2 v_3^2 + 6 o_1 9 o_1 1 o_7 + 12 o_1 1^2 + 18 o_1 9 o_1 1^2 cs^2 - 36 o_1 1 o_7 cs^2 + 3 o_1 9 o_1 1^2 o_7 + 12 o_1 1^2 o_7 v_3^2 + 36 o_1 1^2 o_7 cs^2 - 12 o_1 1^2 o_7 + 36 o_1 9 o_7 cs^2 - 6 o_1 9 o_1 1 o_7 v_3^2 - 18 o_1 9 o_1 1 o_7 cs^2 - 12 o_1 9 o_7 + 12 o_1 9 o_7 v_3^2$

$C_5 = 24 o_1 1^2 v_3^2 cs^2 - 7 o_1 1^2 v_3^2 - 12 o_1 1 cs^4 - o_1 1^2 cs^2 - 36 o_1 1 v_3^4 + 144 v_3^2 cs^2 - 12 cs^2 - 36 v_3^2 + 12 cs^4 + 36 v_3^4 + 7 o_1 1^2 v_3^4 + 12 o_1 1 cs^2 - 144 o_1 1 v_3^2 cs^2 + o_1 1^2 cs^4 + 36 o_1 1 v_3^2$

$C_6 = -72 v_1^2 cs^2 o_6^3 o_1 3 + 12 cs^2 o_6 o_1 3^2 - 36 v_1^2 o_6^3 - 12 v_1^2 cs^2 o_6^2 o_1 3^2 + 72 v_1^2 o_6^2 + 24 cs^4 o_6 o_1 3 - 216 v_1^2 cs^2 o_6^2 - 48 cs^4 o_6 o_1 3^2 + 144 v_1^2 cs^2 o_6^2 o_1 3 + 108 v_1^2 cs^2 o_6^3 + 6 v_1^2 cs^2 o_6^3 o_1 3^2 - 24 cs^2 o_6 o_1 3 + 24 cs^4 o_1 3^2 + 6 cs^4 o_6^3 o_1 3 - 3 v_1^2 o_6^3 o_1 3^2 - 12 v_1^4 o_6^2 o_1 3^2 - 72 v_1^4 o_6^2 + 24 cs^2 o_6^2 o_1 3 - 72 v_1^2 o_6^2 o_1 3 + 24 cs^4 o_6^2 o_1 3^2 + cs^2 o_6^3 o_1 3^2 + 36 v_1^4 o_6^3 + 72 v_1^2 cs^2 o_6 o_1 3 - 30 v_1^4 o_6^3 o_1 3 - 6 cs^2 o_6^3 o_1 3 + 3 v_1^4 o_6^3 o_1 3^2 - 36 v_1^2 cs^2 o_6 o_1 3^2 + 12 v_1^2 o_6 o_1 3^2 - 24 cs^4 o_6^2 o_1 3 + 72 v_1^4 o_6^2 o_1 3 - 8 cs^2 o_6^2 o_1 3^2 - 3 cs^4 o_6^3 o_1 3^2 + 30 v_1^2 o_6 o_1 3$

$C_7 = -2 o_1 6 o_7 o_6^2 o_1 4 o_1 3 + 2 o_1 7 o_1 6 o_7^2 o_6 o_8 o_1 3 - 2 o_7 o_6^2 o_1 4 o_8 o_1 3 + 2 o_1 7 o_1 6 o_7 o_6 o_1 4 o_8 + o_7^2 o_6^2 o_1 4 o_8 o_1 3 + o_1 6 o_7^2 o_6 o_1 4 o_8 o_1 3 - o_1 7 o_1 6 o_7^2 o_1 4 o_8 o_1 3 - o_1 7 o_7^2 o_6 o_1 4 o_8 o_1 3 - 2 o_1 7 o_1 6 o_7^2 o_6 o_1 3 - 2 o_1 6 o_7^2 o_6 o_1 4 o_1 3 + o_1 7 o_1 6 o_7 o_7^2 o_8 o_1 3 - o_1 7 o_1 6 o_6^2 o_1 4 o_8 o_1 3 - 2 o_1 7 o_1 6 o_7 o_6^2 o_1 3 - 2 o_1 7 o_1 6 o_7^2 o_6^2 o_1 4 o_1 3 - 2 o_1 7 o_1 6 o_7^2 o_6 o_8 + 2 o_1 7 o_7 o_6 o_1 4 o_8 o_1 3 + o_1 7 o_1 6 o_7 o_6^2 o_1 4 o_8 o_1 3 + 2 o_1 6 o_7 o_6^2 o_1 4 o_8 o_1 3 + o_1 7 o_1 6 o_7^2 o_6^2 o_8 + 2 o_1 6 o_7^2 o_6^2 o_1 4 o_1 3 + 2 o_1 7 o_1 6 o_7^2 o_6 o_1 4 o_1 3 + 2 o_1 7 o_1 6 o_7^2 o_6^2 o_1 3 + 2 o_1 7 o_1 6 o_7 o_1 4 o_8 o_1 3 - o_1 6 o_7^2 o_6^2 o_1 4 o_8 o_1 3 - o_1 7 o_1 6 o_7^2 o_6^2 o_8 o_1 3 + 2 o_1 7 o_1 6 o_6 o_1 4 o_8 o_1 3 + o_1 7 o_1 6 o_7^2 o_6 o_1 4 o_8 o_1 3 - o_1 7 o_1 6 o_7 o_7 o_6^2 o_1 4 o_8 - 6 o_1 7 o_1 6 o_7 o_6 o_1 4 o_8 o_1 3 + 2 o_1 7 o_1 6 o_7 o_7 o_6^2 o_1 4 o_1 3$

$C_8 = 108 o_3^2 v_2^2 cs^2 - 3 o_1 6^2 o_7^3 v_2^2 - 36 o_7^3 v_2^2 - 30 o_1 6 o_7^3 v_2^4 + 144 o_1 6 o_7^2 v_2^2 cs^2 + o_1 6^2 o_7^3 cs^2 + 6 o_1 6^2 o_7^3 v_2^2 cs^2 + 6 o_1 6 o_7^3 cs^4 + 72 o_1 6 o_7^2 v_2^4 - 36 o_1 6^2 o_7 v_2^2 cs^2 + 72 o_7^2 v_2^2 - 48 o_1 6^2 o_7 cs^4 - 24 o_1 6 o_7 cs^2 + 12 o_1 6^2 o_7^2 v_2^2 - 24 o_1 6^2 cs^4 - 8 o_1 6^2 o_7^2 cs^2 + 24 o_1 6 o_7 cs^4 - 12 o_1 6^2 o_7^2 v_2^4 - 12 o_1 6^2 o_7^2 v_2^2 cs^2 - 72 o_1 6 o_7^2 v_2^2 - 72 o_7^2 v_2^4 + 12 o_1 6^2 o_7 cs^2 - 72 o_1 6^2 v_2^2 cs^2 + 24 o_1 6^2 o_7^2 cs^4 + 24 o_1 6 o_7^2 cs^2 - 216 o_7^2 v_2^2 cs^2 + 36 o_7^3 v_2^4 + 30 o_1 6 o_7^3 v_2^2 + 72 o_1 6 o_7 v_2^2 cs^2 + 3 o_1 6^2 o_7^3 v_2^4 + 24 o_1 6^2 cs^4 - 6 o_1 6 o_7^3 cs^2 - 3 o_1 6^2 o_7^3 cs^4$

$C_9 = 36 o_1 1 o_2 2 cs^2 o_6^2 o_1 3^2 + 12 o_1 1 v_1^2 o_1 8 o_6 o_9 o_1 3 - 12 o_1 1 o_2 2 v_1^2 o_1 8 o_9 o_1 3 + 18 o_1 1 o_2 2 v_1^2 o_1 8 o_6 o_9 o_1 3 + 6 o_1 1 o_2 2 v_1^2 o_1 8 o_6^2 o_9 - 6 v_1^2 o_1 8 o_6^2 o_9 o_1 3^2 - 12 o_1 1 o_2 2 v_1^2 o_1 8 o_1 3^2 - 12 o_1 1 o_6 o_9 o_1 3^2 - 36 o_1 1 o_2 2 18 cs^2 o_6 o_9 + 12 o_1 1 o_2 2 o_1 8 o_6 o_9 - 18 o_1 1 o_1 8 cs^2 o_6^2 o_9 o_1 3 + 6 o_1 1 o_1 8 o_6^2 o_9 o_1 3 + 3 o_1 1 o_2 2 o_1 8 o_6^2 o_9 o_1 3 - 9 o_1 1 o_2 2 o_1 8 cs^2 o_6^2 o_9 o_1 3 + 12 o_1 1 o_2 2 o_6 o_1 3^2 - 12 o_1 1 v_1^2 o_6^2 o_9 o_1 3^2 + 12 o_2 2 o_6^2 o_1 3^2 + 18 o_2 2 18 cs^2 o_6^2 o_1 3^2 + 12 o_1 1 o_2 2 v_1^2 o_6^2 o_1 3^2 - 12 o_6^2 o_9 o_1 3^2 - o_1 1 o_2 2 o_1 8 o_6 o_9 o_1 3^2 - 6 o_1 1 o_1 8 o_6^2 o_9 o_1 3^2 + 18 o_1 1 o_1 8 cs^2 o_6^2 o_9 o_1 3^2 - 36 o_1 1 cs^2 o_6^2 o_9 o_1 3^2 + 3 o_1 1 o_2 2 o_1 8 cs^2 o_6^2 o_9 o_1 3^2 - 6 o_2 2 o_1 8 o_6^2 o_1 3^2 + 54 o_1 1 o_2 2 o_1 8 cs^2 o_6 o_1 3^2 - 18 o_1 1 o_2 2 o_1 8 o_6 o_1 3^2 - 36 o_1 1 o_2 2 o_1 8 cs^2 o_1 3^2 - 12 o_1 1 v_1^2 o_1 8 o_6 o_9 o_1 3^2 - 12 o_1 1 o_2 2 v_1^2 o_1 8 o_6 o_9 o_1 3^2 - 50 o_1 1 o_2 2 v_1^2 o_1 8 o_6^2 o_1 3^2 + 12 o_1 1 o_2 2 v_1^2 o_1 8 o_9 o_1 3^2 + 50 o_1 1 o_2 2 o_1 8 o_6^2 o_1 3^2 + 36 o_1 1 o_2 2 o_1 8 cs^2 o_9 o_1 3^2 - 12 o_1 1 o_2 2 o_1 8 o_9 o_1 3^2 - 15 o_1 1 o_2 2 o_1 8 cs^2 o_6^2 o_1 3^2 + 6 o_1 8 o_6^2 o_9 o_1 3^2 + 36 cs^2 o_6^2 o_9 o_1 3^2 + 18 o_1 1 o_2 2 v_1^2 o_1 8 o_6 o_1 3^2 + 36 o_1 1 cs^2 o_6 o_9 o_1 3^2 - 36 o_1 1 o_2 2 o_1 8 cs^2 o_6 o_9 o_1 3^2 + 12 o_1 1 o_2 2 o_1 8 o_6 o_9 o_1 3^2 + 12 o_1 1 o_1 8 o_6 o_9 o_1 3 - 36 o_1 1 o_1 8 cs^2 o_6 o_9 o_1 3 + o_1 1 o_2 2 v_1^2 o_1 8 o_6^2 o_9 o_1 3^2 + 6 o_1 1 v_1^2 o_1 8 o_6^2 o_9 o_1 3^2 - 12 o_1 1 o_2 2 o_2 6 o_1 3^2 + 6 o_2 2 v_1^2 o_1 8 o_6^2 o_1 3^2 - 3 o_1 1 o_2 2 v_1^2 o_1 8 o_6^2 o_9 o_1 3 - 6 o_1 1 v_1^2 o_1 8 o_6^2 o_9 o_1 3 + 12 o_1 1 o_6^2 o_9 o_1 3^2 - 36 o_2 2 cs^2 o_6^2 o_1 3^2 - 12 o_1 1 o_2 2 v_1^2 o_6 o_1 3^2 - 18 o_1 8 cs^2 o_6^2 o_9 o_1 3^2 - 12 o_2 2 v_1^2 o_6^2 o_1 3^2 - 36 o_1 1 o_2 2 cs^2 o_6 o_1 3^2 + 54 o_1 1 o_2 2 o_1 8 cs^2 o_6 o_9 o_1 3 + 12 o_1 1 o_2 2 o_1 8 o_1 3^2 - 12 o_1 1 o_2 2 v_1^2 o_1 8 o_6 o_9 + 12 o_1 1 v_1^2 o_6 o_9 o_1 3^2 + 36 o_1 1 o_1 8 cs^2 o_6 o_9 o_1 3 - 12 o_1 1 o_1 8 o_6 o_9 o_1 3 - 18 o_1 1 o_2 2 o_1 8 o_6 o_9 o_1 3 + 12 o_1 1 o_2 2 o_1 8 o_9 o_1 3 - 36 o_1 1 o_2 2 o_1 8 cs^2 o_9 o_1 3 - 6 o_1 1 o_2 2 o_1 8 o_6^2 o_9 + 18 o_1 1 o_2 2 o_1 8 cs^2 o_6^2 o_9 + 12 v_1^2 o_6^2 o_9 o_1 3^2$

$$C_{10} = 12o_{22}o_6^3o_{13}+54o_{11}o_{22}v_1^2o_{18}o_6^2o_{13}-54o_{11}o_{22}v_1^2o_{18}o_6^2o_9+36o_{11}v_1^2o_{18}o_6^2o_9+36o_{11}o_{22}v_1^2o_6^3o_{13}+12o_{11}o_6^3o_9o_{13}+12o_{11}o_{22}o_{18}o_6o_{13}-$$
$$12o_{11}o_{22}o_{18}cs^2o_6o_{13}+6o_{22}o_{18}cs^2o_6^3o_{13}+12o_{11}o_{22}o_{18}cs^2o_6o_9-12o_{11}o_{22}o_{18}o_6o_9-12o_{11}o_{18}cs^2o_6^2o_9o_{13}+12o_{11}o_{18}o_6^2o_9o_{13}+$$
$$o_{11}o_{22}o_{18}o_6^2o_9o_{13}-5o_{11}o_{22}o_{18}cs^2o_6^2o_9o_{13}-6o_{18}cs^2o_6^3o_9o_{13}+12o_{11}cs^2o_6^2o_9o_{13}+12o_{11}o_{22}cs^2o_6^3o_{13}+36v_1^2o_6^3o_9o_{13}-36o_{11}o_{22}v_1^2o_6^2o_{13}+$$
$$12cs^2o_6^3o_9o_{13}+6o_{18}o_6^3o_9o_{13}+36o_{11}v_1^2o_6^2o_9o_{13}-18o_{11}v_1^2o_{18}o_6^3o_9+18o_{11}o_{22}v_1^2o_{18}o_6^3o_9-15o_{11}o_{22}v_1^2o_{18}o_6^3o_{13}-6o_{22}o_{18}o_6^3o_{13}-$$
$$12o_{11}o_{22}cs^2o_6^2o_{13}+18o_{11}v_1^2o_{18}o_6^3o_9o_{13}-o_{11}o_{22}o_{18}cs^2o_6^3o_9o_{13}-12o_{11}cs^2o_6^3o_9o_{13}+6o_{11}o_{18}cs^2o_6^3o_9o_{13}-6o_{11}o_{18}o_6^3o_9o_{13}+$$
$$6o_{11}o_{22}o_{18}cs^2o_6^3o_9+6o_{11}o_{18}o_6^3o_9-6o_{11}o_{18}cs^2o_6^3o_9-12o_{11}o_6^3o_9o_{13}-6o_{11}o_{22}o_{18}o_6^3o_9+5o_{11}o_{22}o_{18}o_6^3o_{13}-5o_{11}o_{22}o_{18}cs^2o_6^3o_{13}+$$
$$12o_{11}o_{22}o_6^2o_{13}-18v_1^2o_{18}o_6^3o_9o_{13}-3o_{11}o_{22}v_1^2o_{18}o_6^2o_9o_{13}-36o_{22}v_1^2o_6^3o_{13}-36o_{11}v_1^2o_{18}o_6^2o_9o_{13}-36o_{11}o_{22}v_1^2o_{18}o_6o_{13}-36o_{11}v_1^2o_6^3o_9o_{13}-$$
$$12o_{11}o_{22}o_6^3o_{13}+18o_{11}o_{22}o_{18}cs^2o_6o_9o_{13}+36o_{11}o_{22}v_1^2o_{18}o_6o_9+18o_{22}v_1^2o_{18}o_6^3o_{13}+18o_{11}o_{22}o_{18}cs^2o_6^2o_{13}-12o_{11}o_{22}o_{18}cs^2o_9o_{13}-$$
$$12o_{22}cs^2o_6^3o_{13}-18o_{11}o_{22}o_{18}o_6^2o_{13}+18o_{11}o_{22}o_{18}o_6^2o_9-12o_6^3o_9o_{13}-12o_{11}o_{18}o_6^2o_9+12o_{11}o_{18}cs^2o_6^2o_9-18o_{11}o_{22}o_{18}cs^2o_6^2o_9$$

$$C_{11} = -2o_{19}o_{11}o_7o_{22}v_1^2v_3^2v_2o_{18}o_{14}o_8o_{13}-o_{11}o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{19}o_7o_{22}o_{20}v_1v_3^2cs^2o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_{14}o_8o_{13}-2o_{19}o_{11}o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_{14}-o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_8o_{13}+o_{19}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+$$
$$o_{19}o_7o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8-2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_{14}o_8-$$
$$2o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_{14}o_{13}+o_{19}o_{11}o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_8o_{13}-2o_{19}o_{11}o_7o_{20}v_1v_3^2o_{18}cs^2o_{14}o_8-o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6o_{14}o_8o_{13}+$$
$$o_{19}o_{11}o_7o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{13}-2o_{19}o_{11}o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_{13}-$$
$$2o_{19}o_{11}o_7o_{22}v_1^2v_2o_{18}cs^2o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{20}v_3^2v_2o_6o_{14}o_8o_{13}+2o_{19}o_7o_{22}v_1o_{18}cs^2o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}v_1v_3^2cs^2o_6o_{14}o_8o_{13}-o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}cs^2o_6o_8-2o_{11}o_{22}v_1v_3^2o_{18}cs^2o_6o_{14}o_{13}-$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_6o_{14}o_8o_{13}-o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-2o_{11}o_7o_{22}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-$$
$$2o_{19}o_{11}o_{22}v_1v_2^2o_{18}cs^2o_6o_{14}o_{13}-o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_{14}-2o_{19}o_7o_{22}o_{20}v_1^2v_3^2v_2o_6o_{14}o_8o_{13}-$$
$$2o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2cs^2o_{14}o_8o_{13}+o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_8o_{13}-$$
$$2o_{19}o_{11}o_7o_{22}v_1^2v_2cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_8+$$
$$o_{19}o_{11}o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_{13}+2o_{19}o_{11}o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}v_1v_3^2o_{18}cs^2o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_{14}o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2cs^2o_6o_{14}o_8o_{13}-$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}-2o_{11}o_{22}v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}v_1v_2^2o_{18}cs^2o_6o_{14}o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}v_3^2v_2cs^2o_{14}o_8o_{13}+2o_{19}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}cs^2o_{14}o_8o_{13}-$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2cs^2o_6o_{14}o_8o_{13}-2o_{19}o_7o_{22}o_{20}v_1v_2^2cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{13}-$$
$$2o_{19}o_7o_{22}o_{20}v_1^2v_2cs^2o_6o_{14}o_8o_{13}-o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13}+o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}v_1^2v_2cs^2o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}v_1^2v_3^2v_2o_6o_{14}o_8o_{13}+2o_{11}o_{22}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_{13}+$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_{13}-2o_{19}o_{11}o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{13}-$$
$$2o_{19}o_7o_{22}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+o_{11}o_{22}o_{20}v_1v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13}+2o_{19}o_7o_{22}v_1^2v_2cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7v_1^2v_2o_{18}cs^2o_{14}o_{13}-$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_{13}+o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_8-o_{19}o_7o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+$$
$$o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-o_{19}o_{11}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_8o_{13}-o_{19}o_7o_{22}o_{20}v_1v_3^2v_2^2o_{18}o_6o_8o_{13}-2o_{19}o_{11}o_7v_1v_3^2cs^2o_{14}o_8o_{13}+o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2^2o_{18}o_6o_8o_{13}-$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_{13}+2o_{19}o_{11}o_7o_{22}v_1^2v_2cs^2o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_7o_{20}v_3^2v_2cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}v_3^2v_2o_{18}cs^2o_6o_{14}o_{13}+2o_{11}o_7o_{22}v_1v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2cs^2o_{14}o_8o_{13}+$$
$$o_{19}o_{11}o_7o_{20}v_1^2o_{18}cs^2o_6o_{14}o_8+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_{14}o_8+2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}o_{14}o_{13}+2o_{19}o_7o_{22}v_1^2v_3^2v_2o_6o_{14}o_8o_{13}-$$
$$2o_{19}o_{11}o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_{13}-o_{19}o_{11}o_7o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8-o_{19}o_{11}o_7o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8-$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_{14}o_8o_{13}-2o_{19}o_{11}o_{22}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-o_{19}o_{11}o_7o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8+$$
$$o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2^2o_{18}o_6o_{13}+2o_7o_{22}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8+$$
$$2o_{19}o_{11}o_7o_{20}v_1v_2o_{18}cs^2o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2cs^2o_8+o_7o_{22}o_{20}v_1v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_8o_{13}+$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2^2o_{18}o_6o_8-2o_{19}o_7o_{22}v_1^2v_3^2v_2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2cs^2o_{14}o_8o_{13}+$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_8-o_{19}o_{11}o_{22}o_{20}v_1v_2o_{18}o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{13}+2o_{11}o_{22}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8-o_{19}o_{11}o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_8o_{13}+2o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_{13}-o_{19}o_{11}o_7o_{22}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8+$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_{14}o_8-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_{13}-2o_{19}o_7o_{20}v_1v_3^2v_2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_{22}v_3^2v_2o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_{13}-2o_{19}o_7o_{22}v_1v_3^2cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_8o_{13}+o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_8+$$
$$2o_{19}o_7o_{20}v_1^2v_3^2v_2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2cs^2o_8+2o_{19}o_{11}o_7o_{22}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7v_1v_2^2cs^2o_{14}o_8o_{13}-$$
$$2o_{11}o_7o_{22}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_{14}o_8-o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+$$
$$o_{19}o_{11}o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8-2o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_8+$$
$$o_{19}o_7o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13}+o_{19}o_{11}o_7o_{20}v_3^2v_2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_{22}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}v_1v_2^2cs^2o_6o_{14}o_8o_{13}+2o_{19}o_7o_{22}v_3^2v_2cs^2o_6o_{14}o_8o_{13}-2o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}v_1^2v_3^2v_2o_{18}o_6o_{14}o_{13}+$$
$$2o_{19}o_{11}o_7o_{20}v_1^2v_2o_{18}cs^2o_{14}o_8+2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_{13}+o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8-$$
$$2o_{19}o_{11}o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{13}-o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8-2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_8+$$
$$o_{19}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13}-o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_8o_{13}+2o_{19}o_7o_{22}o_{20}v_1v_2^2cs^2o_6o_{14}o_8o_{13}-o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_8+$$
$$o_{19}o_{11}o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{13}+2o_{19}o_7o_{20}v_1^2v_2cs^2o_6o_{14}o_8o_{13}-o_{11}o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7v_1^2v_2o_{18}cs^2o_6o_{14}o_{13}+$$
$$o_{19}o_{11}o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}-2o_{19}o_7o_{20}v_1v_3^2cs^2o_6o_{14}o_8o_{13}-2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{13}-2o_{11}o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}-$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{13}-o_{11}o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+2o_{19}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_{14}o_{13}-$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_{13}+2o_{19}o_{11}o_7o_{22}v_1^2o_{18}cs^2o_{14}o_8o_{13}+2o_{19}o_{11}o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_{13}-o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+$$

$$o_{19}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13} - o_{19}o_{11}o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2cs^2o_{14}o_8o_{13} +$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}o_6o_{14}o_8o_{13} - o_{19}o_{11}o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2cs^2o_6o_{14}o_8o_{13} +$$
$$o_{11}o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}v_1v_3^2o_6o_{14}o_8o_{13} -$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8 - 2o_{19}o_{11}o_7o_2v_1^2v_2o_{18}cs^2o_{14}o_8o_{13} + o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_2v_1^2v_3^2v_2o_{18}o_{14}o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_{14}o_{13} - 2o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_{14}o_8o_{13} + o_{19}o_{11}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_8 -$$
$$o_{19}o_7o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} -$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_8o_{13} + 2o_7o_{22}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}v_1^2v_2cs^2o_{14}o_8o_{13} - 2o_{19}o_{11}o_{22}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13} -$$
$$o_{19}o_7o_{20}v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13} + o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_2o_8o_{13} +$$
$$2o_{19}o_7o_{22}o_{20}v_1v_3^2v_2^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_{14}o_8o_{13} - 2o_{19}o_{11}o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{14}o_{13} +$$
$$2o_{11}o_7o_{22}v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2cs^2o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_8 -$$
$$2o_{19}o_{11}o_7o_{20}v_1v_2^2o_{18}cs^2o_{14}o_8 - 2o_{19}o_{11}o_7o_{22}v_1v_3^2o_{18}cs^2o_{14}o_{13} - 2o_{19}o_{11}o_7o_{22}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_{13} + 2o_{19}o_{11}o_7o_{22}v_1^2v_3^2v_2o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2v_1^2v_3^2v_2o_{18}o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2v_1^2v_3^2v_2o_6o_{14}o_8o_{13} -$$
$$o_{19}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} + o_7o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_6o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}v_3^2v_2cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_7o_{22}v_1v_2^2cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_{14}o_8 + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2cs^2o_{14}o_8o_{13} +$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}cs^2o_6o_8o_{13} + o_{11}o_{22}o_{20}v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}cs^2o_6o_{14}o_{13} + 2o_{19}o_{11}o_7o_{20}v_1v_3^2o_{18}cs^2o_{14}o_8o_{13} - 2o_{19}o_7o_{22}v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_2v_1v_2^2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{11}o_2v_3^2v_2o_{18}cs^2o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_2o_{20}v_3^2v_2o_{18}cs^2o_6o_{13}+2o_{11}o_7o_{22}o_2v_1v_3^2o_{18}cs^2o_6o_{14}o_8o_{13}+$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}cs^2o_{14}o_8o_{13} - 2o_7o_{22}o_{20}v_3^2v_2cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_2v_1v_3^2v_2o_{18}o_{14}o_8o_{13} + 2o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2o_{18}o_{14}o_{13} - 2o_{19}o_{11}o_7o_2v_1^2v_2cs^2o_6o_{14}o_8o_{13} -$$
$$o_{19}o_7o_2o_{20}v_1^2v_3^2v_2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_{18}o_{14}o_8 - 2o_{19}o_{11}o_2v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_6o_8 +$$
$$2o_{19}o_{11}o_7o_2o_{20}v_1^2v_2cs^2o_6o_{14}o_8o_{13} + 2o_7o_2v_1^2v_2o_{18}cs^2o_6o_{14}o_8o_{13} + o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2v_2o_{18}o_6o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}cs^2o_{13}$$

$C_{12} = 2o_{19}o_{11}o_2v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{20}v_1v_2o_{18}cs^2o_{14}o_8o_{13} +$

$$2o_{19}o_{11}o_7o_2v_3^2v_2o_{18}o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + o_{19}o_{11}o_7o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8 + 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_{14}o_8o_{13} + 2o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} -$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2v_1v_3^2cs^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_{22}o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_7o_{22}v_3^2v_2^2o_6o_{14}o_8o_{13} +$$
$$o_7o_{22}o_2v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} - 2o_{11}o_2o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8 + 2o_{11}o_7o_2v_3^2o_{18}o_6o_{14}o_8o_{13} +$$
$$4o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_{14}o_8o_{13} - 4o_{11}o_7o_{22}o_2v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{20}v_1v_3^2o_{18}o_{14}o_8o_{13} +$$
$$4o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_8 - o_{19}o_7o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_2^2cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_{13} + o_{11}o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2v_3^2v_2o_{18}o_{14}o_8 -$$
$$2o_{11}o_{22}o_2o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13}+2o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_6o_8o_{13}+4o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_{14}o_{13}+o_{19}o_{11}o_{22}o_{20}v_2^2o_{18}cs^2o_6o_8o_{13}-$$
$$2o_{19}o_{11}o_7o_2v_3^2o_{18}cs^2o_{14}o_{13} + 2o_{19}o_{11}o_2o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2v_3^2v_2^2o_{14}o_8o_{13} + 2o_{19}o_7o_{22}o_2o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} -$$
$$4o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_7o_{22}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_6o_{14}o_8o_{13} -$$
$$2o_7o_{22}o_2o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_2v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_2o_{20}v_1v_2o_8o_{13} +$$
$$o_{11}o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_2o_{20}v_1v_2cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_7o_{22}o_2o_{20}v_3^2v_2^2o_6o_{14}o_8o_{13} - o_{19}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_8o_{13} + 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_2cs^2o_6o_{14}o_8o_{13} -$$
$$2o_{19}o_7o_2o_{20}v_3^2cs^2o_6o_{14}o_8o_{13} + o_{19}o_7o_2o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2o_{18}cs^2o_8o_{13} + 4o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_2o_{20}v_3^2o_{18}cs^2o_{14}o_8o_{13} - 4o_{11}o_7o_{22}o_2v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2v_3^2v_2^2o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_{13} -$$
$$2o_{19}o_{11}o_7o_2o_{20}v_2^2o_{18}cs^2o_{14}o_8 - 2o_{19}o_7o_2v_2^2cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_2v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_7o_2o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_2v_2^2o_{18}cs^2o_{14}o_8o_{13} + o_{19}o_{11}o_7o_2o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8 - 2o_{19}o_{11}o_7o_2v_3^2cs^2o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_{13} +$$
$$4o_7o_2v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{22}o_2v_3^2v_2^2o_{18}o_6o_8o_{13} + 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{13} + 2o_{19}o_7o_{22}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$4o_{19}o_7o_{20}v_1v_3^2v_2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}2v_3^2o_{18}cs^2o_6o_{14}o_{13} + o_{19}o_{11}o_7o_2o_2o_{20}v_3^2v_2^2o_{18}o_6o_8o_{13} - 4o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_{14}o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_2v_1v_2o_{18}cs^2o_6o_{14}o_{13} - 2o_{19}o_{11}o_{22}o_{20}v_3^2o_{18}cs^2o_{13} + 4o_{19}o_7o_2o_{20}v_1v_2cs^2o_6o_{14}o_8o_{13} +$$
$$4o_{19}o_{11}o_7o_2o_{20}v_1v_3^2v_2o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2v_3^2o_{18}cs^2o_6o_{14}o_{13} + 4o_{19}o_{11}o_7o_2o_{20}v_1v_2cs^2o_{14}o_8o_{13} - o_{19}o_{11}o_7o_2o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_2^2o_{18}cs^2o_{14}o_{13} + o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_2o_{20}v_2^2o_{18}cs^2o_6o_{13} -$$
$$4o_{19}o_{11}o_7o_2o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{13} + 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_8 + 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2v_2^2o_{18}o_{14}o_8 - 2o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_8o_{13} +$$
$$o_{19}o_{11}o_{22}o_2o_{20}v_3^2v_2^2o_{18}o_6o_8o_{13} + 4o_{19}o_{11}o_7o_2o_{20}v_1v_3^2v_2o_{18}o_{14}o_8 - 2o_{11}o_2v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_7o_2v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$4o_7o_2v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2v_2^2o_{18}o_6o_{13} + 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2v_2^2o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_2o_{22}o_{20}v_1v_2o_{18}cs^2o_{14}o_8 -$$
$$2o_{19}o_7o_2o_{20}v_1v_3^2o_{18}o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_2v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_2v_1v_3^2v_2o_{18}o_6o_{14}o_{13} + o_{19}o_{11}o_7o_2o_{22}o_{20}v_2^2o_{18}cs^2o_6o_8 -$$
$$4o_{19}o_{11}o_7o_2o_{20}v_1v_3^2o_{18}o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2o_{22}o_2v_3^2v_2^2o_{18}o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2v_2^2cs^2o_6o_{14}o_8o_{13} - o_{11}o_7o_2o_2o_{22}o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2o_{18}cs^2o_8 - 2o_{19}o_{11}o_2o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_8o_{13} + 4o_{11}o_2o_{20}v_1v_2o_{18}cs^2o_6o_{13} - 2o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_6o_8 -$$
$$2o_{19}o_{11}o_7o_2v_2^2cs^2o_{14}o_8o_{13} + 4o_{19}o_{11}o_2v_1v_2o_{18}cs^2o_6o_{14}o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2^2o_{18}o_{14}o_{13} + 4o_{19}o_{11}o_7o_2o_{20}v_1v_3^2v_2o_{18}o_8o_{13} -$$
$$2o_{19}o_{11}o_{22}o_{20}v_3^2v_2^2o_{18}o_6o_{13} + 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_2^2o_{18}cs^2o_{14}o_8 + 2o_{19}o_7o_2o_{20}v_2^2cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2v_2^2o_{18}o_8 -$$
$$2o_7o_2v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2o_{18}cs^2o_{13} - 2o_{19}o_{11}o_7o_2v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} -$$
$$o_{19}o_{11}o_7o_2o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8 - 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_{13} +$$
$$2o_{19}o_{11}o_2o_{20}v_2^2o_{18}cs^2o_6o_{14}o_{13} - 2o_{19}o_{11}o_7o_2o_{22}o_2v_3^2cs^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_2o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 4o_{19}o_7o_2v_1v_2cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_2v_3^2v_2^2o_{18}o_6o_{14}o_{13} - 2o_{19}o_{11}o_7o_2v_2^2cs^2o_{14}o_8o_{13} + o_7o_{22}o_2v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{11}o_7o_2o_2v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_2o_{20}v_3^2o_{18}cs^2o_{14}o_{13} - 2o_{19}o_{11}o_7o_2o_2o_{20}v_3^2o_{18}cs^2o_8 + o_{11}o_7o_2o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_2o_2o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$4o_{19}o_7o_2v_1v_3^2v_2o_6o_{14}o_8o_{13} + o_{19}o_7o_2o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - o_{19}o_7o_{22}o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_2v_3^2v_2^2o_{18}o_6o_{14}o_{13} +$$
$$2o_{19}o_{11}o_7o_2v_2^2cs^2o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_7o_2o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_{13} - o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2o_{18}cs^2o_6o_8o_{13} + o_{11}o_2o_{20}v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} +$$
$$o_7o_{22}o_2o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{14}o_{13} - 2o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2v_2^2o_{18}o_{13} - o_{19}o_{11}o_2o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$o_{19}o_{11}o_7o_2o_{22}o_{20}v_3^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_7o_2o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_7o_2v_1v_3^2v_2o_{18}o_{14}o_{13} +$$
$$2o_{19}o_{11}o_7o_2o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8 + 2o_{19}o_{11}o_7o_2v_2^2o_{18}cs^2o_{14}o_8o_{13} - 2o_7o_{22}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_2o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8 + 2o_{19}o_{11}o_2v_3^2v_2^2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_7o_2o_2v_2^2cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_2v_3^2cs^2o_{14}o_8o_{13} -$$

$$2o_{19}o_{11}o_7o_{22}o_{20}v_2^2o_{18}cs^2o_{13} + o_{19}o_{11}o_{22}o_{20}v_3^2o_{18}cs^2o_6o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_{14}o_8 + 4o_{19}o_{11}o_7o_{22}v_1v_2cs^2o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_{14}o_8o_{13} + o_{19}o_7o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8 + 4o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8 + 2o_{11}o_7o_{22}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_{14}o_{13} - o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}o_6o_{14}o_8 -$$
$$4o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_{13} + 2o_{19}o_{11}o_{22}o_{20}v_3^2v_2o_{18}o_6o_{14}o_{13} - 2o_{11}o_{22}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}v_3^2v_2o_{18}o_{14}o_{13} + 2o_{19}o_{11}o_7o_{22}v_2^2o_{18}cs^2o_6o_{14}o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_2^2cs^2o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}o_8o_{13} +$$
$$2o_{19}o_{11}o_7o_{20}v_3^2v_2o_6o_{14}o_8o_{13} - 4o_{19}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}v_3^2o_{18}cs^2o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{13} +$$
$$4o_{11}o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{14}o_8o_{13} - 2o_{19}o_7o_{22}v_3^2cs^2o_6o_{14}o_8o_{13} + 2o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} -$$
$$4o_{19}o_{11}o_7o_{22}o_{20}v_1v_2cs^2o_{14}o_8o_{13} - o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_{22}v_2^2o_{18}cs^2o_6o_{14}o_{13} - o_{19}o_{11}o_7o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} -$$
$$4o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_{14}o_8o_{13} + o_{19}o_{11}o_7o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_{22}o_{20}v_1v_2o_{18}cs^2o_6o_{14}o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}v_3^2v_2o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_{14}o_8 - 2o_{11}o_7o_{22}o_{20}v_3^2v_2o_{18}o_6o_{14}o_8o_{13} -$$
$$4o_{19}o_{11}o_7o_{20}v_1v_2o_{18}cs^2o_8o_{13} - 2o_{11}o_{22}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_7o_{22}v_3^2v_2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}v_3^2cs^2o_6o_{14}o_8o_{13} +$$
$$4o_{19}o_{11}o_7o_{20}v_1v_2o_{18}cs^2o_{14}o_8 + 2o_{19}o_7o_{22}o_{20}v_3^2cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_7o_{22}o_{20}v_1v_3^2v_2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{20}v_3^2v_2o_{18}o_{14}o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}v_2^2o_{18}cs^2o_{14}o_{13} - 4o_{19}o_{11}o_7o_{22}v_1v_2cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_7o_{22}o_{20}v_1v_2cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_2^2o_{18}cs^2o_8o_{13} +$$
$$o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_8 - 2o_{19}o_{11}o_7o_{20}v_3^2o_{18}cs^2o_{14}o_8 -$$
$$o_{19}o_{11}o_7o_{20}v_3^2o_{18}cs^2o_6o_{14}o_8o_{13} - o_{11}o_7o_{22}o_{20}v_2^2o_{18}cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_6o_{14}o_8o_{13} +$$
$$2o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{14}o_8o_{13} + 4o_{11}o_{22}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} - 4o_{19}o_7o_{22}v_1v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 4o_{19}o_{11}o_{22}o_{20}v_1v_3^2v_2o_{18}o_6o_{13}$$

$$C_{13} = 24o_{11}o_7^2o_{22}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} - 24o_{19}o_7^2o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} -$$
$$12o_{19}o_7^2o_{22}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} - 6o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} - 12o_{11}o_7^2o_{22}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} -$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^2o_{14}o_5o_8 - 12o_{19}o_{11}o_7o_{22}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_7^2o_{22}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} -$$
$$24o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6o_{14}o_5o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^3o_5o_8o_{13} + 12o_7^2v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} -$$
$$24o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} - 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^2o_5o_8o_{13} -$$
$$2o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^2o_{14}o_5o_8o_{13} + 6o_{19}o_7^2o_{22}o_{20}v_3^2o_{18}cs^2o_6^2o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^2o_5o_8 -$$
$$12o_{19}o_{11}o_7o_{22}o_{18}cs^4o_6^2o_{14}o_5o_{13} - 24o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6^3o_5o_{13} -$$
$$24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2cs^2o_6^3o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_{13} - 12o_{19}o_7^2o_{22}o_{20}o_{18}cs^4o_6^3o_{14}o_8o_{13} -$$
$$12o_{11}o_7^2o_{22}o_{20}o_{18}cs^4o_6^3o_{14}o_8o_{13} - 18o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^2o_{14}o_8o_{13} - 12o_{19}o_{11}o_7o_{22}v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} -$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} - 6o_{19}o_{11}o_7o_{20}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8 - 12o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} -$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8 - 24o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_6o_{14}o_5o_8o_{13} - 6o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^3o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}v_1^2v_3^2o_6^2o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{22}v_3^2o_{18}cs^2o_6^2o_{14}o_5o_8o_{13} - 24o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_{14}o_5o_8o_{13} -$$
$$6o_{19}o_{11}o_7o_{20}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8 + 24o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^3o_5o_8o_{13} -$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^2o_{14}o_5o_{13} - 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_6^3o_{14}o_5o_{13} + 12o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} -$$
$$6o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^3o_5o_8o_{13} - 24o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_6^2o_{14}o_5o_{13} - 6o_{19}o_7^2o_{20}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} +$$
$$6o_{11}o_7^2o_{22}o_{20}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^3o_5o_8o_{13} - 24o_{19}o_{11}o_7o_{20}v_1v_2cs^2o_6^2o_{14}o_5o_8o_{13} -$$
$$12o_{19}o_{11}o_7o_{22}v_3^3cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} + 6o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} -$$
$$12o_{19}o_{11}o_7o_{22}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_{13} - 12o_{19}o_{11}o_7o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{11}o_7o_{22}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_3^2cs^2o_6^2o_{14}o_5o_8o_{13} - 6o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6^3o_5o_8 -$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_8 + 12o_{19}o_{11}o_7o_{22}o_{20}cs^4o_6^2o_{14}o_8o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^2o_5o_{13} -$$
$$24o_{19}o_7^2o_{20}v_1v_2cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6^3o_5o_{13} - 12o_{19}o_{11}o_7o_{20}v_1^2cs^2o_6^3o_{14}o_5o_8o_{13} -$$
$$6o_7^2o_{22}o_{20}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{20}v_1^2o_{18}cs^2o_6^2o_{14}o_5o_8o_{13} - 24o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_{13} -$$
$$24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^2o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}v_1^2cs^2o_6^2o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^2o_{14}o_5o_8 -$$
$$24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_{13} - 12o_{19}o_7^2o_{22}o_{20}v_3^2cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}cs^4o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}v_3^2o_{18}cs^2o_6^2o_{14}o_5o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6^2o_{14}o_5o_8o_{13} + 6o_{19}o_{11}o_7o_{22}v_1^2v_3^2o_{18}o_6^3o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^2o_5o_8o_{13} - 12o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_7^2o_{22}v_3^2cs^2o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}o_{18}cs^4o_6^3o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{20}v_1^2v_3^2o_{18}o_6^2o_{14}o_5o_8o_{13} - 18o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^2o_{14}o_5o_8o_{13} +$$
$$24o_{19}o_{11}o_7o_{22}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{20}v_1^2v_3^2o_{18}o_6o_{14}o_5o_8 +$$
$$24o_{19}o_{11}o_7o_{22}v_1v_2cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_{13} + 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^2o_5o_8o_{13} -$$
$$24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^2o_5o_8 - 24o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} + 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^2o_{14}o_5o_{13} +$$
$$6o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8 + 6o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} - 6o_{19}o_7^2o_{20}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^2o_5o_8o_{13} + 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^2o_{14}o_5o_8 - 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^2o_5o_8 -$$
$$18o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^2o_{14}o_8o_{13} - 12o_{19}o_7^2o_{20}v_1^2cs^2o_6^3o_{14}o_5o_8o_{13} -$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_3^2cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{11}o_7o_{22}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} + 24o_{11}o_7^2o_{22}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} + 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^2o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^2o_5o_8 -$$
$$24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^2o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{22}o_{18}cs^4o_6^3o_{14}o_5o_8o_{13} + 24o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_7^2o_{22}o_{20}cs^4o_6^3o_{14}o_8o_{13} - 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^2o_5o_{13} +$$
$$6o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^2o_{14}o_5o_8 - 12o_{19}o_7^2o_{22}cs^4o_6^3o_{14}o_5o_8o_{13} - 12o_{19}o_{11}o_7o_{20}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_{22}o_{20}o_{18}cs^4o_6^3o_{14}o_8o_{13} + 12o_{19}o_{11}o_7o_{20}v_1^2o_{18}cs^2o_6^2o_{14}o_5o_8 - 12o_{19}o_{11}o_7o_{22}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} +$$
$$10o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^3o_{14}o_8o_{13} - 6o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} + 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^2o_{14}o_5o_8 +$$
$$12o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_{13} - 12o_{11}o_7o_{22}v_1^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} + 24o_{19}o_{11}o_7o_{22}v_1v_3^2v_2o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_7^2o_{22}o_{20}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13} + 12o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} +$$
$$6o_{19}o_{11}o_7o_{20}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} - 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^2o_5o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_3^2o_{18}o_6^2o_5o_8 +$$
$$6o_{19}o_{11}o_7o_{22}o_{20}v_1^2o_{18}cs^2o_6^3o_5o_8o_{13} + 24o_{19}o_{11}o_7o_{22}o_{20}v_1v_2o_{18}cs^2o_6^2o_{14}o_5o_{13} - 6o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}o_{18}cs^4o_6^3o_{14}o_5o_{13}+12o_7^2o_{22}v_1^2v_3^2o_{18}o_6^3o_{14}o_5o_8o_{13}+12o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6o_{14}o_8o_{13}+12o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^3o_5o_{13}+$$
$$24o_{19}o_7^2o_{22}v_1v_2o_{18}cs^2o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_{11}o_7o_{22}o_{20}v_3^2o_{18}cs^2o_6^3o_{14}o_5o_{13} - 12o_{19}o_{11}o_7o_{22}v_1^2o_{18}cs^2o_6^2o_{14}o_5o_8o_{13} +$$
$$12o_{19}o_{11}o_7o_{22}o_{20}o_{18}cs^4o_6^3o_{14}o_5o_{13} - 12o_{19}o_{11}o_7o_{22}o_{20}v_1v_3^2v_2o_{18}o_6^3o_{14}o_5o_8o_{13} + 12o_{19}o_7^2o_{22}v_1^2cs^2o_6^3o_{14}o_5o_8o_{13} -$$

$$
\begin{aligned}
&24o_19o_11o_7o_22o_20v_1v_2o_18cs^2o_6^3o_5o_13 + 12o_19o_11o_7^2o_22o_20v_3^2cs^2o_6^3o_14o_5o_8o_13 + 12o_19o_11o_7^2o_22o_20v_3^2o_18cs^2o_6^2o_5o_8 - \\
&24o_19o_7^2o_22v_1v_2cs^2o_8^3o_14o_5o_8o_13 + 6o_19o_7^2o_22o_20v_1^2o_18cs^2o_6^3o_14o_5o_8o_13 + 24o_19o_11o_7^2o_22v_1v_3^2v_2o_18o_6o_14o_5o_8o_13 - \\
&12o_19o_7^2o_22o_20v_1^2cs^2o_6^3o_14o_5o_8o_13 + 24o_19o_11o_7o_22o_20v_1v_3^2o_18o_8o_6o_14o_5o_8o_13 + 12o_19o_11o_7^2o_22v_1^2o_18cs^2o_6^2o_14o_5o_13 - \\
&12o_19o_11o_7^2o_22o_20v_1^2cs^2o_6^2o_14o_5o_8o_13 + 6o_19o_11o_7o_22o_20o_18cs^4o_6^3o_14o_5o_8o_13 + 12o_19o_11o_7o_22o_20v_1v_2o_18cs^2o_6^3o_5o_8o_13 - \\
&24o_19o_11o_7o_22o_20v_1v_3^2v_2o_18o_6^3o_5o_13 + 6o_19o_11o_7^2o_20v_1^2v_3^2o_18o_6^3o_14o_5o_8o_13 - 24o_19o_11o_7^2o_20v_1v_3^2v_2o_18o_6^2o_14o_5o_8 - \\
&24o_19o_11o_7^2o_22v_1v_2cs^2o_6^2o_14o_5o_8o_13 + 12o_7^2o_22v_3^2o_18cs^2o_6^3o_14o_5o_8o_13 + 12o_19o_7^2o_20v_3^2cs^2o_6^3o_14o_5o_8o_13 - \\
&6o_11o_7o_22o_20v_1^2v_3^2o_18o_6^3o_14o_5o_8o_13 + 24o_19o_7^2o_22o_20v_1v_2cs^2o_6^3o_14o_5o_8o_13 - 12o_19o_7^2o_22v_1^2o_18cs^2o_6^3o_14o_5o_8o_13 - \\
&12o_19o_11o_7o_22cs^4o_6^3o_14o_5o_8o_13 - 6o_19o_11o_7o_22o_20o_18cs^4o_6^3o_5o_8o_13 - 12o_19o_11o_7o_22v_3^2o_18cs^2o_6^3o_14o_5o_8o_13 - \\
&6o_19o_11o_7^2o_22o_20v_3^2o_18cs^2o_6^3o_14o_5o_8o_13 - 12o_19o_11o_7^2o_20v_3^2o_18cs^2o_6^2o_14o_5o_8o_13 + 24o_19o_11o_7o_22o_20v_1v_2o_18cs^2o_6^3o_14o_5o_13 - \\
&6o_7^2o_22o_20v_1^2o_18cs^2o_6^3o_14o_5o_8o_13 - 6o_19o_11o_7o_22o_20o_18cs^4o_6^3o_14o_5o_8 + 12o_19o_7^2o_20v_3^2o_18cs^2o_6^2o_5o_13 + \\
&12o_19o_7^2o_20v_1v_3^2v_2o_18o_6^3o_14o_5o_8o_13 - 12o_19o_7^2o_22o_20v_1v_3^2v_2o_6o_14o_5o_8o_13 - 24o_19o_11o_7^2o_22v_1v_3^2v_2o_6^2o_14o_5o_8o_13 + \\
&6o_19o_11o_7o_22o_20o_18cs^4o_6^3o_5o_8 + 12o_19o_7^2o_22v_1^2v_3^2o_6^3o_14o_5o_8o_13 + 6o_19o_11o_7o_22o_20v_3^2o_18cs^2o_6^3o_14o_5o_8 - \\
&12o_19o_11o_7^2o_22o_20o_18cs^4o_6^3o_14o_5o_13 - 24o_7^2o_22v_1v_2o_18cs^2o_6^3o_14o_5o_8o_13 + 24o_19o_11o_7^2o_20v_1v_2o_18cs^2o_6^2o_14o_5o_8o_13 + \\
&12o_19o_11o_7o_22o_20v_1^2v_3^2o_18o_6o_14o_5o_8o_13 - 12o_19o_7^2o_22o_20v_1^2v_3^2o_6^3o_14o_5o_8o_13 + 12o_7^2o_22o_20v_1v_3^2v_2o_18o_6^3o_14o_5o_8o_13 + \\
&24o_19o_7^2o_22o_20v_1v_3^2v_2o_6^3o_14o_5o_8o_13 + 6o_19o_11o_7o_22o_20v_3^2o_18cs^2o_6^3o_5o_8o_13 - 12o_19o_11o_7o_22o_20v_1^2v_3^2o_6^2o_14o_5o_8o_13 - \\
&24o_11o_7o_22v_1v_3^2v_2o_18o_6^3o_14o_5o_8o_13 + 12o_11o_7o_22v_3^2o_18cs^2o_6^3o_14o_5o_8o_13 + 6o_19o_11o_7o_22o_20v_1^2o_18cs^2o_6^3o_14o_5o_8o_13 + \\
&6o_19o_11o_7o_22o_20o_18cs^4o_6^3o_5o_8o_13 + 12o_19o_11o_7^2o_22v_1^2v_3^2o_18o_6^2o_14o_5o_13 + 12o_19o_11o_7^2o_22o_20v_1v_2o_18cs^2o_6^3o_14o_5o_8o_13 + \\
&12o_19o_11o_7o_20v_3^2o_18cs^2o_6^2o_14o_5o_8 - 24o_19o_11o_7o_20v_1v_2o_18cs^2o_6^2o_14o_5o_8o_13 - 6o_19o_7^2o_20v_3^2o_18cs^2o_6^2o_14o_5o_8o_13 + \\
&12o_19o_11o_7o_22o_20v_1v_3^2v_2o_18o_6^3o_14o_5o_8o_13 + 24o_19o_11o_7o_22v_1v_2o_18cs^2o_6^3o_14o_5o_8o_13 - 24o_19o_7^2o_22v_1v_3^2v_2o_6^3o_14o_5o_8o_13 + \\
&12o_19o_11o_7o_22o_18cs^4o_6^2o_14o_5o_8o_13 + 12o_19o_11o_7o_20v_1^2v_3^2o_6^2o_14o_5o_8o_13 + 12o_19o_11o_7o_20v_1^2v_3^2o_18o_6o_5o_13 + \\
&12o_19o_11o_7o_22v_3^2o_18cs^2o_6^3o_14o_5o_8o_13 + 12o_19o_11o_7^2o_22o_20o_18cs^4o_6^2o_14o_5o_13 - 6o_19o_11o_22o_20o_18cs^4o_6^3o_14o_5o_8o_13 - \\
&12o_19o_11o_7o_22v_1^2v_3^2o_6^3o_14o_5o_8o_13 + 24o_19o_11o_7^2o_20v_1v_3^2v_2o_6^3o_14o_5o_8o_13 + 6o_19o_11o_7o_22o_20v_1^2v_3^2o_18o_6^3o_14o_5o_8o_13 - \\
&o_19o_11o_7^2o_22o_20o_18cs^4o_6^3o_14o_5o_8o_13 + 24o_19o_11o_7^2o_22o_20v_1v_3^2v_2o_18o_6^3o_5o_13 - 12o_19o_11o_7^2o_22o_20v_3^2o_18cs^2o_6^2o_14o_5o_8 - \\
&6o_19o_11o_7^2o_22o_20v_1^2v_3^2o_18o_6^3o_5o_8 + 12o_19o_11o_7^2o_22o_20o_18cs^4o_6^2o_14o_5o_8 - 12o_7^2o_22o_18cs^4o_6^3o_14o_5o_8o_13 + 12o_11o_7o_22o_20o_18cs^4o_6^3o_14o_8o_13 + \\
&24o_19o_11o_7^2o_22o_20v_1v_2cs^2o_6^2o_14o_5o_8o_13 + 6o_11o_7^2o_22o_20v_3^2o_18cs^2o_6^3o_14o_5o_8o_13 + 12o_19o_11o_7o_22v_1^2o_18cs^2o_6^3o_14o_5o_13 + \\
&12o_19o_11o_7o_20v_1v_2o_18cs^2o_6^3o_14o_5o_8 - 6o_7^2o_22o_20v_1^2v_3^2o_18o_6^3o_14o_5o_8o_13 - 6o_19o_11o_7o_20v_3^2o_18cs^2o_6^3o_14o_5o_8 + \\
&24o_19o_11o_7o_22v_1v_2o_18cs^2o_6^2o_14o_5o_8o_13 - 6o_19o_11o_7^2o_22o_20v_1^2v_3^2o_18o_6^3o_14o_5o_13 - 12o_19o_11o_7o_22o_20v_1v_2o_18cs^2o_6^2o_14o_5o_8o_13 - \\
&12o_19o_11o_7o_22o_20v_3^2o_18cs^2o_6^3o_14o_5o_13 - 12o_11o_7o_22o_18cs^4o_6^3o_14o_5o_8o_13 - 12o_19o_7^2o_22v_1^2v_3^2o_18o_6^3o_14o_5o_8o_13 - 12o_11o_7^2o_22v_3^2o_18cs^2o_6^3o_14o_5o_8o_13 - \\
&24o_11o_7o_22v_1v_2o_18cs^2o_6^2o_14o_5o_8o_13 - 12o_19o_11o_7o_20v_1v_3^2v_2o_18o_6^3o_5o_8o_13 - 12o_19o_11o_7o_22o_20v_1v_3^2o_18o_6^3o_14o_5o_8o_13 + \\
&12o_11o_7o_22o_20v_1v_3^2o_18o_6^3o_5o_8 + 12o_11o_7^2o_22o_18cs^4o_6^3o_14o_5o_8o_13 + 12o_19o_11o_7o_22v_3^2cs^2o_6^2o_14o_5o_8o_13 + \\
&24o_19o_11o_7o_20v_1v_2cs^2o_6^3o_14o_5o_8o_13 - 12o_19o_11o_7o_22o_20v_1^2o_18cs^2o_6^3o_5o_13 + 12o_7^2o_22o_20v_1v_2o_18cs^2o_6^3o_14o_5o_8o_13 + \\
&24o_19o_11o_7o_20v_1v_3^2v_2o_18o_6^2o_14o_5o_8o_13 - 12o_19o_11o_7o_20v_3^2cs^2o_6^3o_14o_5o_8o_13 - 24o_7^2o_22v_1v_3^2v_2o_18o_6^3o_14o_5o_8o_13 - \\
&12o_19o_11o_7o_22v_1^2v_3^2o_18o_6^3o_14o_5o_8o_13 + 12o_19o_11o_7o_22v_1^2v_3^2o_18o_6^3o_14o_5o_13 + 12o_19o_11o_7^2o_22o_20o_18cs^4o_6^2o_5o_8o_13 + \\
&12o_19o_11o_7o_22o_20v_1v_2o_18cs^2o_6^3o_5o_8 + 24o_19o_11o_7o_22o_20v_1v_3^2v_2o_6^2o_14o_5o_8o_13 + 6o_19o_7^2o_22o_20v_1^2v_3^2o_18o_6^3o_14o_5o_8o_13 - \\
&12o_19o_7^2o_22o_20v_1v_3^2v_2o_18o_6^3o_14o_5o_8o_13 + 12o_19o_7^2o_20v_1v_2o_18cs^2o_6^3o_14o_5o_8o_13 + 12o_19o_11o_7o_20v_1v_3^2v_2o_18o_6^3o_14o_5o_8
\end{aligned}
$$

$$
\begin{aligned}
C_{14} = {}&-2o_19o_11o_7o_22o_20v_1^2v_2o_18o_6o_13 - 2o_19o_11o_7o_22o_20v_1^2v_2o_14o_8o_13 - 2o_19o_11o_7o_22o_20v_1^2v_2o_6o_14o_8o_13 + \\
&2o_19o_11o_22v_1o_18cs^2o_6o_14o_8o_13 - 2o_19o_11o_22v_1^2v_2o_18o_6o_14o_8o_13 + 2o_19o_11o_7o_22o_20v_2o_18cs^2o_8 + o_7o_22o_20v_1v_2^2o_18o_6o_14o_8o_13 - \\
&2o_19o_11o_7o_22o_20v_1cs^2o_6o_14o_8o_13 - 2o_19o_11o_7o_22v_1v_2^2o_18o_14o_13 - o_19o_11o_22o_20v_1v_2^2o_18o_6o_14o_8o_13 + 2o_19o_11o_7o_22v_1v_2^2o_18o_6o_14o_13 + \\
&2o_19o_11o_7o_20v_2o_18cs^2o_14o_8 + 2o_19o_11o_7o_22o_20v_1v_2^2o_18o_8o_13 + o_19o_11o_7o_20v_2o_18cs^2o_6o_14o_8o_13 + o_19o_11o_7o_20v_1o_18cs^2o_6o_14o_8 - \\
&2o_19o_11o_7o_22o_20v_1^2v_2o_18o_14o_13 + o_19o_11o_7o_22o_20v_1^2v_2o_18o_6o_14o_8 - 2o_19o_11o_7o_22v_2cs^2o_6o_14o_8o_13 - 2o_19o_11o_7o_22o_20v_1o_18cs^2o_8 - \\
&o_19o_11o_7o_22o_20v_2o_18cs^2o_6o_14o_8o_13 + 2o_19o_11o_22o_20v_1^2v_2o_18o_6o_13 + 2o_11o_7o_22v_1v_2^2o_18o_6o_14o_8o_13 - 2o_19o_11o_22v_1v_2^2o_18o_6o_14o_13 - \\
&2o_19o_7o_22o_20v_2cs^2o_6o_14o_8o_13 - o_19o_11o_7o_22o_20v_1o_18cs^2o_6o_8o_13 - 2o_19o_11o_22o_20v_1^2v_2o_18o_6o_14o_13 - 2o_19o_11o_7o_22v_1v_2^2o_14o_8o_13 + \\
&2o_19o_7o_22o_20v_2cs^2o_6o_14o_8o_13 - 2o_19o_11o_7o_22o_20v_1^2v_2o_18o_6o_8 - 2o_19o_7o_22o_20v_2cs^2o_6o_14o_8o_13 + \\
&2o_19o_11o_7o_22v_1^2v_2o_18o_6o_14o_8o_13 - 2o_19o_11o_7o_22v_1o_18cs^2o_6o_14o_8o_13 + 2o_19o_11o_7o_22v_1^2v_2o_18cs^2o_13 + 2o_11o_22v_2o_18cs^2o_6o_14o_8o_13 - \\
&2o_19o_11o_7o_22o_20v_1o_18cs^2o_13 + o_19o_7o_22o_20v_1^2v_2o_18o_6o_14o_8o_13 - o_19o_7o_22o_20v_1o_18cs^2o_6o_14o_8o_13 - 2o_19o_11o_7o_22o_20v_1^2v_2o_18o_14o_8 - \\
&2o_19o_11o_7o_20v_1o_18cs^2o_14o_8 + 2o_19o_11o_7o_22o_20v_1^2v_2o_18o_6o_14o_13 - o_11o_22o_20v_1^2v_2o_18o_6o_14o_8o_13 + o_11o_22o_20v_1o_18cs^2o_6o_14o_8o_13 + \\
&o_19o_11o_22o_20v_1o_18cs^2o_6o_8o_13 + 2o_19o_7o_20v_1^2v_2o_6o_14o_8o_13 - 2o_19o_11o_7o_22v_1^2o_18o_14o_8o_13 - 2o_19o_11o_7o_22o_20v_1o_18cs^2o_14o_8o_13 + \\
&o_11o_7o_22o_20v_2o_18cs^2o_6o_14o_8o_13 + o_19o_7o_20v_1v_2^2o_18o_6o_14o_8o_13 + o_19o_11o_22o_20v_2o_18cs^2o_6o_14o_8o_13 + 2o_19o_11o_7o_22o_20v_1o_18cs^2o_6o_13 + \\
&2o_19o_11o_7o_20v_1^2v_2o_14o_8o_13 - o_19o_11o_7o_22o_20v_1v_2^2o_18o_6o_14o_8 - o_7o_22o_20v_2o_18cs^2o_6o_14o_8o_13 - o_19o_11o_22o_20v_2o_18cs^2o_6o_8o_13 + \\
&2o_19o_11o_22o_20v_1v_2^2o_18o_6o_14o_13 + 2o_19o_11o_7o_22o_20v_2o_18cs^2o_14o_8o_13 + 2o_19o_11o_7o_22v_2cs^2o_14o_8o_13 - 2o_19o_11o_7o_22o_20v_2o_18cs^2o_14o_8 + \\
&2o_19o_7o_22v_1o_18cs^2o_6o_14o_8o_13 - 2o_19o_11o_7o_22v_1^2v_2o_18o_6o_14o_8o_13 + 2o_19o_11o_7o_20v_1v_2^2o_6o_14o_8o_13 + \\
&2o_19o_11o_7o_20v_1o_18cs^2o_14o_13 - 2o_19o_7o_20v_1cs^2o_6o_14o_8o_13 - 2o_19o_11o_22o_20v_1o_18cs^2o_6o_13 + 2o_19o_11o_7o_22v_1o_18cs^2o_14o_8o_13 - \\
&2o_19o_11o_7o_22v_1^2v_2o_18o_6o_14o_13 + o_19o_11o_7o_22o_20v_1v_2^2o_18o_6o_14o_8o_13 - 2o_11o_7o_22v_2o_18cs^2o_6o_14o_8o_13 - o_19o_11o_7o_20v_1v_2^2o_18o_6o_14o_8o_13 - \\
&o_19o_11o_7o_22o_20v_2o_18cs^2o_6o_8 - 2o_19o_7o_20v_1v_2^2o_6o_14o_8o_13 - 2o_19o_11o_7o_22o_20v_1v_2^2o_18o_6o_14o_13 - o_19o_11o_7o_20v_2o_18cs^2o_6o_14o_8 - \\
&2o_11o_22v_1v_2^2o_18o_6o_14o_8o_13 + 2o_19o_11o_7o_22v_1cs^2o_6o_14o_8o_13 + 2o_7o_22v_2o_18cs^2o_6o_14o_8o_13 + o_19o_11o_7o_22o_20v_1o_18cs^2o_6o_8 - \\
&2o_19o_11o_7o_22o_20v_2o_18cs^2o_14o_13 + 2o_19o_7o_22o_20v_1cs^2o_6o_14o_8o_13 + o_19o_11o_7o_22o_20v_2o_18cs^2o_6o_8o_13 + 2o_19o_11o_22o_20v_2o_18cs^2o_6o_13 + \\
&2o_19o_11o_7o_20v_1v_2^2o_18o_14o_8o_13 - o_11o_7o_22o_20v_1v_2^2o_18o_6o_14o_8o_13 - 2o_19o_11o_7o_22v_1cs^2o_14o_8o_13 - o_19o_7o_20v_2o_18cs^2o_6o_14o_8o_13 +
\end{aligned}
$$

$2o_{19}o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_{14}o_8 + 2o_{19}o_{11}o_7o_{20}v_1^2v_2o_{18}o_{14}o_8 + 2o_{19}o_{11}o_7o_{22}o_{20}v_2cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_2o_{18}cs^2o_6o_{13} +$

$2o_{19}o_{11}o_7o_{22}v_1v_2^2o_{18}o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}v_1v_2^2o_{18}o_6o_{14}o_8o_{13} - 2o_7o_{22}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} + 2o_7o_{22}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} -$

$2o_{19}o_{11}o_7o_{20}v_1cs^2o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{20}v_1cs^2o_6o_{14}o_8o_{13} + o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}o_8o_8 -$

$2o_{19}o_7o_{22}v_1v_2^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{20}v_1^2v_2o_{18}o_6o_{14}o_8 + 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_{13} - o_{19}o_7o_{20}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} +$

$o_{19}o_7o_{20}v_1o_{18}cs^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_6o_{14}o_8 + o_{11}o_{22}o_{20}v_1v_2^2o_{18}o_6o_{14}o_8o_{13} - o_{19}o_7o_{22}o_{20}v_1v_2^2o_{18}o_6o_{14}o_8o_{13} +$

$o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_6o_8o_{13} + 2o_{19}o_{11}o_{22}o_{20}v_1o_{18}cs^2o_6o_{14}o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}o_4o_8 + o_{19}o_{11}o_{22}o_{20}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} -$

$o_{19}o_{11}o_{22}o_{20}v_1o_{18}cs^2o_6o_{14}o_8o_{13} - o_7o_{22}o_{20}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} + o_7o_{22}o_{20}v_1o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}v_1^2v_2o_{18}o_{14}o_{13} +$

$2o_{19}o_{11}o_{22}v_1v_2^2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}o_6o_{13} - 2o_{19}o_{11}o_7o_{22}v_2o_{20}cs^2o_6o_{14}o_{13} -$

$2o_{19}o_7o_{22}v_2o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_7o_{22}o_{20}v_1v_2^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_8 + 2o_{19}o_{11}o_7o_{22}v_1^2v_2o_{14}o_8o_{13} -$

$2o_{19}o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_6o_{14}o_{13} - o_{19}o_{11}o_{22}o_{20}v_1^2v_2o_{18}o_6o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_4o_8o_{13} - 2o_{11}o_7o_{22}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} +$

$2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_6o_{14}o_8o_{13} - 2o_{19}o_7o_{20}v_1cs^2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_4o_8o_{13} -$

$2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_8o_8o_{13} + 2o_{19}o_{11}o_7o_{20}v_2cs^2o_{14}o_8o_{13} - 2o_{19}o_{11}o_{22}o_{20}v_1v_2^2o_{18}o_6o_{13} + 2o_{19}o_{11}o_{22}v_2o_{18}cs^2o_6o_{14}o_{13} +$

$2o_{19}o_{11}o_7o_{22}v_1v_2^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_2o_{18}cs^2o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_{13} + 2o_{19}o_{11}o_7o_{22}o_{20}v_1cs^2o_{14}o_8o_{13} +$

$o_{19}o_{11}o_7o_{20}v_1v_2^2o_{18}o_6o_{14}o_8 + 2o_{19}o_{11}o_7o_{22}o_{20}v_2o_{18}cs^2o_6o_{14}o_{13} - 2o_{19}o_{11}o_7o_{20}v_2o_{18}cs^2o_4o_8o_{13} + 2o_{19}o_7o_{20}v_2cs^2o_6o_{14}o_8o_{13} -$

$o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}o_6o_8o_{13} - 2o_{11}o_{22}v_1o_{18}cs^2o_6o_{14}o_8o_{13} + 2o_{11}o_{22}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}v_2o_{18}cs^2o_6o_{14}o_8o_{13} -$

$2o_{19}o_{11}o_{22}v_1o_{18}cs^2o_6o_{14}o_{13} + o_{19}o_7o_{22}o_{20}v_2o_{18}cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_6o_{14}o_8o_{13} - o_{11}o_{22}o_{20}v_2o_{18}cs^2o_6o_{14}o_8o_{13} -$

$2o_{19}o_{11}o_7o_{22}v_1^2v_2o_{18}o_{14}o_{13} + 2o_{19}o_7o_{22}v_1^2v_2o_6o_{14}o_8o_{13} + 2o_{19}o_{11}o_7o_{22}v_1o_{18}cs^2o_6o_{14}o_{13} - o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_6o_{14}o_8o_{13} +$

$o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{20}v_1v_2^2o_{18}o_4o_8 + 2o_{19}o_{11}o_7o_{22}v_2o_{18}cs^2o_{14}o_{13} + o_{19}o_{11}o_{22}o_{20}v_1v_2^2o_{18}o_6o_8o_{13} +$

$2o_{19}o_7o_{22}v_1v_2^2o_{18}o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}v_1v_2^2o_{18}o_8o_8 + 2o_{19}o_{11}o_{22}v_2o_{18}cs^2o_6o_{14}o_8o_{13} -$

$2o_{19}o_7o_{22}o_{20}v_1^2v_2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{20}v_1o_{18}cs^2o_{14}o_{13} - 2o_{19}o_{11}o_7o_{20}v_1v_2^2o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}v_1^2v_2o_6o_{14}o_8o_{13} -$

$2o_{19}o_{11}o_{22}o_{20}v_2o_{18}cs^2o_6o_{14}o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_1v_2^2o_{18}o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{20}v_1o_{18}cs^2o_6o_{14}o_8o_{13} +$

$o_{19}o_{11}o_7o_{20}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} + o_{19}o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_6o_{14}o_8o_{13} - o_{19}o_{11}o_7o_{22}o_{20}v_1^2v_2o_{18}o_6o_{14}o_8o_{13} +$

$2o_{19}o_{11}o_7o_{22}o_{20}v_1o_{18}cs^2o_8o_{13} - 2o_{19}o_{11}o_7o_{20}v_2cs^2o_6o_{14}o_8o_{13} - 2o_{19}o_{11}o_7o_{22}o_{20}v_2cs^2o_{14}o_8o_{13}$

$C_{15} = o_{19}o_{17}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_6o_8 + 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3o_{18}cs^2 - 2o_{17}o_{16}o_7o_{20}v_3v_2^2o_{18}cs^2o_6o_8 +$

$o_{19}o_{17}o_{23}o_{16}o_7o_{20}v_3v_2^2cs^2o_6o_8 + 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_6 + 2o_{11}o_{17}o_{16}o_7o_{20}v_1^2v_3o_{18}cs^2o_6o_8 +$

$2o_{19}o_{11}o_{23}o_{16}o_2v_1^2v_3o_{18}cs^2o_6o_8 - o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_3v_2^2cs^2o_8 -$

$2o_{19}o_{11}o_{23}o_{16}o_2v_1^2v_3v_2^2o_{18}o_6 + 2o_{11}o_{17}o_{23}o_{16}v_1v_3^2o_{18}cs^2o_6o_8 + 2o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3o_{18}cs^2o_6o_8 + o_{19}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_6o_8 -$

$o_{19}o_{11}o_{23}o_7o_{20}v_1v_3^2v_2^2o_{18}o_6o_8 + 2o_{19}o_{11}o_{23}o_2o_{20}v_1v_3^2v_2^2o_{18}o_6o_8 - 2o_{11}o_{17}o_{23}o_{16}o_7v_1v_3^2v_2^2o_{18}o_6o_8 - 2o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_6o_8 +$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_2o_{20}v_1^2v_3v_2^2o_{18}o_6 - 2o_{11}o_{17}o_{16}o_2o_{20}v_3v_2^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_2o_{20}v_1v_3^2v_2^2o_{18}o_6o_8 - o_{19}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2cs^2o_6o_8 -$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_3v_2^2o_{18}cs^2o_6 - 2o_{19}o_{17}o_{23}o_{16}o_7v_1v_3^2o_{18}cs^2o_6o_8 - o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2v_2^2o_8 +$

$o_{19}o_{11}o_{17}o_{23}o_7o_{20}v_1v_2^2o_{18}cs^2o_8o_8 - o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2v_2^2o_{18}o_6o_8 + 2o_{11}o_{17}o_{23}o_{16}o_2o_{20}v_1^2v_3o_{18}cs^2o_6o_8 -$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_3v_2^2cs^2o_8^2 + 2o_{19}o_{11}o_{17}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_6 + 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1v_2^2o_6o_8 +$

$o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3cs^2o_8 + 2o_{19}o_{11}o_{17}o_7o_{20}v_1v_3^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_2v_1v_3o_{18}cs^2o_6 - o_{19}o_{11}o_{17}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_8 -$

$2o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1^2v_3o_{18}cs^2 - 2o_{11}o_{17}o_{23}o_{16}v_3v_2^2o_{18}cs^2o_6o_8 + 2o_{19}o_{17}o_{23}o_{16}o_7v_1v_3^2cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2 +$

$2o_{19}o_{11}o_{17}o_{23}o_{16}v_1v_3^2v_2^2o_{18}o_6o_8 - o_{19}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3o_{18}cs^2o_6o_8 + 2o_{17}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_3v_2^2o_{18}cs^2o_6 -$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1v_2^2o_{18}cs^2o_8 - o_{19}o_{11}o_{17}o_{16}o_7o_{20}v_1^2v_3o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{23}o_2o_{20}v_1v_2^2o_{18}cs^2o_6o_8 - o_{19}o_{11}o_{23}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_8 -$

$2o_{11}o_{17}o_{23}o_{16}o_7v_1v_2^2o_{18}cs^2o_6o_8 + o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_2^2cs^2o_6o_8 - o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_6o_8 -$

$2o_{19}o_{11}o_{17}o_{23}o_2o_{20}v_1v_2^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1^2v_3v_2^2o_{18} + o_{19}o_{11}o_{17}o_7o_{20}v_3v_2^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_2o_{20}v_3v_2^2o_{18}cs^2o_6o_8 +$

$o_{19}o_{11}o_{17}o_{23}o_7o_{20}v_1v_3^2v_2^2o_{18}o_6o_8 - 2o_{19}o_{17}o_{23}o_{16}o_7v_3v_2^2cs^2o_6o_8 - o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_8 +$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2 + 2o_{19}o_{17}o_{23}o_{16}o_7v_1v_3^2o_{18}cs^2o_6o_8 +$

$2o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2 - 2o_{19}o_{11}o_{17}o_7v_1v_3^2v_2^2o_{18}o_8 - 2o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2o_6 - 2o_{17}o_{23}o_{16}o_7v_1^2v_3v_2^2o_6o_8 -$

$2o_{17}o_{23}o_{16}o_7v_1^2v_3v_2^2o_{18}o_6o_8 + o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_8 + 2o_{11}o_{17}o_{16}o_2v_1v_3^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_2v_1^2v_3o_{18}cs^2o_6o_8 -$

$o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_2^2cs^2o_8 - 2o_{11}o_{17}o_{23}o_{16}o_2v_1^2v_3o_{18}cs^2o_6o_8 + o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_6o_8 -$

$2o_{19}o_{11}o_{17}o_{16}o_2v_1v_3^2v_2^2o_{18}o_6o_8 + 2o_{19}o_{11}o_{17}o_{23}o_{16}v_1v_3^2v_2^2o_{18}o_6 + 2o_{19}o_{17}o_{23}o_{16}o_7v_1^2v_3o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1v_3^2cs^2o_6o_8 +$

$o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_8 + 2o_{19}o_{11}o_{17}o_{23}o_2v_1^2v_3v_2^2o_{18}o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_2v_3v_2^2o_{18}cs^2o_6o_8 -$

$2o_{19}o_{11}o_{23}o_{16}o_2v_3v_2^2o_{18}cs^2o_6 + o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_8 + 2o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}o_6o_8 +$

$2o_{11}o_{17}o_{23}o_{16}o_7v_1^2v_3v_2^2o_{18}o_6o_8 + o_{19}o_{11}o_{17}o_7o_{20}v_1^2v_3o_{18}cs^2o_6o_8 + 2o_{17}o_{23}o_{16}o_7v_1^2v_3o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2 -$

$o_{19}o_{11}o_{17}o_{23}o_7o_{20}v_1v_3^2cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_7o_{20}v_1^2v_3o_{18}cs^2o_6 -$

$o_{19}o_{11}o_{17}o_{23}o_7o_{20}v_3v_2^2o_{18}cs^2o_8 - 2o_{19}o_{11}o_{23}o_{16}o_2v_1v_3o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{17}o_{23}o_{16}v_1o_{18}cs^2o_6o_8 -$

$2o_{19}o_{11}o_{17}o_{23}o_{16}v_1v_2^2o_{18}cs^2o_6o_8 - 2o_{11}o_{17}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{23}o_{16}o_2v_1v_3^2o_{18}cs^2o_6 + 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_3v_2^2cs^2o_6o_8 -$

$o_{19}o_{17}o_{16}o_7o_{20}v_1v_3^2v_2^2o_{18}o_6o_8 - o_{19}o_{11}o_{17}o_{16}o_7o_{20}v_3v_2^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2 -$

$2o_{19}o_{11}o_{23}o_2v_1^2v_3v_2^2o_{18}o_6o_8 + o_{19}o_{11}o_{23}o_7o_2v_1^2v_3v_2^2o_{18}o_6o_8 - 2o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{17}o_{23}o_{16}o_2o_{20}v_3v_2^2o_{18}cs^2o_6 +$

$o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_8 - 2o_{11}o_{17}o_{23}o_{16}v_1^2v_3o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_6 -$

$o_{19}o_{17}o_{23}o_{16}o_7o_{20}v_3v_2^2o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1^2v_3v_2^2o_6o_8 - o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_8 -$

$2o_{19}o_{11}o_{17}o_{16}o_2v_1v_2^2o_{18}cs^2o_6o_8 - o_{19}o_{11}o_{17}o_{23}o_7o_2v_1^2v_3v_2^2o_{18}o_6o_8 + 2o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_{18}o_6 +$

$o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_8 + o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3v_2^2o_8o_8 +$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1v_3^2v_2^2o_{18} - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1v_3^2v_2^2o_{18}o_6 + 2o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_8 +$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_2v_1v_3^2o_{18}cs^2o_6o_8 - 2o_{11}o_{17}o_{16}o_2v_1^2v_3o_{18}cs^2o_6o_8 + 2o_{17}o_{23}o_{16}o_7v_1v_3^2o_{18}cs^2o_6o_8 + 2o_{11}o_{17}o_{23}o_{16}o_2v_3v_2^2o_{18}cs^2o_6o_8 -$

$2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1^2v_3v_2^2o_{18}o_6o_8 + o_{19}o_{17}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_6o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}v_1v_3^2v_2^2o_{18}o_6o_8 +$

$2o_{17}o_{23}o_{16}o_7o_{20}v_3v_2^2o_{18}cs^2o_6o_8 + o_{19}o_{11}o_{23}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_8 - 2o_{19}o_{11}o_{17}o_{23}o_{16}o_7v_1^2v_3o_{18}cs^2o_6 -$

$o_{19}o_{17}o_{16}o_7o_{20}v_1v_2^2o_{18}cs^2o_6o_8 + o_{19}o_{11}o_{17}o_{16}o_7o_{20}v_1v_3^2o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{23}o_{16}o_2v_3v_2^2o_{18}cs^2o_6o_8 -$

$o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}v_1^2v_3cs^2o_6o_8 - 2o_{17}o_{16}o_7o_2o_{20}v_1^2v_3o_{18}cs^2o_6o_8 + 2o_{11}o_{17}o_{16}o_7o_2o_{20}v_3v_2^2o_{18}cs^2o_6o_8 + 2o_{17}o_{23}o_{16}o_7v_1v_3^2o_{18}cs^2o_6o_8 -$

$2o_{11}o_{17}o_{23}o_{16}o_7o_2o_{20}v_3v_2^2o_{18}cs^2o_6o_8 + 2o_{19}o_{11}o_{17}o_{23}o_{16}o_2v_1v_3^2v_2^2o_{18}o_6o_8 - 2o_{11}o_{17}o_{16}o_2v_1^2v_3v_2^2o_{18}o_6o_8 +$

$$2o_19o_11o_17o_23o_16o_7v_3v_2^2o_18cs^2o_6 - 2o_19o_11o_17o_23o_16o_7v_1^2v_3o_18cs^2o_6o_8 - o_19o_11o_23o_16o_7o_20v_1v_2^2o_18cs^2o_8 +$$
$$2o_19o_11o_17o_16o_20v_3v_2^2o_18cs^2o_8 + 2o_19o_11o_17o_23o_16o_7v_1v_3^2cs^2o_8 - 2o_19o_17o_23o_16o_7v_1^2v_3cs^2o_6o_8 -$$
$$o_19o_11o_17o_23o_7o_20v_1^2v_3o_18cs^2o_8 - 2o_11o_17o_23o_16o_20v_1v_2^2o_18cs^2o_6o_8 + o_19o_11o_23o_16o_7o_20v_1v_2^2o_18cs^2o_8 +$$
$$2o_19o_11o_17o_23o_16o_7v_1^2v_3v_2^2o_18o_8 + o_19o_17o_16o_7o_20v_3v_2^2o_18cs^2o_6o_8 + o_19o_11o_17o_16o_7o_20v_1v_3^2v_2^2o_18o_6o_8 -$$
$$2o_19o_11o_17o_23o_16o_7v_1v_3^2o_18cs^2o_6 - 2o_17o_23o_16o_7o_20v_1v_2^2o_18cs^2o_6o_8 - 2o_17o_16o_7o_20v_1^2v_3v_2^2o_18o_6o_8 - o_19o_11o_23o_16o_7o_20v_1v_3^2v_2^2o_18o_8 +$$
$$2o_19o_17o_23o_16o_7v_1v_3^2v_2^2o_6o_8 + 2o_19o_11o_23o_16o_7o_20v_1^2v_3o_18cs^2o_6 - 2o_11o_17o_16o_7o_20v_1v_2^2o_18cs^2o_6o_8 - 2o_19o_11o_17o_23o_16v_1v_3^2o_18cs^2o_6o_8 +$$
$$o_19o_17o_23o_16o_7o_20v_1v_3^2v_2^2o_18o_6o_8 - 2o_19o_11o_23o_16o_20v_1v_2^2o_18cs^2o_6o_8 + 2o_19o_11o_17o_23o_16o_7v_1v_3^2o_18cs^2 -$$
$$2o_19o_11o_17o_23o_16v_3v_2^2o_18cs^2o_6 + o_19o_11o_17o_7o_20v_1^2v_3v_2^2o_18o_6o_8 - o_19o_11o_23o_16o_7o_20v_3v_2^2o_18cs^2o_6o_8 +$$
$$2o_19o_11o_17o_23o_16o_20v_1v_2^2o_18cs^2o_6o_8 - o_19o_17o_23o_16o_7o_20v_1v_3^2v_2^2o_6o_8 - 2o_19o_11o_17o_20v_1^2v_3v_2^2o_18o_6o_8 + 2o_19o_11o_23o_16o_20v_1v_3^2v_2^2o_18o_6 -$$
$$2o_19o_11o_17o_23o_16o_7v_1v_2^2cs^2o_6o_8 + 2o_19o_17o_23o_16o_7v_1^2v_3v_2^2o_18o_6o_8 - 2o_19o_11o_17o_23o_16o_20v_1v_2^2o_18cs^2o_6 -$$
$$2o_11o_17o_16o_20v_1v_3^2o_18cs^2o_6o_8 - 2o_11o_17o_23o_16o_20v_1v_3^2v_2^2o_18o_6o_8 + o_19o_11o_17o_23o_16o_7o_20v_1^2v_3v_2^2o_6o_8 +$$
$$o_19o_11o_17o_23o_16o_7o_20v_1v_3^2v_2^2o_18o_8 - 2o_17o_23o_16o_7v_3v_2^2o_18cs^2o_6o_8 + 2o_11o_17o_23o_16o_7o_20v_1v_3^2o_18cs^2o_6o_8 +$$
$$2o_11o_17o_23o_16o_7v_1^2v_3o_18cs^2o_6o_8 - 2o_19o_11o_17o_23o_16o_7o_20v_1v_3^2v_2^2o_18 - 2o_19o_11o_17o_23o_16o_7o_20v_1^2v_3o_18cs^2o_6 +$$
$$2o_19o_11o_17o_23o_20v_1^2v_3o_18cs^2o_6o_8 - 2o_11o_17o_23o_16v_1^2v_3v_2^2o_18o_6o_8 + o_19o_11o_17o_16o_7o_20v_1v_2^2o_18cs^2o_6o_8 + 2o_19o_11o_23o_16o_7o_20v_1v_3^2v_2^2o_18 -$$
$$2o_17o_23o_16o_7o_20v_1v_3^2v_2^2o_18o_6o_8 - 2o_19o_11o_23o_20v_1^2v_3o_18cs^2o_6o_8 + o_19o_11o_23o_7o_20v_1^2v_3o_18cs^2o_6o_8 + 2o_19o_11o_17o_23o_16v_3v_2^2o_18cs^2o_6o_8 +$$
$$2o_19o_11o_23o_16o_20v_1v_2^2o_18cs^2o_6 + 2o_19o_11o_17o_23o_16v_1v_3^2o_18cs^2o_6 + o_19o_17o_23o_16o_7o_20v_1v_3^2cs^2o_6o_8 - 2o_11o_17o_16o_7o_20v_1v_3^2v_2^2o_18o_6o_8 -$$
$$2o_19o_11o_17o_23o_16o_20v_1v_3^2v_2^2o_18o_6 - 2o_19o_11o_23o_16o_20v_1v_3^2v_2^2o_18o_6o_8 + o_19o_17o_23o_16o_7o_20v_1v_2^2o_18cs^2o_6o_8 -$$
$$o_19o_17o_16o_7o_20v_1v_3^2o_18cs^2o_6o_8 + o_19o_11o_17o_23o_16o_7o_20v_1v_2^2o_18cs^2o_8 + 2o_17o_16o_7o_20v_1v_3^2v_2^2o_18o_6o_8 -$$
$$o_19o_11o_23o_16o_7o_20v_3v_2^2cs^2o_6o_8 + 2o_19o_17o_23o_16o_7v_1v_2^2cs^2o_6o_8 + 2o_11o_17o_23o_16v_1v_2^2cs^2o_6o_8 - o_19o_11o_17o_16o_7o_20v_1v_3^2v_2^2o_18o_6o_8 +$$
$$o_19o_11o_17o_23o_16o_7o_20v_3v_2^2cs^2o_8 - o_19o_11o_17o_23o_16o_7o_20v_1^2v_3v_2^2o_6o_8 + o_19o_11o_23o_7o_20v_3v_2^2o_18cs^2o_6o_8 - 2o_19o_11o_23o_20v_3v_2^2o_18cs^2o_6o_8 -$$
$$2o_19o_11o_23o_16o_7o_20v_1v_3^2v_2^2o_18o_6 - 2o_19o_11o_17o_23o_16o_7v_1^2v_3o_18cs^2 + o_19o_11o_23o_16o_7o_20v_1v_3o_18cs^2o_8 + 2o_19o_11o_17o_23o_16o_7v_1^2v_3v_2^2o_18o_6 -$$
$$o_19o_17o_23o_16o_7o_20v_1^2v_3v_2^2o_18o_6o_8 - 2o_19o_11o_17o_23o_16o_7v_1v_3^2o_18cs^2o_8 + 2o_19o_11o_17o_23o_16v_1^2v_3o_18cs^2o_6o_8 +$$
$$o_19o_11o_17o_23o_16o_7o_20v_3v_2^2o_18cs^2o_6o_8 + 2o_19o_11o_17o_20v_1v_2^2o_18cs^2o_6o_8 - 2o_19o_11o_17o_23o_16o_7v_1^2v_3cs^2o_8 +$$
$$2o_19o_11o_17o_23o_16o_7v_1v_3^2o_18cs^2o_6o_8 + 2o_11o_17o_16o_20v_1v_3^2v_2^2o_18o_6o_8 - 2o_19o_11o_17o_23o_16o_20v_1^2v_3v_2^2o_18o_6o_8 +$$
$$o_19o_11o_17o_23o_16o_7o_20v_1v_3^2cs^2o_6o_8 - o_19o_11o_17o_7o_20v_1v_2^2o_18cs^2o_6o_8 + 2o_19o_11o_17o_23o_20v_3v_2^2o_18cs^2o_6o_8 - 2o_17o_23o_16o_7v_1^2v_3o_18cs^2o_6o_8 +$$
$$2o_11o_17o_23o_16o_7v_3v_2^2o_18cs^2o_6o_8 + 2o_19o_11o_17o_23o_16o_7v_3v_2^2o_18cs^2o_8 - o_19o_11o_23o_16o_7o_20v_1^2v_3o_18cs^2o_6o_8 -$$
$$2o_11o_17o_23o_16o_7o_20v_1^2v_3v_2^2o_18o_6o_8 + o_19o_11o_17o_23o_16o_7o_20v_1v_2^2o_18cs^2o_6o_8 +$$
$$2o_19o_11o_17o_23o_16o_7v_1v_3^2v_2^2o_8 - 2o_19o_17o_23o_16o_7v_1v_1^2o_18cs^2o_6o_8 + 2o_19o_11o_17o_23o_16o_7o_20v_1v_2^2o_18cs^2o_6 + 2o_17o_16o_7o_20v_1v_2^2o_18cs^2o_6o_8 -$$
$$o_19o_11o_23o_7o_20v_1v_3o_18cs^2o_6o_8 + 2o_19o_11o_23o_20v_1v_3^2o_18cs^2o_6o_8 - 2o_19o_11o_23o_16o_7o_20v_1^2v_3v_2^2o_18 + 2o_19o_11o_17o_23o_16o_20v_1^2v_3o_18cs^2o_6 +$$
$$2o_17o_23o_16o_7o_20v_1^2v_3v_2^2o_18o_6o_8 + 2o_11o_17o_23o_16v_1v_3^2v_2^2o_18o_6o_8 + 2o_19o_11o_17o_23o_16o_7v_1^2v_3cs^2o_6o_8 - 2o_19o_11o_17o_23o_16v_1^2v_3v_2^2o_18o_6 +$$
$$o_19o_17o_16o_7o_20v_1^2v_3o_18cs^2o_6o_8 + 2o_19o_11o_23o_16o_20v_1^2v_3v_2^2o_18o_6o_8 + 2o_11o_17o_16o_7o_20v_1^2v_3v_2^2o_18o_6o_8 + 2o_19o_11o_17o_23o_16o_7v_1v_2^2o_18cs^2 -$$
$$o_19o_11o_17o_23o_7o_20v_3v_2^2o_18cs^2o_6o_8 + 2o_19o_11o_17o_23o_16o_7o_20v_1v_3^2v_2^2o_18o_6 - o_19o_11o_17o_23o_16o_7o_20v_1^2v_3o_18cs^2o_8 +$$
$$2o_19o_11o_17o_20v_1v_3^2v_2^2o_18o_6o_8 + 2o_19o_11o_17o_23o_16o_7v_1v_2^2cs^2o_8 - 2o_19o_11o_17o_23o_16o_7v_1v_3^2v_2^2o_6o_8 + 2o_11o_17o_16o_20v_1v_2^2o_18cs^2o_6o_8 -$$
$$o_19o_11o_17o_7o_20v_1v_3^2v_2^2o_18o_6o_8 - o_19o_17o_23o_16o_7o_20v_1v_2^2cs^2o_6o_8 - 2o_19o_11o_23o_16o_20v_1^2v_3o_18cs^2o_6 + 2o_19o_11o_17o_23o_16o_7o_20v_1^2v_3v_2^2o_18 -$$
$$2o_19o_11o_17o_23o_20v_1v_3^2o_18cs^2o_6o_8 - 2o_11o_17o_23o_16o_7v_1v_3^2o_18cs^2o_6o_8 - 2o_11o_17o_23o_16o_7o_20v_1^2v_3o_18cs^2o_6o_8 +$$
$$2o_19o_11o_17o_16o_20v_1^2v_3o_18cs^2o_6o_8 - o_19o_11o_17o_23o_16o_7o_20v_1v_3^2o_18cs^2o_6o_8 + 2o_11o_17o_23o_16o_20v_1^2v_3v_2^2o_18o_6o_8 -$$
$$2o_19o_17o_23o_16o_7v_1v_3^2v_2^2o_18o_6o_8$$

$C_{16} = -12o_19o_11o_17o_23o_16o_7^3v_3^2v_2^2o_6^2o_5o_8 + 24o_19o_11o_17o_23o_16o_7^3o_20v_1v_3v_2^2o_18o_6o_5 - 12o_19o_11o_17o_23o_16o_7^3v_2^2o_18cs^2o_6o_5o_8 +$
$12o_19o_11o_23o_7^3o_20v_1v_3v_2^2o_18o_6^2o_5o_8 + 12o_19o_11o_17o_23o_16o_7^3v_3^2v_2^2o_18o_6^2o_5 + 12o_19o_11o_23o_16o_7^3o_20v_3^2v_2^2o_18o_6^2o_5 -$
$12o_19o_11o_23o_16o_7^3o_20v_1v_3o_18cs^2o_6^2o_5o_8 - 24o_11o_17o_16o_7^3o_20v_1v_3o_18cs^2o_6^2o_5o_8 - 6o_19o_17o_16o_7^3o_20v_3^2v_2^2o_18o_6^2o_5o_8 -$
$6o_19o_11o_17o_23o_16o_7^3o_20v_2^2o_18cs^2o_6^2o_5o_8 - 24o_19o_11o_17o_23o_16o_7^3o_20v_1v_3o_18cs^2o_6^2o_5 - 12o_19o_17o_23o_16o_7^3v_2^2o_18cs^2o_6^2o_5o_8 +$
$12o_17o_23o_16o_7^3v_3^2o_18cs^2o_6^2o_5o_8 + 12o_19o_17o_23o_16o_7^3v_3^2cs^2o_6^2o_5o_8 - 12o_11o_17o_23o_16o_7^3o_20v_2^2o_18cs^2o_6^2o_5o_8 -$
$12o_19o_11o_17o_23o_16o_7^2o_20v_2^2o_18cs^2o_6^2o_5 - 12o_19o_11o_17o_16o_7^3o_20v_3^2v_2^2o_18o_6^2o_5o_8 + 12o_19o_11o_23o_16o_7^3o_20v_1v_3v_2^2o_18o_6o_5o_8 +$
$6o_19o_17o_23o_16o_7^3o_20v_3^2o_18cs^2o_6^2o_5o_8 - 6o_19o_11o_23o_7^3o_20v_2^2o_18cs^2o_6^2o_5o_8 + 24o_19o_11o_17o_23o_7^3o_20v_1v_3o_18cs^2o_6^2o_5o_8 +$
$12o_11o_17o_23o_16o_7^2v_2^2o_18cs^2o_6^2o_5o_8 + 6o_19o_11o_17o_16o_7^3o_20v_3^2o_18cs^2o_6^2o_5o_8 + 10o_19o_11o_17o_23o_16o_7^3o_20o_18cs^4o_6^2o_8 +$
$12o_11o_17o_23o_16o_7^3o_20v_3^2v_2^2o_18o_6^2o_5o_8 - 24o_17o_23o_16o_7^3v_1v_3v_2^2o_18o_6^2o_5o_8 - o_19o_11o_17o_23o_16o_7^3o_20o_18cs^4o_6^2o_5o_8 +$
$24o_11o_17o_23o_16o_7^2o_20v_1v_3v_2^2o_18o_6^2o_5o_8 - 6o_19o_11o_23o_16o_7^2o_20v_3^2o_18cs^2o_6o_5o_8 - 12o_19o_17o_23o_16o_7^3o_20v_1v_3v_2^2o_18o_6o_5o_8 -$
$12o_19o_11o_17o_23o_16o_7^2o_20v_1v_3o_18cs^2o_6o_5o_8 - 6o_19o_11o_23o_16o_7^2o_20o_18cs^4o_6^2o_5o_8 + 24o_19o_11o_17o_23o_16o_7^2v_1v_3v_2^2o_18o_6^2o_5 -$
$6o_19o_17o_23o_16o_7^3o_20v_3^2o_18cs^2o_6^2o_5o_8 + 12o_19o_11o_23o_16o_7^2o_20v_2^2o_18cs^2o_6^2o_5o_8 -$
$6o_19o_11o_17o_23o_7^3o_20v_2^2o_18cs^2o_6^2o_5o_8 - 24o_19o_11o_17o_23o_16o_7^3v_1v_3o_18cs^2o_6o_5 + 12o_19o_11o_17o_23o_7^2o_20v_1v_3o_18cs^2o_6^2o_5o_8 +$
$12o_19o_11o_17o_23o_7^2o_20o_18cs^4o_6o_5o_8 - 6o_19o_11o_17o_23o_16o_7^3o_20v_3^2v_2o_6o_5o_8 - 12o_19o_11o_17o_23o_16o_7^2o_20v_3^2v_2^2o_18o_6^2o_5 -$
$12o_19o_11o_17o_23o_16o_7^2v_2^2o_18cs^2o_6^2o_5o_8 - 12o_11o_17o_16o_7^3o_20v_3^2o_18cs^2o_6^2o_5o_8 - 12o_19o_11o_23o_16o_7^2o_20v_3^2o_18cs^2o_6^2o_5o_8 -$
$24o_19o_17o_23o_16o_7^3v_1v_3cs^2o_6^2o_5o_8 + 12o_19o_11o_17o_23o_16o_7^3o_18cs^4o_6o_5o_8 - 24o_11o_17o_23o_16o_7^2v_1v_3v_2^2o_18o_6^2o_5o_8 -$
$12o_19o_11o_17o_16o_7^2o_20v_1v_3v_2^2o_18o_6^2o_5o_8 - 12o_19o_11o_17o_23o_16o_7^2o_20v_1v_3cs^2o_6^2o_5o_8 + 12o_19o_11o_17o_7^2o_20v_2^2o_18cs^2o_6^2o_5o_8 +$
$24o_19o_17o_23o_16o_7^3v_1v_3v_2^2o_18o_6^2o_5o_8 + 12o_19o_11o_17o_23o_16o_7^2o_20v_1v_3v_2^2o_18o_6^2o_5o_8 + 12o_11o_17o_16o_7^2o_20v_3^2v_2^2o_18o_6^2o_5o_8 +$
$12o_11o_17o_23o_16o_7^2o_20o_18cs^4o_6^2o_8 + 6o_19o_11o_23o_16o_7^3o_20v_3^2v_2^2o_18o_6^2o_5o_8 - 24o_19o_11o_17o_23o_16o_7^3v_1v_3cs^2o_6o_5o_8 -$
$12o_17o_23o_16o_7^3o_20v_3^2o_18cs^2o_6^2o_5o_8 + 24o_11o_17o_23o_16o_7^2o_20v_1v_3v_2^2o_18o_6^2o_5o_8 -$
$6o_19o_11o_17o_23o_16o_7^3o_20v_3^2cs^2o_6^2o_5o_8 + 12o_19o_11o_17o_23o_16o_7^2o_20v_2^2o_18cs^2o_6^2o_5 - 12o_19o_17o_23o_16o_7^3cs^4o_6^2o_5o_8 -$
$6o_19o_11o_17o_23o_7^3o_20o_18cs^4o_6o_5o_8 - 24o_19o_11o_17o_7^2o_20v_1v_3v_2^2o_18o_6^2o_5o_8 - 24o_17o_16o_7^3o_20v_1v_3o_18cs^2o_6^2o_5o_8 +$
$6o_19o_11o_17o_23o_16o_7^3o_20v_2^2cs^2o_6^2o_5o_8 - 12o_19o_11o_23o_16o_7^3o_20v_2^2o_18cs^2o_6^2o_5 - 12o_19o_11o_17o_23o_16o_7^3v_3^2v_2^2o_18o_6o_5o_8 +$
$12o_19o_11o_23o_16o_7^2o_20o_18cs^4o_6^2o_5o_8 + 12o_19o_11o_17o_23o_16o_7^2o_18cs^4o_6^2o_5o_8 + 12o_17o_16o_7^3o_20v_3^2o_18cs^2o_6^2o_5o_8 -$
$24o_19o_11o_17o_23o_16o_7^3v_1v_3v_2^2o_18o_6^2o_5 - 24o_19o_11o_23o_16o_7^2o_20v_1v_3v_2^2o_18o_6^2o_5 - 6o_19o_17o_23o_16o_7^3o_20v_3^2cs^2o_6^2o_5o_8 -$
$6o_19o_17o_16o_7^3o_20v_2^2o_18cs^2o_6^2o_5o_8 - 6o_19o_11o_17o_23o_16o_7^3o_20v_3^2v_2^2o_18o_6^2o_5o_8 - 12o_19o_17o_23o_16o_7^3v_3^2v_2^2o_18o_6^2o_5o_8 -$

$$
\begin{aligned}
&24o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 + 6o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_3^2o_{18}cs^2o_6o_5o_8 - 12o_{19}o_{11}o_{17}o_{16}o_7^2o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_3^2o_{18}cs^2o_6o_5 - 6o_{19}o_{11}o_{23}o_7^2o_{20}v_3^2o_{18}o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}cs^4o_6^2o_8 -\\
&24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_1v_3o_{18}o_6o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2o_{18}cs^2o_6^2o_5 - 12o_{17}o_{23}o_{16}o_7^3o_{18}cs^4o_6^2o_5o_8 -\\
&24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{23}o_7^2o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2v_2o_{18}o_6o_5 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3v_2^2o_6^2o_5o_8 + 24o_{19}o_{11}o_{17}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 + 12o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 +\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2o_{18}cs^2o_6^2o_5o_8 - 24o_{19}o_{17}o_{23}o_{16}o_7^3v_1v_3v_2^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_3^2v_2^2o_{18}o_6^2o_5 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{18}cs^4o_6^2o_5 - 12o_{19}o_{11}o_{17}o_{23}o_7^2o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{17}o_{23}o_{16}o_7^3v_3^2v_2^2o_6^2o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{18}cs^4o_6o_5 + 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2v_1v_3v_2^2o_{18}o_6^2o_5o_8 + 24o_{11}o_{17}o_{16}o_7^3o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 +\\
&24o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{17}o_{23}o_{16}o_7^2o_{20}cs^4o_6^2o_8 - 24o_{19}o_{11}o_{23}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 -\\
&12o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_3^2v_2o_{20}o_{18}cs^4o_6^2o_5 + 12o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_3^2o_{18}cs^2o_6o_5 +\\
&6o_{19}o_{11}o_{17}o_{23}o_7^3o_{20}v_3^2o_{18}o_6^2o_5o_8 + 12o_{11}o_{17}o_{23}o_{16}o_7^3o_{18}cs^4o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_2^2cs^2o_6o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2cs^2o_6^2o_5o_8 + 12o_{19}o_{17}o_{16}o_7^3o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 - 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_1v_3o_{18}cs^2o_6^2o_5o_8 -\\
&2o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}o_{18}cs^4o_6^2o_5o_8 + 24o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3cs^4o_6^2o_5o_8 -\\
&24o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6o_5 - 12o_{11}o_{17}o_{23}o_{16}o_7^3v_2^2o_{18}cs^2o_6^2o_5o_8 + 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_1v_3v_2^2o_{18}o_6o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6^2o_5 + 12o_{19}o_{11}o_{17}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}o_{18}cs^4o_6o_5o_8 +\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_2^2o_{18}cs^2o_6o_5 - 12o_{19}o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6^2o_8 + 6o_{19}o_{11}o_{23}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 +\\
&12o_{11}o_{17}o_{16}o_7^2o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 + 24o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5 -\\
&6o_{19}o_{11}o_{17}o_7^3o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6^2o_5 - 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 +\\
&12o_{19}o_{11}o_{17}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 - 6o_{19}o_{17}o_{23}o_{16}o_7^3o_{20}v_3^2cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{18}cs^4o_6^2o_5 -\\
&6o_{19}o_{11}o_{23}o_7^3o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 + 6o_{19}o_{17}o_{23}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 + 6o_{19}o_{11}o_{17}o_{23}o_7^3o_{20}v_3^2v_2^2o_{18}o_6o_5o_8 -\\
&12o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2v_2^2o_{18}o_6^2o_5o_8 - 6o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_2^2cs^2o_6o_5o_8 +\\
&24o_{19}o_{11}o_{17}o_{16}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 - 12o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_3^2o_{18}cs^2o_6^2o_5 + 6o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_3^2cs^2o_6^2o_5o_8 +\\
&6o_{19}o_{11}o_{17}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 + 12o_{11}o_{17}o_{23}o_{16}o_7^2v_2^2o_{18}cs^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6o_5 -\\
&12o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6^2o_5 + 12o_{19}o_{11}o_{23}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2o_{18}cs^2o_6o_5o_8 -\\
&24o_{17}o_{16}o_7^3o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 - 24o_{19}o_{11}o_{17}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6o_5 +\\
&6o_{19}o_{11}o_{23}o_7^3o_{20}o_{18}cs^4o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3v_2^2o_6o_5o_8 + 24o_{19}o_{11}o_{23}o_{16}o_7^3o_{20}v_1v_3o_{18}o_6^2o_5 +\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 - 24o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6o_5 - 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6o_5 +\\
&24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_1v_3v_2^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6o_5 - 6o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6o_8 +\\
&12o_{17}o_{23}o_{16}o_7^3v_2^2o_{18}cs^2o_6^2o_5o_8 - 12o_{19}o_{17}o_{23}o_{16}o_7^3v_3^2o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{17}o_{23}o_{16}o_7^3o_{18}cs^4o_6^2o_5o_8 -\\
&6o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_2^2o_{18}cs^2o_6^2o_5 + 12o_{17}o_{16}o_7^3o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 +\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2cs^2o_6o_5o_8 + 12o_{19}o_{11}o_{23}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6o_5 - 24o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5 -\\
&24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2v_1v_3o_{18}cs^2o_6^2o_5 + 12o_{19}o_{11}o_{17}o_7^2o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 + 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2v_1v_3o_{18}o_6o_5o_8 -\\
&12o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2v_2^2o_{18}o_6^2o_5o_8 + 24o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 -\\
&12o_{11}o_{17}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2v_2^2o_{18}cs^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_2^2cs^2o_6^2o_5o_8 -\\
&6o_{19}o_{11}o_{17}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2v_2^2o_{18}cs^2o_6^2o_5o_8 - 18o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}o_{18}cs^4o_6^2o_8 -\\
&12o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^2o_6^2o_5o_8 - 24o_{19}o_{11}o_{23}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}cs^4o_6o_8 +\\
&24o_{19}o_{11}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 + 12o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6^2o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2o_{18}cs^2o_6o_5 +\\
&24o_{11}o_{17}o_{16}o_7^3o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 + 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2v_1v_3o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_3^2o_{18}cs^2o_6^2o_5 -\\
&6o_{19}o_{11}o_{23}o_{16}o_7^3o_{20}v_2^2o_{18}cs^2o_6o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3cs^2o_6^2o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_3^3v_2^2o_{18}o_6o_5 - 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_1v_3v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{17}o_{16}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 +\\
&24o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}o_{20}o_{18}cs^4o_6^2o_5o_8 + 6o_{19}o_{11}o_{17}o_{23}o_7^3o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 - 18o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}o_{18}cs^4o_6o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2v_2^2o_{18}o_6^2o_5 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7cs^4o_6o_5o_8 - 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_1v_3v_2^2o_{18}o_6o_5 +\\
&24o_{19}o_{11}o_{17}o_{23}o_7^3o_{20}v_1v_3o_{18}o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_2^2cs^2o_6^2o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{16}o_7^2o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 + 6o_{19}o_{17}o_{23}o_{16}o_7^3o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{23}o_{16}o_7^3o_{20}v_1v_3o_{18}cs^2o_6o_5o_8 +\\
&6o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_2^2o_{18}cs^2o_6o_5o_8 - 12o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7o_{20}o_{20}o_{18}cs^4o_6^2o_8 -\\
&24o_{17}o_{23}o_{16}o_7^3v_1v_3o_{18}cs^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_2^2o_{18}cs^2o_6^2o_5o_8 + 12o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_3^2o_{18}cs^2o_6^2o_5o_8 +\\
&24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_1v_3o_{18}cs^2o_6^2o_5 + 6o_{19}o_{11}o_{17}o_{16}o_7^2o_{20}v_3^2v_2^2o_{18}o_6^2o_5o_8 + 12o_{11}o_{17}o_{23}o_{16}o_7^2v_3^2v_2^2o_{18}o_6^2o_5o_8 +\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3v_3^2v_2^2o_6o_5o_8 + 12o_{19}o_{11}o_{23}o_7^2o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 + 24o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5 +\\
&6o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}o_{18}cs^4o_6o_5o_8 + 12o_{19}o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3v_2^2o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 +\\
&12o_{17}o_{23}o_{16}o_7^3v_3^2v_2^2o_{18}o_6^2o_5o_8 + 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}o_{18}cs^4o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_3^2o_{18}cs^2o_6^2o_5 -\\
&24o_{11}o_{17}o_{16}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 - 12o_{11}o_{17}o_{23}o_{16}o_7^2o_{18}cs^4o_6^2o_5o_8 - 6o_{19}o_7o_{16}o_7^2o_{20}v_3^2v_2^2o_{18}cs^2o_6^2o_5o_8 -\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6o_5o_8 - 6o_{19}o_{11}o_{23}o_{16}o_7^3o_{20}v_3^2v_2^2o_{18}o_6o_5o_8 +\\
&24o_{19}o_{17}o_{23}o_{16}o_7^3v_1v_3cs^2o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_7^2o_{20}v_2^2o_{18}cs^2o_6^2o_5o_8 + 24o_{11}o_{17}o_{23}o_{16}o_7^2o_{20}v_1v_3o_{18}cs^2o_6^2o_5o_8 +\\
&12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}v_1v_3cs^2o_6^2o_5o_8 - 18o_{19}o_{11}o_{17}o_{23}o_{16}o_7^3o_{20}o_{18}cs^4o_6o_8 - 12o_{19}o_{11}o_{23}o_7^2o_{20}o_{18}cs^4o_6^2o_5o_8 +\\
&12o_{19}o_{11}o_{17}o_7^2o_{20}v_1v_3v_2^2o_{18}o_6^2o_5o_8 - 12o_{19}o_{11}o_{17}o_{23}o_{16}o_7^2o_{18}cs^4o_6^2o_5o_8
\end{aligned}
$$

$$C_{17} = -2o_1 1o_1 7o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 - 2o_1 9o_1 1o_2 3o_1 6o_2 0v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_1 6o_2 0v_3 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 cs^2 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 - 2o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6v_1 v_3^2 o_1 8o_6 +$$
$$o_1 9o_1 7o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_8 - 2o_1 7o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 -$$
$$2o_1 1o_1 7o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_2 3o_1 6o_2 0v_1 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_1 8o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1 o_1 8cs^2 o_6 o_8 -$$
$$o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_6 o_8 - o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_3 cs^2 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6v_3 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 o_1 8cs^2 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_1 8o_6 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1 v_3^2 o_1 8o_6 o_8 + o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_3 cs^2 o_6 o_8 - o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_6 o_8 + 2o_1 1o_1 7o_2 3o_1 6v_1 o_1 8cs^2 o_6 o_8 +$$
$$2o_1 1o_1 7o_2 3o_1 6o_2 0v_1^2 v_3 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 0v_1 v_3^2 o_1 8o_6 o_8 + o_1 9o_1 1o_2 3o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 - o_1 9o_1 1o_1 7o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 -$$
$$o_1 9o_1 1o_1 7o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 0v_1 o_1 8cs^2 o_6 o_8 + 2o_1 1o_1 7o_2 3o_1 6v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8 +$$
$$2o_1 7o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 + 2o_1 1o_1 7o_1 6o_2 0v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 1o_1 7o_1 6o_2 0v_1 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_3 o_1 8cs^2 o_8 -$$
$$o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 - o_1 9o_1 1o_1 7o_2 3o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8 + 2o_1 7o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_3 o_1 8cs^2 o_6 o_8 - o_1 9o_1 1o_1 7o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_1 8o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_8 - 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6v_1^2 v_3 o_1 8o_6 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_1 8o_6 - 2o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_2 3o_2 0v_1 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_2 0v_1 v_3^2 o_1 8o_6 o_8 +$$
$$2o_1 9o_1 1o_1 7o_1 6o_2 0v_1^2 v_3 o_1 8o_6 o_8 - o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 -$$
$$o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 - 2o_1 1o_1 7o_2 3o_1 6o_7 v_1 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_2 3o_2 0v_1 v_3^2 o_1 8o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_2 0v_1 o_1 8cs^2 o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6v_1^2 v_3 o_1 8o_6 + o_1 9o_1 7o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 + 2o_1 9o_1 7o_2 3o_1 6o_7 v_3 o_1 8cs^2 o_6 o_8 + o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8cs^2 o_6 + 2o_1 7o_2 3o_1 6o_7 v_1 o_1 8cs^2 o_6 - o_1 9o_1 1o_1 7o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 +$$
$$2o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_1 8o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_1 8o_6 o_8 - o_1 9o_1 1o_1 7o_2 3o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 - o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 +$$
$$o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 + o_1 9o_1 1o_2 3o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 + 2o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1 o_1 8cs^2 o_6 +$$
$$2o_1 1o_1 7o_2 3o_1 6o_2 0v_3 o_1 8cs^2 o_6 o_8 + o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6v_3 o_1 8cs^2 o_6 + 2o_1 9o_1 1o_2 3o_1 6o_2 0v_1 o_1 8cs^2 o_6 +$$
$$2o_1 9o_1 7o_2 3o_1 6o_7 v_1 cs^2 o_6 o_8 - o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_3 cs^2 o_6 o_8 + 2o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 - 2o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 -$$
$$2o_1 9o_1 7o_2 3o_1 6o_7 v_3 cs^2 o_6 o_8 - 2o_1 1o_1 7o_2 3o_1 6v_1^2 v_3 o_1 8o_6 o_8 - 2o_1 9o_1 1o_2 3o_1 6o_2 0v_3 o_1 8cs^2 o_6 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 -$$
$$o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_8 - 2o_1 1o_1 7o_2 3o_1 6o_2 0v_1 o_1 8cs^2 o_6 o_8 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_6 o_8 -$$
$$2o_1 1o_1 7o_2 3o_1 6o_2 0v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_3 o_1 8cs^2 o_6 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_8 + o_1 9o_1 1o_1 7o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6v_1 o_1 8o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6v_1 o_1 8cs^2 o_8 - o_1 9o_1 1o_2 3o_7 o_2 0v_1^2 v_3 o_1 8o_8 + o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 -$$
$$o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 + o_1 9o_1 1o_1 7o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 - 2o_1 7o_2 3o_1 6o_7 v_3 o_1 8cs^2 o_6 o_8 - 2o_1 7o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 +$$
$$2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 + o_1 9o_1 1o_1 7o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 o_1 8cs^2 o_6 - 2o_1 1o_1 7o_1 6o_2 0v_1^2 v_3 o_1 8o_6 o_8 +$$
$$o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1^2 v_3 o_1 8o_6 - 2o_1 9o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_1 8o_6 o_8 - 2o_1 9o_1 1o_2 3o_2 0v_3 o_1 8cs^2 o_6 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_2 0v_3 o_1 8cs^2 o_6 o_8 + 2o_1 1o_1 7o_2 3o_1 6o_7 v_3 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_2 3o_1 6o_2 0v_1^2 v_3 o_1 8o_6 o_8 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 +$$
$$2o_1 1o_1 7o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_8 - 2o_1 9o_1 7o_2 3o_1 6o_7 v_1 o_1 8cs^2 o_6 + 2o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 -$$
$$2o_1 9o_1 1o_2 3o_1 6o_2 0v_1^2 v_3 o_1 8o_6 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 + 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_3 cs^2 o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1 v_3 o_1 8o_6 o_8 + 2o_1 9o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_6 o_8 - 2o_1 7o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 o_1 8cs^2 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_6 - 2o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_1 8o_6 o_8 + o_1 9o_1 1o_1 7o_2 3o_7 o_2 0v_1^2 v_3 o_1 8o_8 - o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 +$$
$$o_1 9o_1 1o_2 3o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 + o_1 9o_1 1o_1 7o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 - 2o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 - 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 - 2o_1 1o_1 7o_2 3o_1 6v_3 o_1 8cs^2 o_6 o_8 -$$
$$2o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 - o_1 9o_1 1o_2 3o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 0v_3 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3^2 o_1 8 -$$
$$o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_8 + o_1 9o_1 1o_1 7o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 - o_1 9o_1 1o_2 3o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_3 o_1 8cs^2 o_6 o_8 - o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 cs^2 o_8 - o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1 cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6v_1 v_3^2 o_1 8o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_3 o_1 8cs^2 - 2o_1 9o_1 1o_1 7o_2 3o_1 6v_1 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_6 o_8 + o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_8 -$$
$$2o_1 9o_1 1o_2 3o_2 0v_1^2 v_3 o_1 8o_6 + 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_1 8 - o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_8 -$$
$$2o_1 9o_1 1o_2 3o_1 6o_2 0v_1 o_1 8cs^2 o_6 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1 v_3^2 o_1 8o_6 - o_1 9o_1 7o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 + 2o_1 7o_2 3o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 -$$
$$o_1 9o_1 7o_1 6o_7 o_2 0v_1 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_1 6o_2 0v_1 v_3^2 o_1 8o_6 - 2o_1 7o_1 6o_7 o_2 0v_1 v_3^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_2 3o_1 6o_2 0v_3 o_1 8cs^2 o_6 o_8 +$$
$$o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_3 o_1 8o_6 o_8 + 2o_1 1o_1 7o_1 6o_7 o_2 0v_3 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_3 cs^2 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 o_1 8cs^2 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_2 0v_1^2 v_3 o_1 8o_6 o_8 + 2o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_3 o_1 8o_6 o_8$$

$$C_{18} = 2o_1 7o_2 3o_1 6o_7 o_2 0v_2^2 o_1 8cs^2 o_6 o_8 - 2o_1 7o_1 6o_7 o_2 0v_1^2 o_1 8cs^2 o_6 o_8 - o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_2^2 cs^2 o_6 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_7 o_2 0v_1 v_3 v_2^2 o_1 8o_6 o_8 + 2o_1 1o_1 7o_1 6o_7 o_2 0v_2^2 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 o_1 8cs^2 o_6 + 2o_1 9o_1 1o_2 3o_1 6o_2 0v_2^2 o_1 8cs^2 o_6 o_8 -$$
$$2o_1 1o_1 7o_1 6o_2 0v_1^2 o_1 8cs^2 o_6 + 4o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3 v_2^2 o_1 8o_6 o_8 - 4o_1 9o_1 7o_2 3o_1 6o_7 v_1 v_3 o_1 8cs^2 o_6 - 2o_1 9o_1 7o_2 3o_1 6v_2^2 o_1 8cs^2 o_6 +$$
$$o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_2^2 o_1 8o_6 o_8 - 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_3 v_2^2 o_1 8o_8 + 4o_1 1o_1 7o_1 6o_2 0v_1 v_3 o_1 8cs^2 o_6 o_8 + 4o_1 9o_1 7o_2 3o_1 6o_7 v_1 v_3 v_2^2 o_6 o_8 -$$
$$2o_1 9o_1 1o_2 3o_1 6o_2 0v_1^2 v_2^2 o_1 8o_6 - o_1 9o_1 1o_1 7o_2 3o_7 o_2 0v_1^2 v_2^2 o_1 8o_6 o_8 + 4o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3 v_2^2 o_8 - 2o_1 1o_1 7o_2 3o_1 6v_1^2 o_1 8cs^2 o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6v_1^2 o_1 8cs^2 o_6 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_2^2 o_1 8o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 0v_1^2 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_2^2 o_1 8cs^2 o_6 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_2^2 o_1 8cs^2 o_6 + o_1 9o_1 1o_1 7o_7 o_2 0v_1^2 o_1 8cs^2 o_6 o_8 + 4o_1 7o_1 6o_7 o_2 0v_1 v_3 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1^2 v_2^2 o_1 8o_6 -$$
$$o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 cs^2 o_6 o_8 + o_1 9o_1 7o_1 6o_7 o_2 0v_1^2 v_2^2 o_1 8o_6 o_8 - 4o_1 9o_1 1o_1 7o_2 3o_2 0v_1 v_3 v_2^2 o_1 8o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 0v_2^2 o_1 8cs^2 o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1^2 o_1 8cs^2 o_6 o_8 + o_1 9o_1 1o_1 7o_7 o_2 0v_2^2 o_1 8cs^2 o_6 o_8 - 4o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3 v_2^2 o_1 8o_6 o_8 -$$
$$4o_1 9o_1 1o_1 7o_2 3o_1 6o_2 0v_1 v_3 v_2^2 o_1 8o_6 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3 v_2^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1^2 v_2^2 o_1 8o_6 -$$
$$4o_1 9o_1 7o_2 3o_1 6o_7 v_1 v_3 o_1 8cs^2 o_6 + o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 cs^2 o_8 + 4o_1 9o_1 1o_1 7o_1 6o_2 0v_1^2 v_2^2 o_1 8o_6 o_8 + 4o_1 9o_1 1o_1 7o_2 0v_1 v_3 o_1 8cs^2 o_6 o_8 -$$
$$2o_1 1o_1 7o_2 3o_1 6v_2^2 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_7 o_2 0v_1 v_3 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1^2 v_2^2 o_1 8 + 4o_1 9o_1 1o_1 7o_2 3o_1 6v_1 v_3 o_1 8cs^2 o_6 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 o_1 8cs^2 - 2o_1 1o_1 7o_1 6o_2 0v_2^2 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6v_1^2 v_2^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3 v_2^2 o_1 8o_8 -$$
$$2o_1 7o_1 6o_7 o_2 0v_2^2 o_1 8cs^2 o_6 o_8 + 2o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 o_1 8cs^2 o_6 o_8 - 2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_2^2 o_1 8o_6 - 2o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3 v_2^2 o_6 o_8 -$$
$$2o_1 9o_1 1o_2 3o_1 6o_7 o_2 0v_1^2 o_1 8cs^2 + 2o_1 1o_1 7o_1 6o_7 o_2 0v_1^2 o_1 8cs^2 o_6 o_8 + 2o_1 9o_1 1o_2 3o_1 6o_2 0v_1^2 o_1 8cs^2 o_6 o_8 + 4o_1 9o_1 1o_2 3o_2 0v_1 v_3 v_2^2 o_1 8o_6 o_8 -$$
$$2o_1 9o_1 1o_2 3o_7 o_2 0v_1 v_3 v_2^2 o_1 8o_6 o_8 + 4o_1 9o_1 1o_2 3o_1 6o_2 0v_1 v_3 v_2^2 o_1 8o_6 + 4o_1 1o_1 7o_2 3o_1 6v_1 v_3 o_1 8cs^2 o_6 o_8 - 4o_1 9o_1 1o_1 7o_2 3o_1 6v_1 v_3 v_2^2 o_1 8o_6 o_8 -$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_2^2 cs^2 o_8 - o_1 9o_1 1o_1 7o_1 6o_7 o_2 0v_1^2 v_2^2 o_1 8o_6 o_8 + 2o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1 v_3 o_1 8cs^2 o_6 o_8 - 2o_1 1o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 o_1 8cs^2 o_6 o_8 +$$
$$2o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_2^2 o_1 8cs^2 o_8 - o_1 9o_1 7o_2 3o_1 6o_7 o_2 0v_1^2 v_2^2 o_1 8o_6 o_8 + 2o_1 9o_1 1o_1 7o_1 6o_7 o_2 0v_1 v_3 o_1 8cs^2 o_6 o_8 + 4o_1 9o_1 1o_1 7o_2 3o_1 6o_7 v_1 v_3 cs^2 o_8 +$$

$$2o_19o_11o_17o_23o_16o_7o_20v_1v_3cs^2o_6o_8+4o_19o_11o_17o_23o_16o_7v_1v_3o_18cs^2-4o_19o_11o_23o_16o_7o_20v_1v_3v_2^2o_18o_6+2o_11o_17o_23o_16o_7v_2^2o_18cs^2o_6o_8+$$
$$2o_19o_11o_17o_23o_20v_2^2o_18cs^2o_6o_8-2o_19o_17o_23o_16o_7v_1^2v_2^2o_6o_8-o_19o_11o_23o_16o_7o_20v_1^2o_18cs^2o_6o_8+o_19o_11o_17o_23o_16o_7o_20v_2^2o_18cs^2o_6o_8-$$
$$2o_17o_23o_16o_7v_1^2o_18cs^2o_6o_8-4o_19o_11o_17o_23o_16o_7v_1v_3o_18cs^2o_8+2o_19o_11o_23o_16o_7o_20v_1v_3v_2^2o_18o_6o_8+4o_17o_23o_16o_7v_1v_3v_2^2o_18o_6o_8+$$
$$2o_19o_11o_17o_23o_16o_7v_1^2o_18cs^2o_8-2o_19o_11o_17o_23o_16o_7v_2^2o_18cs^2+4o_19o_11o_17o_23o_16o_20v_1v_3o_18cs^2o_6o_8+2o_11o_17o_23o_16o_20v_1^2v_2^2o_18o_6o_8-$$
$$2o_19o_11o_23o_20v_2^2o_18cs^2o_6o_8-4o_11o_17o_16o_7o_20v_1v_3o_18cs^2o_6o_8-4o_19o_11o_17o_23o_16o_7o_20v_1v_3v_2^2o_18+o_19o_17o_23o_16o_7o_20v_2^2cs^2o_6o_8-$$
$$4o_19o_11o_23o_16o_20v_1v_3o_18cs^2o_6o_8+2o_19o_11o_17o_23o_16o_7v_1^2v_2^2o_6o_8-2o_19o_17o_16o_7o_20v_1v_3v_2^2o_18o_6o_8-2o_19o_11o_23o_20v_1^2o_18cs^2o_6o_8-$$
$$o_19o_11o_17o_23o_16o_7o_20v_1^2v_2^2o_18o_6+2o_11o_17o_23o_16o_7v_1^2o_18cs^2o_6o_8+2o_19o_11o_17o_23o_20v_1^2o_18cs^2o_6o_8+4o_19o_11o_17o_23o_16o_7o_20v_1v_3v_2^2o_18o_6-$$
$$o_19o_11o_23o_16o_7o_20v_2^2o_18cs^2o_6o_8-4o_17o_23o_16o_7o_20v_1v_3o_18cs^2o_6o_8+o_19o_11o_17o_23o_16o_7o_20v_1^2o_18cs^2o_6o_8-$$
$$4o_19o_11o_17o_23o_16o_7v_1v_3v_2^2o_8-2o_17o_23o_16o_7v_2^2o_18cs^2o_6o_8-4o_19o_11o_17o_16o_20v_1v_3v_2^2o_18o_6o_8-4o_11o_17o_23o_16o_20v_1v_3o_18cs^2o_6o_8+$$
$$o_19o_11o_17o_23o_16o_7o_20v_1^2v_2^2o_8+2o_19o_17o_23o_16o_7v_1^2o_18o_6o_8+4o_11o_17o_23o_16o_7o_20v_1v_3v_2^2o_18o_6o_8+o_19o_11o_17o_23o_16o_7o_20v_1^2v_2^2o_18o_6o_8-$$
$$2o_11o_17o_23o_16o_7o_20v_2^2o_18cs^2o_6o_8+4o_19o_11o_17o_23o_16o_7o_20v_1v_3v_2^2o_18+o_19o_11o_17o_23o_16o_7o_20v_1^2cs^2o_6o_8+o_19o_11o_17o_23o_16o_7o_20v_1^2v_2^2o_18o_6o_8-$$
$$4o_17o_23o_16o_7o_20v_1v_3v_2^2o_18o_6o_8-2o_19o_11o_17o_23o_16o_7o_20v_1v_3cs^2o_8+2o_19o_11o_17o_23o_20v_1^2v_2^2o_18o_6o_8+2o_11o_17o_23o_16o_7v_1^2v_2^2o_18o_6o_8+$$
$$4o_19o_11o_23o_16o_7o_20v_1v_3o_18cs^2-4o_19o_11o_23o_16o_20v_1v_3v_2^2o_18o_6o_8-2o_19o_17o_23o_16o_7o_20v_1v_3cs^2o_6o_8-4o_11o_17o_16o_7o_20v_1v_3v_2^2o_18o_6o_8-$$
$$2o_19o_11o_23o_20v_1^2v_2^2o_18o_6o_8+2o_11o_17o_23o_16o_20v_2^2o_18cs^2o_6o_8-o_19o_11o_17o_23o_16o_7o_20v_2^2o_18cs^2o_8+o_19o_11o_23o_16o_7o_20v_1^2o_18cs^2o_8-$$
$$2o_19o_17o_16o_7o_20v_1v_3o_18cs^2o_6o_8-o_19o_11o_17o_16o_7o_20v_2^2o_18cs^2o_6o_8-o_19o_11o_17o_23o_16o_7o_20v_1^2o_18cs^2o_8+o_19o_11o_23o_16o_7o_20v_2^2o_18cs^2o_8-$$
$$o_19o_17o_23o_16o_7o_20v_2^2o_18cs^2o_6o_8-2o_19o_11o_17o_23o_16o_7v_1^2v_2^2o_8-4o_11o_17o_23o_16o_20v_1v_3v_2^2o_18o_6o_8-4o_19o_11o_17o_16o_20v_1v_3o_18cs^2o_6o_8-$$
$$4o_19o_11o_17o_23o_16o_7o_20v_1v_3o_18cs^2+4o_19o_11o_17o_23o_16o_7o_20v_1v_3o_18cs^2o_6+4o_11o_17o_23o_16o_7o_20v_1v_3o_18cs^2o_6o_8+$$
$$2o_19o_17o_23o_16o_7v_1^2o_18cs^2o_6o_8-4o_19o_11o_17o_23o_16o_7v_1v_3v_2^2o_18o_6o_8+2o_19o_11o_17o_16o_7o_20v_1v_3o_18o_6o_8-$$
$$4o_19o_11o_23o_16o_7o_20v_1v_3o_18cs^2o_6+o_19o_11o_17o_23o_16o_7o_20v_2^2cs^2o_8+2o_19o_11o_23o_16o_7v_2^2o_18cs^2o_6o_8-o_19o_11o_17o_23o_16o_7o_20v_1^2v_2^2o_6o_8-$$
$$2o_11o_17o_23o_16o_7o_20v_1^2v_2^2o_18o_6o_8+2o_19o_17o_23o_16o_7o_20v_1v_3o_18o_6o_8-o_19o_11o_17o_16o_7o_20v_2^2o_18cs^2o_6o_8+$$
$$4o_19o_11o_17o_23o_16o_7v_1v_3v_2^2o_18-4o_19o_11o_17o_23o_16v_1v_3o_18cs^2o_6o_8+2o_19o_11o_17o_23o_16o_7v_1^2v_2^2o_18o_8-o_19o_17o_23o_16o_7o_20v_1^2o_18cs^2o_6o_8+$$
$$4o_19o_11o_17o_23o_16o_20v_1v_3v_2^2o_18o_6o_8-2o_19o_11o_23o_16o_7o_20v_2^2o_18cs^2+4o_17o_23o_16o_7v_1v_3o_18cs^2o_6o_8+2o_11o_17o_23o_16o_20v_1^2o_18cs^2o_6o_8+$$
$$4o_19o_17o_23o_16o_7v_1v_3cs^2o_6o_8-o_19o_11o_23o_16o_7o_20v_1^2v_2^2o_18o_6o_8+2o_19o_11o_17o_23o_16o_7o_20v_2^2o_18cs^2+2o_19o_11o_23o_16o_7o_20v_1v_3o_18cs^2o_6o_8-$$
$$2o_17o_23o_16o_7v_1^2v_2^2o_18o_6o_8+4o_19o_11o_17o_20v_1v_3v_2^2o_18o_6o_8+2o_19o_11o_17o_16o_20v_1^2o_18cs^2o_6o_8+2o_19o_11o_17o_23o_16o_7o_20v_1v_3o_18cs^2o_8-$$
$$o_19o_11o_17o_23o_7o_20v_2^2o_18cs^2o_6o_8-2o_19o_11o_17o_23o_16o_7v_2^2cs^2o_8o_6o_8-2o_19o_11o_23o_16o_7o_20v_1^2v_2^2o_18-2o_19o_11o_17o_7o_20v_1v_3v_2^2o_18o_6o_8+$$
$$2o_19o_11o_17o_23o_16o_7o_20v_1^2v_2^2o_18+2o_19o_11o_17o_23o_16o_7v_1^2cs^2o_6o_8-4o_11o_17o_23o_16o_7v_1v_3o_18cs^2o_6o_8+2o_19o_11o_23o_16o_20v_1^2v_2^2o_18o_6o_8-$$
$$4o_19o_11o_17o_23o_20v_1v_3o_18cs^2o_6o_8+4o_19o_11o_23o_16o_20v_1v_3o_18cs^2o_6+o_19o_17o_23o_16o_7o_20v_1^2v_2^2o_6o_8+o_19o_17o_16o_7o_20v_1^2o_18cs^2o_6o_8-$$
$$4o_19o_17o_23o_16o_7v_1v_3v_2^2o_18o_6o_8-2o_19o_11o_17o_23o_16o_7v_1^2cs^2o_8+2o_19o_11o_23o_16o_7o_20v_2^2o_18cs^2o_6-2o_19o_11o_17o_23o_16o_7o_20v_1v_3o_18cs^2o_6o_8-$$
$$2o_19o_11o_17o_23o_16o_7o_20v_1^2o_18cs^2o_6+2o_19o_11o_23o_16o_7o_20v_1^2o_18cs^2o_6+2o_17o_23o_16o_7o_20v_1^2v_2^2o_18o_6o_8-2o_19o_11o_17o_23o_16o_7o_20v_2^2o_18cs^2o_6+$$
$$4o_11o_17o_23o_16v_1v_3v_2^2o_18o_6o_8+2o_19o_11o_17o_23o_16o_7v_1^2cs^2o_6o_8-4o_19o_11o_17o_23o_16o_20v_1v_3o_18cs^2o_6+4o_19o_11o_23o_20v_1v_3o_18cs^2o_6o_8+$$
$$2o_19o_11o_23o_16o_20v_1^2v_2^2o_18o_6o_8-2o_19o_11o_23o_7o_20v_1v_3o_18cs^2o_6o_8+2o_11o_17o_16o_7o_20v_1^2v_2^2o_18o_6o_8-2o_19o_11o_17o_23o_16o_7v_1^2o_18cs^2+$$
$$2o_19o_11o_17o_23o_16v_1^2o_18cs^2o_6o_8-2o_19o_11o_17o_23o_16o_7o_20v_1v_3v_2^2o_8+4o_19o_11o_17o_23o_16v_1v_3v_2^2o_18o_6-4o_19o_11o_17o_23o_16o_7v_1v_3cs^2o_6o_8+$$
$$o_19o_11o_23o_7o_20v_2^2o_18cs^2o_6o_8+4o_19o_11o_17o_23o_16o_7v_1v_3o_18cs^2o_6-2o_11o_17o_16o_20v_1^2v_2^2o_18o_6o_8+2o_19o_11o_17o_23o_16v_2^2o_18cs^2o_6o_8-$$
$$2o_19o_11o_17o_23o_16v_1^2v_2^2o_18o_6-2o_19o_11o_17o_23o_16o_7o_20v_1^2o_18cs^2o_6+4o_11o_17o_16o_20v_1v_3v_2^2o_18o_6o_8+$$
$$o_19o_11o_17o_23o_7o_20v_1^2o_18cs^2o_6o_8-2o_17o_16o_7o_20v_1^2v_2^2o_18o_6o_8+2o_19o_11o_17o_23o_16o_20v_1^2o_18cs^2o_6+2o_19o_11o_17o_23o_7o_20v_1v_3o_18cs^2o_6o_8+$$
$$2o_19o_11o_17o_23o_16o_7v_1^2v_2^2o_18o_6+o_19o_11o_17o_7o_20v_1^2v_2^2o_18o_6o_8+4o_17o_16o_7o_20v_1v_3v_2^2o_18o_6o_8-2o_19o_11o_17o_20v_1^2v_2^2o_18o_6o_8+$$
$$o_19o_17o_16o_7o_20v_2^2o_18cs^2o_6o_8+2o_19o_11o_17o_23o_16o_20v_2^2o_18cs^2o_6+2o_19o_11o_17o_16o_20v_2^2o_18cs^2o_6o_8-2o_19o_17o_23o_16o_7v_2^2cs^2o_6o_8-$$
$$2o_11o_17o_23o_16v_1^2v_2^2o_18o_6o_8-2o_19o_11o_23o_16o_20v_2^2o_18cs^2o_6-2o_19o_11o_23o_16o_7o_20v_1v_3o_18cs^2o_8+2o_19o_11o_17o_23o_16o_7o_20v_1v_3v_2^2o_6o_8-$$
$$o_19o_11o_17o_23o_7o_20v_1^2o_18cs^2o_6o_8-2o_19o_11o_17o_23o_16o_7v_1^2o_18cs^2o_6o_8-4o_19o_11o_17o_23o_16o_7v_1v_3v_2^2o_18o_6$$

$C_{19} = 12o_2 3o_1 6^2 o_7^2 - 12o_2 3o_1 6^2 o_7^2 v_2^2 - 36o_1 9o_1 1o_2 3o_1 6o_1 0cs^2 - 36o_1 1o_2 3o_1 6^2 o_7 cs^2 + 18o_1 9o_1 1o_2 3o_1 6o_7 o_1 0v_2^2 + 18o_1 9o_1 1o_1 6^2 o_7^2 o_1 0cs^2 +$
$18o_1 9o_2 3o_1 6^2 o_7^2 cs^2 - 36o_2 3o_1 6^2 o_7^2 cs^2 - 6o_1 9o_1 1o_2 3o_7^2 o_1 0 + 6o_1 9o_1 1o_1 6^2 o_7^2 o_1 0v_2^2 + 6o_1 9o_2 3o_1 6^2 o_7^2 v_2^2 + 54o_1 9o_1 1o_2 3o_1 6o_7 o_1 0cs^2 -$
$12o_1 1o_2 3o_1 6^2 o_7 v_2^2 - 12o_1 9o_1 1o_2 3o_1 6o_1 0v_2^2 + 12o_1 9o_1 1o_2 3o_1 6^2 o_7 o_1 0 - 12o_1 6^2 o_7^2 o_1 0 - 36o_1 9o_1 1o_2 3o_1 6^2 cs^2 - 12o_1 1o_1 6^2 o_7 o_1 0 +$
$36o_1 9o_1 1o_1 6o_7 o_1 0cs^2 + o_1 9o_1 1o_2 3o_1 6^2 o_7^2 o_1 0v_2^2 + 6o_1 9o_1 1o_1 6o_7^2 o_1 0 + 18o_1 9o_1 1o_2 3o_1 6^2 o_7 v_2^2 + 6o_1 9o_1 1o_2 3o_7^2 o_1 0v_2^2 - 12o_1 1o_1 6^2 o_7^2 o_1 0v_2^2 +$
$3o_1 9o_1 1o_2 3o_1 6^2 o_7^2 o_1 0cs^2 + 12o_1 9o_1 1o_1 6o_7 o_1 0v_2^2 + 3o_1 9o_1 1o_2 3o_1 6o_7^2 o_1 0 - 12o_1 9o_1 1o_2 3o_1 6^2 v_2^2 - 36o_1 1o_1 6^2 o_7^2 o_1 0cs^2 +$
$18o_1 9o_1 1o_2 3o_7^2 o_1 0cs^2 - 12o_1 9o_1 1o_2 3o_1 6^2 o_1 0 + 54o_1 9o_1 1o_2 3o_1 6^2 o_7 cs^2 + 12o_1 9o_1 1o_1 6^2 o_7 o_1 0 - 12o_1 9o_1 1o_2 3o_1 6^2 o_7 o_1 0v_2^2 -$
$18o_1 9o_1 1o_1 6o_7^2 o_1 0cs^2 + 12o_1 6^2 o_7^2 o_1 0v_2^2 - 18o_1 9o_1 1o_2 3o_1 6o_7 o_1 0 + 12o_1 1o_1 6^2 o_7 o_1 0v_2^2 - 12o_1 9o_1 1o_2 3o_7 o_1 0v_2^2 - 6o_1 9o_1 1o_1 6^2 o_7^2 o_1 0 -$
$6o_1 9o_2 3o_1 6^2 o_7^2 + 12o_1 1o_2 3o_1 6^2 o_7 - 15o_1 9o_1 1o_2 3o_1 6^2 o_7^2 cs^2 - 18o_1 9o_1 6^2 o_7^2 o_1 0cs^2 + 12o_1 9o_1 1o_2 3o_1 6o_1 0 - o_1 9o_1 1o_2 3o_1 6^2 o_7^2 o_1 0 +$
$36o_1 6^2 o_7^2 o_1 0cs^2 - 6o_1 9o_1 1o_2 3o_1 6o_7 o_1 0v_2^2 - 18o_1 9o_1 1o_2 3o_1 6^2 o_7 + 12o_1 1o_1 6^2 o_7^2 o_1 0 - 36o_1 9o_1 1o_2 3o_1 6^2 o_1 0cs^2 - 5o_1 9o_1 1o_2 3o_1 6^2 o_7^2 v_2^2 -$
$12o_1 9o_1 1o_1 6o_7 o_1 0 - 6o_1 9o_1 6^2 o_7^2 o_1 0v_2^2 + 12o_1 9o_1 1o_2 3o_1 6^2 - 36o_1 9o_1 1o_2 3o_1 6^2 o_1 0cs^2 + 36o_1 1o_1 6^2 o_7 o_1 0cs^2 + 12o_1 9o_1 1o_2 3o_7 o_1 0 -$
$36o_1 9o_1 1o_1 6^2 o_7 o_1 0cs^2 - 3o_1 9o_1 1o_2 3o_1 6o_7 o_1 0v_2^2 + 5o_1 9o_1 1o_2 3o_1 6^2 o_7^2 + 6o_1 9o_1 6^2 o_7^2 o_1 0 + 12o_1 1o_2 3o_1 6^2 o_7^2 v_2^2 + 36o_1 9o_1 1o_2 3o_1 6^2 o_1 0cs^2 -$
$12o_1 1o_2 3o_1 6^2 o_7^2 + 36o_1 1o_2 3o_1 6^2 o_7^2 cs^2 + 12o_1 9o_1 1o_2 3o_1 6^2 o_1 0v_2^2 - 9o_1 9o_1 1o_2 3o_1 6o_7^2 o_1 0cs^2 - 12o_1 9o_1 1o_1 6^2 o_7 o_1 0v_2^2$

$C_{20} = 12o_1 1o_2 3o_1 6o_7^2 - 5o_1 9o_1 1o_2 3o_1 6o_7^3 cs^2 - 6o_1 9o_1 1o_1 6o_7^3 o_1 0 - 36o_1 1o_2 3o_1 6o_7^2 v_2^2 - 12o_1 9o_1 1o_2 3o_1 6o_1 0cs^2 + 5o_1 9o_1 1o_2 3o_1 6o_7^3 +$
$18o_1 9o_1 1o_1 6o_7^3 o_1 0v_2^2 - 12o_1 1o_2 3o_1 6o_7^3 - 15o_1 9o_1 1o_2 3o_1 6o_7^3 v_2^2 + 18o_1 9o_1 1o_2 3o_7^2 o_1 0 - 12o_1 9o_1 1o_7^2 o_1 0 + 6o_1 9o_1 1o_1 6o_7^3 o_1 0cs^2 +$
$18o_1 9o_1 1o_2 3o_1 6o_7^2 o_1 0 - 12o_1 1o_1 6o_7^3 o_1 0 - 12o_1 1o_2 3o_1 6o_7^2 o_1 0v_2^2 - 18o_1 9o_1 1o_2 3o_1 6o_7^2 v_2^2 + 36o_1 1o_2 3o_1 6o_7^3 o_1 0v_2^2 - o_1 9o_1 1o_2 3o_1 6o_7^3 o_1 0cs^2 +$
$12o_1 9o_1 1o_2 3o_1 6o_7 + 6o_1 9o_1 6o_7^3 o_1 0 + 12o_1 9o_1 1o_7^2 o_1 0cs^2 + 18o_1 9o_1 1o_2 3o_1 6o_7^2 cs^2 - 6o_1 9o_1 1o_2 3o_1 6o_7^3 + 12o_1 9o_1 1o_1 6o_7^2 o_1 0 +$
$54o_1 9o_1 1o_2 3o_7^2 o_1 0v_2^2 - 12o_1 1o_1 6o_7^3 o_1 0cs^2 - 12o_1 1o_1 6o_7^2 o_1 0 + 36o_1 9o_1 1o_7^2 o_1 0v_2^2 + 12o_1 1o_2 3o_1 6o_7^3 cs^2 + 6o_1 9o_1 1o_7^3 o_1 0 +$
$o_1 9o_1 1o_2 3o_1 6o_7^2 o_1 0 - 18o_1 9o_1 1o_2 3o_7^2 o_1 0cs^2 - 36o_1 1o_1 6o_7^3 o_1 0v_2^2 - 6o_1 9o_1 1o_2 3o_7^3 o_1 0 + 54o_1 9o_1 1o_2 3o_1 6o_7^2 v_2^2 - 12o_1 9o_1 1o_1 6o_7^2 o_1 0cs^2 +$
$12o_1 6o_7^3 o_1 0cs^2 + 6o_1 9o_2 3o_1 6o_7^3 cs^2 + 36o_1 9o_1 1o_2 3o_7 o_1 0v_2^2 - 36o_2 3o_1 6o_7^3 v_2^2 - 36o_1 9o_1 1o_2 3o_1 6o_7 v_2^2 - 18o_1 9o_1 6o_7^3 o_1 0v_2^2 + 18o_1 9o_2 3o_1 6o_7^3 v_2^2 -$
$36o_1 9o_1 1o_1 6o_7^2 o_1 0v_2^2 + 36o_1 6o_7^3 o_1 0v_2^2 - 6o_1 9o_1 6o_7^3 o_1 0cs^2 - 12o_1 9o_1 1o_2 3o_1 6o_7 cs^2 + 12o_1 9o_1 1o_2 3o_7 o_1 0cs^2 - 12o_2 3o_1 6o_7^3 cs^2 +$
$36o_1 1o_1 6o_7^2 o_1 0v_2^2 + 6o_1 9o_1 1o_2 3o_7 o_1 0cs^2 - 12o_1 9o_1 1o_2 3o_7 o_1 0 + 12o_2 3o_1 6o_7^3 - 12o_1 6o_7^3 o_1 0 - 18o_1 9o_1 1o_7^3 o_1 0v_2^2 - 3o_1 9o_1 1o_2 3o_1 6o_7^2 o_1 0v_2^2 +$
$12o_1 1o_1 6o_7^3 o_1 0cs^2 + 18o_1 9o_1 1o_2 3o_7^3 o_1 0v_2^2 - 6o_1 9o_1 1o_7^3 o_1 0cs^2 - 5o_1 9o_1 1o_2 3o_1 6o_7^2 o_1 0cs^2$

$$
\begin{aligned}
C_{21} = {}& -6o_{11}^2v_3^2o_{18}^2o_6^2o_{13} + 12o_{11}^3o_{18}o_6^2o_{13} - 12o_{11}^3o_{22}v_3^2o_{18}^2o_6o_{13} - 6o_{11}^2o_{22}o_{18}^2cs^2o_6^2o_{13} + 6o_{11}^3o_{18}^2o_6^2 + 2o_{11}^2o_{22}o_{18}^2o_6^2o_{13} - \\
& 12o_{11}^3v_3^2o_{18}o_6^2o_{13} + 6o_{11}^3o_{22}o_{18}o_6^2o_{13} - 36o_{11}^3o_{18}cs^2o_6^2o_{13} - 18o_{11}^3o_{22}o_{18}cs^2o_6^2o_{13} + 12o_{11}^2o_{22}o_6^2o_{13} - \\
& 6o_{11}^3o_{22}v_3^2o_{18}o_6^2o_{13} + 12o_{11}^3o_{18}^2o_6o_{13} + 12o_{11}^3o_{22}o_{18}^2o_6o_{13} - 12o_{11}^2o_{22}v_3^2o_{18}^2o_6 - 12o_{11}o_{22}v_3^2o_{18}^2o_6^2o_{13} + 36o_{11}^3o_{22}o_{18}^2cs^2o_{13} + \\
& 12o_{11}o_{22}o_{18}^2o_6^2o_{13} - 12o_{11}^3v_3^2o_{18}^2o_6o_{13} + 6o_{11}^2o_{22}v_3^2o_{18}^2o_6^2 - 36o_{11}^2o_{22}cs^2o_6^2o_{13} - 12o_{11}^3o_{22}o_6^2o_{13} - 12o_{11}^2o_{22}v_3^2o_{18}^2o_{13} - \\
& 2o_{11}^2o_{22}v_3^2o_{18}^2o_6^2o_{13} - 18o_{11}^2o_{18}^2cs^2o_6^2o_{13} + 36o_{11}^3o_{18}^2cs^2o_6 + 12o_{11}^3o_{22}v_3^2o_6^2o_{13} - 40o_{11}^3o_{22}o_{18}^2cs^2o_6o_{13} - 36o_{11}^3o_{18}^2cs^2o_6o_{13} - \\
& 36o_{11}o_{22}o_{18}^2cs^2o_6^2o_{13} - 12o_{11}^2o_{18}o_6^2o_{13} + 12o_{11}^3o_{22}o_{18}o_{13} - 12o_{11}^3o_{22}v_3^2o_{18}o_{13} - 36o_{11}^3o_{22}cs^2o_6o_{13} - 12o_{11}^3o_{18}^2o_6 + \\
& 12o_{22}v_3^2o_{18}^2o_6^2o_{13} + 18o_{11}^3o_{18}^2cs^2o_6^2o_{13} - 6o_{11}^3v_3^2o_{18}^2o_6^2 - 12o_{11}^2o_{22}v_3^2o_6^2o_{13} - 12o_{11}^3o_{22}o_{18}^2o_{13} + 12o_{11}^3o_{22}v_3^2o_{18}^2o_{13} + \\
& 54o_{11}^2o_{22}o_{18}cs^2o_6^2o_{13} + 36o_{11}^3o_{22}cs^2o_6^2o_{13} + 18o_{11}^2o_{22}v_3^2o_{18}o_6^2o_{13} + 12o_{11}^2o_{22}o_{18}^2o_6 - 36o_{11}^2o_{22}o_{18}^2cs^2o_6 + 12o_{11}^3o_{22}o_6o_{13} + \\
& 6o_{11}^2o_{18}^2o_6^2o_{13} + 18o_{11}^2o_{22}v_3^2o_{18}^2o_6o_{13} - 12o_{11}^3o_{22}v_3^2o_6o_{13} + 5o_{11}^3o_{22}o_{18}^2cs^2o_6^2o_{13} + 36o_{11}^2o_{18}cs^2o_6^2o_{13} - 18o_{11}^2o_{22}o_{18}o_6^2o_{13} + \\
& 54o_{11}^3o_{18}^2cs^2o_6o_{13} - 6o_{11}^3o_{18}^2o_6^2o_{13} + 18o_{11}^3o_{22}v_3^2o_{18}o_6o_{13} + 12o_{11}^2v_3^2o_{18}o_6^2o_{13} + 6o_{11}^3v_3^2o_{18}^2o_6o_{13} + \\
& 36o_{22}o_{18}^2cs^2o_6^2o_{13} + o_{11}^3o_{22}v_3^2o_{18}^2o_6^2o_{13} - 12o_{11}^3o_{18}o_6o_{13} - 36o_{11}^2o_{22}o_{18}^2cs^2o_{13} + 12o_{11}^2o_{22}o_{18}^2o_{13} - 12o_{22}o_{18}^2o_6^2o_{13} + \\
& 54o_{11}^2o_{22}o_{18}^2cs^2o_6o_{13} - 18o_{11}^2o_{22}o_{18}^2o_6o_{13} - 6o_{11}^2o_{22}o_{18}^2o_6^2 + 18o_{11}^2o_{22}o_{18}^2cs^2o_6^2 - 36o_{11}o_{22}o_{18}cs^2o_6^2o_{13} - 36o_{11}^3o_{22}o_{18}cs^2o_{13} + \\
& 12o_{11}^3v_3^2o_{18}o_6o_{13} + 12o_{11}o_{22}o_{18}o_6^2o_{13} + 12o_{11}^3v_3^2o_{18}^2o_6 - 18o_{11}^3o_{22}o_{18}o_6o_{13} + 36o_{11}^3o_{18}cs^2o_6o_{13} - 12o_{11}o_{22}v_3^2o_{18}o_6^2o_{13}
\end{aligned}
$$

$$
\begin{aligned}
C_{22} = {}& 36o_{11}^2v_3^2o_{18}o_6^2 - 12o_{11}o_{22}o_{18}cs^2o_6^2 + 12o_{11}o_{22}o_{18}o_6o_{13} - 12o_{11}o_{22}o_{18}cs^2o_6o_{13} + 18o_{22}v_3^2o_{18}o_6^3o_{13} + 12o_{11}^2o_{22}cs^2o_6^3o_{13} - \\
& 36o_{11}o_{22}v_3^2o_{18}o_6o_{13} + 6o_{22}o_{18}cs^2o_6^3o_{13} - 18o_{11}^2v_3^2o_{18}o_6^3 + 12o_{11}^2o_6^3o_{13} - 12o_{11}^2o_{22}o_{18}cs^2o_{13} + 24o_{11}^2o_{22}o_6o_{13} + 12o_{22}o_{18}o_6^3o_{13} - \\
& 12o_{11}o_{22}cs^2o_6^3o_{13} + 12o_{11}cs^2o_6^3o_{13} + 36o_{11}^2v_3^2o_6^3o_{13} - 6o_{11}^2o_{18}o_6^3o_{13} + 6o_{11}o_{22}o_{18}cs^2o_6^3 - 24o_{11}^2o_{22}cs^2o_6^3o_{13} - 12o_{22}o_{18}cs^2o_6^3o_{13} - \\
& 36o_{22}v_3^2o_{18}o_6^3o_{13} - 12o_{11}^2o_{18}o_6^3 + 36o_{11}^2o_{22}o_6^3o_{13} + 12o_{11}^2o_{18}o_6^3o_{13} - 6o_{22}o_{18}o_6^3o_{13} - 12o_{11}^2o_{22}o_6^3o_{13} + 12o_{11}o_{22}cs^2o_6^3o_{13} + \\
& 6o_{11}^2o_{18}o_6^3 + 18o_{11}^2o_{22}o_{18}cs^2o_6o_{13} - 36o_{11}^2v_3^2o_6^3o_{13} - 12o_{11}^2o_6^3o_{13} - 72o_{11}^2o_{22}v_3^2o_6^2o_{13} + 12o_{11}^2o_{18}cs^2o_6^2 + 12o_{11}o_{22}o_{18}o_6^2 - \\
& 4o_{11}^2o_{22}o_{18}cs^2o_6^2o_{13} + 18o_{11}^2v_3^2o_{18}o_6^3o_{13} - 36o_{11}o_{22}v_3^2o_{18}o_6^2 + 6o_{11}^2o_{18}cs^2o_6^3o_{13} - 6o_{11}^2o_{18}cs^2o_6^3 + 12o_{11}^2o_{22}cs^2o_6o_{13} - \\
& 18o_{11}o_{22}v_3^2o_{18}o_6^3o_{13} - 18o_{11}v_3^2o_{18}o_6^3o_{13} + 6o_{11}o_{22}o_{18}o_6^3o_{13} - 6o_{11}o_{18}cs^2o_6^3o_{13} + 6o_{11}o_{18}o_6^3o_{13} - 6o_{11}o_{22}o_{18}cs^2o_6^3o_{13} - \\
& 12o_{11}^2cs^2o_6^3o_{13} - 12o_{11}o_{22}o_2o_6^3o_{13} + 36o_{11}o_{22}v_3^2o_6^3o_{13} + 18o_{11}o_2v_3^2o_{18}o_6^3 - 6o_{11}o_{22}o_{18}o_6^3 - 12o_{11}^2o_{18}cs^2o_6^2o_{13} - 12o_{11}^2o_{22}o_6o_{13} - \\
& 36o_{11}^2v_3^2o_{18}o_6^2o_{13} - o_{11}^2o_{22}o_{18}cs^2o_6^3o_{13} + 36o_{11}^2o_{22}v_3^2o_6^3o_{13} + 12o_{11}o_{22}o_6^3o_{13} - 12o_{11}o_6^3o_{13} + 12o_{11}^2cs^2o_6^3o_{13} - 36o_{11}o_{22}v_3^2o_6^3o_{13} + \\
& 36o_{11}v_3^2o_6^3o_{13} + 24o_{11}o_{22}o_{18}cs^2o_6^2o_{13} - 24o_{11}o_{22}o_{18}o_6^2o_{13} + 72o_{11}o_{22}v_3^2o_{18}o_6^2o_{13}
\end{aligned}
$$

$$
\begin{aligned}
C_{23} = {}& -12o_{11}^3o_{23}o_{16}o_7v_3^2 - 12o_{19}^2o_{11}o_{23}o_{16}o_7^2v_3^2 - 6o_{19}^2o_{11}^2o_{23}o_{16}o_7^2cs^2 - 12o_{19}^2o_{11}^3o_{23}o_{16}o_7v_3^2 + 12o_{19}^2o_{11}o_{23}o_{16}o_7^2 + \\
& 36o_{19}^2o_{11}^3o_7cs^2 - 36o_{19}^2o_{11}^2o_{23}o_{16}cs^2 - 36o_{11}^2o_{23}o_{16}o_7^2cs^2 - 12o_{19}^2o_{11}^3o_7 - 12o_{19}^2o_{11}^3o_{23}o_{16} - 12o_{19}o_{11}^3o_{16}o_7 - \\
& 36o_{11}^3o_{23}o_{16}o_7cs^2 - 36o_{19}^2o_{11}o_{23}o_{16}o_7^2cs^2 - 2o_{19}^2o_{11}^2o_{23}o_{16}o_7^2v_3^2 - 40o_{19}^2o_{11}^3o_{23}o_{16}o_7cs^2 - 12o_{19}^2o_{11}^2o_{23}o_{16}v_3^2 + 12o_{19}o_{11}o_{23}o_{16}o_7^2 - \\
& 12o_{11}^2o_{23}o_{16}o_7^2v_3^2 + 12o_{19}^2o_{11}^3o_7v_3^2 + 12o_{19}o_{11}^3o_{16}o_7v_3^2 - 36o_{19}^2o_{11}^3o_{16}o_7cs^2 - 36o_{19}o_{11}^3o_{23}o_{16}cs^2 - 36o_{19}o_{11}o_{23}o_{16}o_7^2cs^2 + \\
& 18o_{19}o_{11}^2o_{23}o_{16}o_7^2v_3^2 + 12o_{19}^2o_{11}^3o_{23}o_{16}v_3^2 - 36o_{19}^2o_{11}^2o_{23}o_7cs^2 + 12o_{19}o_{11}^3o_{16}o_7^2 + 54o_{19}o_{11}^3o_{23}o_{16}o_7cs^2 - 12o_{19}o_{11}o_{23}o_{16}o_7^2v_3^2 - \\
& 12o_{19}o_{11}^3o_{23}o_{16}v_3^2 + 6o_{19}^2o_{11}^3o_7^2 + 36o_{19}^2o_{11}^3o_{23}o_{16}cs^2 + 54o_{19}o_{11}^2o_{23}o_{16}o_7^2cs^2 - 12o_{19}^2o_{11}^2o_{23}o_7v_3^2 + 18o_{19}o_{11}^3o_{23}o_{16}o_7v_3^2 + \\
& 6o_{19}^2o_{11}^2o_{16}o_7^2 + 36o_{19}o_{11}^3o_{16}o_7cs^2 - 12o_{19}^2o_{11}^3o_{16}o_7v_3^2 - 6o_{19}o_{11}^3o_{23}o_{16}o_7^2v_3^2 + 12o_{19}^2o_{11}^3o_{23}o_{16}o_7 + 6o_{19}^2o_{11}^2o_{23}o_7^2v_3^2 + \\
& 12o_{11}^3o_{23}o_{16}o_7 + 12o_{11}^2o_{23}o_{16}o_7^2 + 2o_{19}^2o_{11}^2o_{23}o_{16}o_7^2 - 36o_{19}o_{11}^3o_{16}o_7^2cs^2 - \\
& 18o_{19}o_{11}^2o_{23}o_{16}o_7^2 + 18o_{19}^2o_{11}^3o_{16}o_7^2cs^2 - 12o_{19}o_{11}^3o_{16}o_7v_3^2 + 12o_{19}^2o_{11}^3o_{16}o_7 - 18o_{19}o_{11}^3o_{23}o_{16}o_7^2cs^2 - 18o_{19}o_{11}^3o_{23}o_{16}o_7 + \\
& 12o_{19}^2o_{11}^2o_{23}o_7 + 12o_{19}o_{11}^3o_{23}o_{16} + 18o_{19}^2o_{11}^2o_{23}o_7^2cs^2 - 6o_{19}^2o_{11}^3o_{16}o_7 - 18o_{19}^2o_{11}^2o_{16}o_7^2cs^2 + 12o_{19}o_{11}^2o_{16}o_7^2v_3^2 - \\
& 6o_{19}^2o_{11}^2o_{23}o_7^2 + 6o_{19}o_{11}^3o_{23}o_{16}o_7 + 12o_{19}^2o_{23}o_{16}o_7^2v_3^2 + 18o_{19}^2o_{11}^2o_{23}o_{16}o_7v_3^2 + 36o_{11}^3o_{23}o_{16}o_7^2cs^2 - 6o_{19}^2o_{11}^3o_7^2v_3^2 + \\
& 5o_{19}^2o_{11}^3o_{23}o_{16}o_7^2cs^2 + 36o_{19}^2o_{23}o_{16}o_7^2cs^2 + 54o_{19}^2o_{11}^2o_{23}o_{16}o_7cs^2 + 12o_{11}^3o_{23}o_{16}o_7^2v_3^2 - 18o_{19}^2o_{11}^2o_{23}o_{16}o_7 - 12o_{19}^2o_{23}o_{16}o_7^2 - \\
& 18o_{19}^2o_{11}^3o_7^2cs^2 + o_{19}^2o_{11}^3o_{23}o_{16}o_7^2v_3^2 - 12o_{19}o_{11}^2o_{16}o_7^2 - 6o_{19}^2o_{11}^2o_{16}o_7^2v_3^2 + 36o_{19}o_{11}^2o_{16}o_7^2cs^2 - o_{19}^2o_{11}^3o_{23}o_{16}o_7^2 - 12o_{11}^3o_{23}o_{16}o_7
\end{aligned}
$$

$$
\begin{aligned}
C_{24} = {}& 12o_{11}o_{16}o_7^3cs^2 - 18o_{19}o_{11}o_{16}o_7^3v_3^2 - 12o_{11}o_{23}o_{16}o_7^2 - 6o_{19}o_{11}o_{23}o_{16}o_7^2cs^2 + 6o_{19}o_{11}o_{16}o_7^3 + 36o_{11}o_{23}o_{16}o_7^2v_3^2 - \\
& 24o_{11}^2o_{23}o_{16}o_7^2cs^2 + 6o_{19}o_{11}o_{23}o_{16}o_7^3 - 12o_{19}o_{11}o_{23}o_2o_7^2cs^2 - 36o_{19}o_{11}o_{23}o_2o_7^2v_3^2 + 12o_{11}o_{23}o_{16}o_7^3 + 36o_{11}o_{16}o_7^3v_3^2 - 6o_{19}o_{11}o_{16}o_7^3cs^2 - \\
& o_{19}o_{11}^2o_{23}o_{16}o_7^3cs^2 - 18o_{19}o_{11}o_{23}o_{16}o_7^3v_3^2 + 12o_{11}o_{23}o_{16}o_7^2cs^2 - 12o_{19}o_{11}^2o_{23}o_{16}cs^2 - 24o_{19}o_{11}o_{23}o_{16}o_7^2 - 72o_{11}^2o_{23}o_{16}o_7^2v_3^2 + \\
& 12o_{19}o_{11}o_{23}o_{16}o_7 + 6o_{19}o_{11}o_{23}o_3^3cs^2 + 24o_{19}o_{11}o_{23}o_{16}o_7^2cs^2 - 6o_{19}o_2o_3o_{16}o_7^3 + 12o_{11}^2o_{23}o_{16}o_7^2cs^2 - 36o_{11}o_{23}o_{16}o_7^3v_3^2 + 12o_{11}^2o_{16}o_7^3 + \\
& 72o_{19}o_{11}o_{23}o_{16}o_7^2v_3^2 - 4o_{19}o_{11}^2o_{23}o_{16}o_7^2cs^2 + 36o_{11}^2o_{23}o_{16}o_7^2v_3^2 - 12o_{11}o_{23}o_{16}o_7^2cs^2 - 12o_{11}^2o_{16}o_7^2 + 18o_{19}o_{11}o_{23}o_3^3v_3^2 + \\
& 12o_{19}o_{23}o_{16}o_7^2 + 18o_{19}o_{11}^2o_{23}o_{16}o_7cs^2 - 36o_{19}o_{11}o_{23}o_{16}o_7v_3^2 + 6o_{19}o_{23}o_{16}o_7^3cs^2 + 24o_{11}^2o_{23}o_{16}o_7^2 - 12o_{11}o_{16}o_7^3 - 12o_{11}^2o_{16}o_7^3cs^2 - \\
& 6o_{19}o_{11}^2o_7^3cs^2 + 12o_{19}o_{11}o_{23}o_3o_7 + 18o_{19}o_{11}^2o_{16}o_7^3v_3^2 - 36o_{11}^2o_{16}o_7^3v_3^2 + 6o_{19}o_{11}^2o_{16}o_7^3cs^2 - 18o_{19}o_{11}^2o_7^3v_3^2 - 6o_{19}o_{11}o_{23}o_3^3 - \\
& 12o_{19}o_{11}o_{23}o_{16}o_7cs^2 + 18o_{19}o_{23}o_{16}o_7^2v_3^2 - 12o_{11}^2o_{23}o_{16}o_7 - 6o_{19}o_{11}^2o_{16}o_7 + 12o_{11}^2o_{16}o_7^2cs^2 - 36o_{19}o_{11}^2o_{16}o_7^2v_3^2 + 12o_{19}o_{11}^2o_7^2cs^2 - \\
& 12o_{19}o_{23}o_{16}o_7^2cs^2 + 36o_{11}^2o_{23}o_{16}o_7v_3^2 + 6o_{19}o_{11}^2o_7^2 - 12o_{11}^2o_{23}o_{16}o_7 - 36o_{19}o_{23}o_{16}o_7^2v_3^2 + 12o_{11}^2o_{23}o_{16}o_7cs^2 + 12o_{19}o_{11}^2o_{16}o_7 + \\
& 36o_{11}^2o_{16}o_7^3v_3^2 - 12o_{19}o_{11}^2o_7 + 36o_{19}o_{11}^2o_7^3v_3^2 - 12o_{19}o_{11}^2o_{16}o_7^2cs^2
\end{aligned}
$$

$$
\begin{aligned}
C_{25} = {}& 198o_{11}^2v_3^2o_{18}cs^2o_6^3 - 6o_{11}^2o_{18}cs^4o_6^3 - 39o_{11}^3v_3^4o_{18}o_6^3 + 12o_{11}^3v_3^2o_{18}^2cs^2o_6^3 - 90o_{11}v_3^4o_{18}^2o_6^3 - 12o_{18}^2cs^2o_6^3 - 72o_{11}^2v_3^2o_{18}o_6^3 + \\
& 252v_3^2o_{18}^2cs^2o_6^3 + 36o_{11}^3v_3^4o_{18}o_6^3 - 5o_{11}^3o_{18}^2cs^2o_6^3 + 12o_{11}^3o_{18}o_6cs^4 + 12o_{11}^2o_{18}cs^4o_6^3 + 36o_{11}^2v_3^2o_{18}cs^2o_6^2 - 108o_{11}v_3^2o_{18}cs^2o_6^3 + \\
& 12o_{11}^3o_{18}cs^4o_6 - 3o_{11}^3v_3^2o_{18}^2cs^2o_6^2 - 6o_{11}^2o_{18}cs^2o_6^3 - 18o_{11}^3o_{18}cs^4o_6^3 - 18o_{11}^3v_3^2o_{18}^2cs^2o_6 + 36o_{11}^3v_3^2o_6^3 + 39o_{11}^3v_3^2o_{18}o_6^3 - \\
& 12o_{11}o_{18}cs^4o_6^3 + 6o_{11}^3o_{18}^2cs^2o_6 + 90o_{11}v_3^2o_{18}o_6^3 - 36o_{11}^3v_3^2o_{18}o_6^3 - 36o_{11}^3v_3^2o_6^3 + 72o_{11}^2v_3^4o_{18}o_6^3 - o_{11}^2o_{18}cs^2o_6^3 + 6o_{11}^3o_{18}cs^4o_6^3 - \\
& 36o_{11}^2v_3^4o_6^3 - 12o_{11}o_{18}^2cs^4o_6^3 + 19o_{11}^2v_3^4o_{18}^2o_6^3 + 36o_{11}^3v_3^4o_{18}cs^2o_6 + 6o_{11}^3v_3^2o_{18}^2o_6^2 - 12o_{11}^2o_{18}cs^4o_6 + 13o_{11}^3o_{18}^2cs^4o_6^3 + \\
& 108o_{11}^3v_3^2cs^2o_6^3 - 12o_{11}^3o_{18}cs^2o_6 - 108o_{11}^3v_3^2cs^2o_6^3 + 6o_{11}^3o_{18}cs^2o_6^3 - o_{11}^3o_{18}^2cs^4o_6^3 - 4o_{11}^3v_3^2o_{18}^2o_6^3 - 72o_{11}^2v_3^2o_{18}o_6^3 + 36o_{11}v_3^2o_{18}o_6^3 + \\
& 12o_{18}^2cs^4o_6^3 - 6o_{11}^3v_3^4o_{18}^2o_6^2 - 19o_{11}^2v_3^2o_{18}^2o_6^3 + 36o_{11}^3v_3^4o_6^3 - 6o_{11}^3o_{18}cs^2o_6^2 + o_{11}^2o_{18}^2cs^4o_6^3 + 60o_{11}^2v_3^2o_{18}^2cs^2o_6^3 - 36o_{11}v_3^2o_{18}^2cs^2o_6^2 + \\
& 36o_{11}^2v_3^2o_6^3 - 99o_{11}^3v_3^2o_{18}cs^2o_6^3 + 12o_{11}o_{18}^2cs^2o_6^2 + 18o_{11}^2v_3^2o_{18}^2cs^2o_6^2 - 108o_{11}^2v_3^2cs^2o_6^3 + 18o_{11}^3o_{18}cs^2o_6^2 + 6o_{11}^2o_{18}^2cs^4o_6^2 - \\
& 36o_{11}^3v_3^4o_6^3 + 4o_{11}^3v_3^4o_{18}^2o_6^3 + 12o_{11}o_{18}^2cs^2o_6^3 + 72v_3^4o_{18}^2o_6^3 + 54o_{11}^3v_3^2o_{18}cs^2o_6^2 - 24o_{11}^3o_{18}^2cs^4o_6 - 306o_{11}v_3^2o_{18}^2cs^2o_6^3 - 36o_{11}v_3^4o_{18}o_6^3
\end{aligned}
$$

$$
\begin{aligned}
C_{26} = {}& -o_{19}^2o_{11}^2o_7^3cs^2 - 6o_{19}^2o_{11}^3o_7^3v_3^4 - 36o_{11}^3o_7^3v_3^4 + 6o_{19}^2o_{11}^3o_7cs^2 + 12o_{19}o_{11}^2o_7^2cs^4 - 12o_{19}^2o_{11}o_7^3cs^4 - 99o_{19}o_{11}^3o_7^3v_3^2cs^2 + \\
& 39o_{19}o_{11}^3o_7^3v_3^2 + 12o_{19}^2o_{11}^3o_7^3v_3^2cs^2 + 12o_{19}^2o_{11}^3cs^4 - 90o_{19}^2o_{11}o_7^3v_3^4 - 6o_{19}o_{11}^3o_7^3cs^2 + 108o_{11}^3o_7^3v_3^2cs^2 - 19o_{19}^2o_{11}^2o_7^3v_3^2 + 36o_{11}^2o_7^3v_3^2 + \\
& 252o_{19}^2o_7^3v_3^2cs^2 + 13o_{19}^2o_{11}^3o_7^2cs^4 - 36o_{19}o_{11}^3o_7^3v_3^2 - 108o_{11}^2o_7^3v_3^2cs^2 - 12o_{19}^2o_{11}o_7cs^4 + 60o_{19}^2o_{11}^2o_7^3v_3^2cs^2 + 12o_{19}o_{11}^3o_7cs^4 - \\
& 6o_{19}o_{11}^2o_7^3cs^4 + 36o_{11}^3o_7^3v_3^4 - 18o_{19}^2o_{11}^3o_7v_3^2cs^2 + 4o_{19}^2o_{11}^3o_7^3v_3^4 + 72o_{19}^2o_7^3v_3^4 - 6o_{19}^2o_{11}^2o_7^2cs^2 + 36o_{19}o_{11}^3o_7v_3^2cs^2 + 36o_{19}o_{11}o_7^3v_3^2 -
\end{aligned}
$$

$o_1 9^2 o_1 1^3 o_7^3 cs^4 - 36 o_1 9^2 o_1 1 o_7^2 v_3^2 cs^2 + 12 o_1 9^2 o_7^3 cs^4 + 18 o_1 9 o_1 1^3 o_7^2 cs^2 + 198 o_1 9 o_1 1^2 o_7^3 v_3^2 cs^2 + 72 o_1 9 o_1 1^2 o_7^3 v_3^4 - 36 o_1 1^3 o_7^3 v_3^2 - 4 o_1 9^2 o_1 1^3 o_7^3 v_3^2 - 72 o_1 9^2 o_7^3 v_3^2 + 6 o_1 9^2 o_1 1^2 o_7^2 cs^4 + 36 o_1 9 o_1 1^3 o_7^2 v_3^4 + 12 o_1 9^2 o_1 1 o_7^2 cs^2 - 12 o_1 9 o_1 1^3 o_7 cs^2 - 108 o_1 1^3 o_7^2 v_3^2 cs^2 + 6 o_1 9 o_1 1^2 o_7^3 cs^2 - 3 o_1 9^2 o_1 1^3 o_7^2 v_3^2 cs^2 - 18 o_1 9 o_1 1^3 o_7^2 cs^4 + 54 o_1 9 o_1 1^3 o_7^2 v_3^2 cs^2 - 72 o_1 9 o_1 1^2 o_7^3 v_3^2 - 36 o_1 9 o_1 1 o_7^3 v_3^4 - 12 o_1 9^2 o_7^3 cs^2 + 36 o_1 9 o_1 1^2 o_7^2 v_3^2 cs^2 - 12 o_1 9 o_1 1^2 o_7^2 cs^2 + 12 o_1 9^2 o_1 1 o_7^3 cs^2 - 39 o_1 9 o_1 1^3 o_7^3 v_3^4 + o_1 9^2 o_1 1^2 o_7^3 cs^4 + 6 o_1 9^2 o_1 1^3 o_7^2 v_3^2 + 36 o_1 1^3 o_7^2 v_3^2 - 306 o_1 9^2 o_1 1 o_7^3 v_3^2 cs^2 - 24 o_1 9^2 o_1 1^3 o_7 cs^4 + 19 o_1 9^2 o_1 1^2 o_7^3 v_3 - 36 o_1 1^2 o_7^3 v_3^4 - 5 o_1 9^2 o_1 1^3 o_7^2 cs^2 - 108 o_1 9 o_1 1 o_7^3 v_3^2 cs^2 + 18 o_1 9^2 o_1 1^2 o_7^2 v_3^2 cs^2 + 90 o_1 9^2 o_1 1 o_7^3 v_3^2 + 6 o_1 9 o_1 1^3 o_7^3 cs^4$

$C_{27} = 12 + 404 o_1 1^2 v_3^2 cs^2 - 98 o_1 1^2 v_3^2 - 216 o_1 1 cs^4 - 78 o_1 1^2 cs^2 - 216 o_1 1 v_3^4 - 18 o_1 1 + 672 v_3^2 cs^2 - o_1 1^3 + 10 o_1 1^3 v_3^2 - 132 cs^2 - 156 v_3^2 + 8 o_1 1^2 + 6 o_1 1^3 cs^2 + 144 cs^4 - 9 o_1 1^3 v_3^4 - 5 o_1 1^3 cs^4 + 144 v_3^4 - 34 o_1 1^3 v_3^2 cs^2 + 90 o_1 1^2 v_3^4 + 198 o_1 1 cs^2 - 1008 o_1 1 v_3^2 cs^2 + 82 o_1 1^2 cs^4 + 234 o_1 1 v_3^2$

$C_{28} = 12 + 252 o_1 1^2 v_3^2 cs^2 - 154 o_1 1^2 v_3^2 - 36 o_1 1 cs^4 - 22 o_1 1^2 cs^2 - 756 o_1 1 v_3^4 - 18 o_1 1 + 432 v_3^2 cs^2 - o_1 1^3 + 14 o_1 1^3 v_3^2 - 36 cs^2 - 252 v_3^2 + 8 o_1 1^2 + 2 o_1 1^3 cs^2 + 24 cs^4 - 29 o_1 1^3 v_3^4 - o_1 1^3 cs^4 + 504 v_3^4 - 18 o_1 1^3 v_3^2 cs^2 + 310 o_1 1^2 v_3^4 + 54 o_1 1 cs^2 - 648 o_1 1 v_3^2 cs^2 + 14 o_1 1^2 cs^4 + 378 o_1 1 v_3^2$

2.6 CuLBM1

2.6.1 Definitions

Based on [2], collision operator $\boldsymbol{C}$:

$$\boldsymbol{C}\left(\boldsymbol{f}\right) = \mathbf{M}^{-1}\boldsymbol{G}^{-1}\left(\mathbf{S}\left(\boldsymbol{\gamma}^{(eq)} - \boldsymbol{G}\left(\mathbf{M}\boldsymbol{f}\right)\right)\right),$$

where

$$\mathbf{S} = \mathrm{diag}(0,0,0,0,\omega_1,\omega_2,\omega_3,\omega_4,\omega_5,\omega_6,\omega_7,\omega_8,\omega_9,\omega_{10},\omega_{11},\omega_{12},\omega_{13},\omega_{14},\omega_{15},\omega_{16},\omega_{17},\omega_{18},\omega_{19},\omega_{20},\omega_{21},\omega_{22},\omega_{23}),$$

$\omega_1,\omega_2,\cdots,\omega_{10} \in (0,2)$.

The nonlinear operator $\boldsymbol{G}$ (with its inverse $\boldsymbol{G}^{-1}$) transforms the raw moment vector $\boldsymbol{\mu}$ defined by matrix $\mathbf{M}$ to the cumulant vector

$$\boldsymbol{\gamma} = \boldsymbol{G}(\boldsymbol{\mu}) = \left(\gamma_{(0,0,0)},\gamma_{(1,0,0)},\gamma_{(0,1,0)},\cdots,\gamma_{(2,2,2)}\right)^T$$

as:

$\gamma_{(0,0,0)} = m_{(0,0,0)}$

$\gamma_{(1,0,0)} = m_{(1,0,0)} - v_1 m_{(0,0,0)}$

$\gamma_{(0,1,0)} = m_{(0,1,0)} - v_2 m_{(0,0,0)}$

$\gamma_{(0,0,1)} = m_{(0,0,1)} - v_3 m_{(0,0,0)}$

$\gamma_{(1,1,0)} = m_{(1,1,0)} - v_1 m_{(0,1,0)} - v_2 m_{(1,0,0)} - v_1 v_2 m_{(0,0,0)}$

$\gamma_{(1,0,1)} = m_{(1,0,1)} - v_1 m_{(0,0,1)} - v_3 m_{(1,0,0)} - v_1 v_3 m_{(0,0,0)}$

$\gamma_{(0,1,1)} = m_{(0,1,1)} - v_3 m_{(0,1,0)} - v_2 m_{(0,0,1)} - v_3 v_2 m_{(0,0,0)}$

$\gamma_{(2,0,0)} = m_{(2,0,0)} - 2 v_1 m_{(1,0,0)} + v_1 v_1 m_{(0,0,0)}$

$\gamma_{(0,2,0)} = m_{(0,2,0)} - 2 v_2 m_{(0,1,0)} + v_2 v_2 m_{(0,0,0)}$

$\gamma_{(0,0,2)} = m_{(0,0,2)} - 2 v_3 m_{(0,0,1)} + v_3 v_3 m_{(0,0,0)}$

$\gamma_{(1,2,0)} = m_{(1,2,0)} - 2 v_2 m_{(1,1,0)} + v_2 v_2 m_{(1,0,0)} - v_1 m_{(0,2,0)} + 2 v_1 v_2 m_{(0,1,0)} - v_1 v_2 v_2 m_{(0,0,0)}$

$\gamma_{(1,0,2)} = m_{(1,0,2)} - 2 v_3 m_{(1,0,1)} + v_3 v_3 m_{(1,0,0)} - v_1 m_{(0,0,2)} + 2 v_1 v_3 m_{(0,0,1)} - v_1 v_3 v_3 m_{(0,0,0)}$

$\gamma_{(0,1,2)} = m_{(0,1,2)} - 2 v_3 m_{(0,1,1)} + v_3 v_3 m_{(0,1,0)} - v_2 m_{(0,0,2)} + 2 v_2 v_3 m_{(0,0,1)} - v_2 v_3 v_3 m_{(0,0,0)}$

$$\gamma_{(2,1,0)} = m_{(2,1,0)} - 2v_1 m_{(1,1,0)} + v_1 v_1 m_{(0,1,0)} - v_2 m_{(2,0,0)} + 2v_1 v_2 m_{(1,0,0)} - v_1 v_1 v_2 m_{(0,0,0)}$$

$$\gamma_{(2,0,1)} = m_{(2,0,1)} - 2v_1 m_{(1,0,1)} + v_1 v_1 m_{(0,0,1)} - v_3 m_{(2,0,0)} + 2v_1 v_3 m_{(1,0,0)} - v_1 v_1 v_3 m_{(0,0,0)}$$

$$\gamma_{(0,2,1)} = m_{(0,2,1)} - 2v_2 m_{(0,1,1)} + v_2 v_2 m_{(0,0,1)} - v_3 m_{(0,2,0)} + 2v_2 v_3 m_{(0,1,0)} - v_2 v_2 v_3 m_{(0,0,0)}$$

$$\gamma_{(1,1,1)} = m_{(1,1,1)} - v_3 m_{(1,1,0)} - v_2 m_{(1,0,1)} + v_2 v_3 m_{(1,0,0)} - v_1 m_{(0,1,1)} + v_1 v_3 m_{(0,1,0)} + v_1 v_2 m_{(0,0,1)} - v_1 v_2 v_3 m_{(0,0,0)}$$

$$\gamma_{(2,2,0)} = -2v_2 m_{(2,1,0)} - 2m_{(0,0,0)} v_1^2 v_2^2 - 4m_{(1,0,0)} v_1 v_2^2 - \frac{2m_{(1,0,0)}^2 v_2^2}{m_{(0,0,0)}} - 4m_{(0,1,0)} v_1^2 v_2 + 8m_{(1,1,0)} v_1 v_2 - \frac{8m_{(0,1,0)} m_{(1,0,0)} v_1 v_2}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)} m_{(2,0,0)} v_2}{m_{(0,0,0)}} + \frac{4m_{(1,0,0)} m_{(1,1,0)} v_2}{m_{(0,0,0)}} - \frac{2m_{(0,1,0)}^2 v_1^2}{m_{(0,0,0)}} - 2m_{(1,2,0)} v_1 + \frac{4m_{(0,1,0)} m_{(1,1,0)} v_1}{m_{(0,0,0)}} + \frac{2m_{(0,2,0)} m_{(1,0,0)} v_1}{m_{(0,0,0)}} + m_{(2,2,0)} - \frac{m_{(0,2,0)} m_{(2,0,0)}}{m_{(0,0,0)}} - \frac{2m_{(1,1,0)}^2}{m_{(0,0,0)}}$$

$$\gamma_{(2,0,2)} = -2v_3 m_{(2,0,1)} - 2m_{(0,0,0)} v_1^2 v_3^2 - 4m_{(1,0,0)} v_1 v_3^2 - \frac{2m_{(1,0,0)}^2 v_3^2}{m_{(0,0,0)}} - 4m_{(0,0,1)} v_1^2 v_3 + 8m_{(1,0,1)} v_1 v_3 - \frac{8m_{(0,0,1)} m_{(1,0,0)} v_1 v_3}{m_{(0,0,0)}} + \frac{2m_{(0,0,1)} m_{(2,0,0)} v_3}{m_{(0,0,0)}} + \frac{4m_{(1,0,0)} m_{(1,0,1)} v_3}{m_{(0,0,0)}} - \frac{2m_{(0,0,1)}^2 v_1^2}{m_{(0,0,0)}} - 2m_{(1,0,2)} v_1 + \frac{4m_{(0,0,1)} m_{(1,0,1)} v_1}{m_{(0,0,0)}} + \frac{2m_{(0,0,2)} m_{(1,0,0)} v_1}{m_{(0,0,0)}} + m_{(2,0,2)} - \frac{m_{(0,0,2)} m_{(2,0,0)}}{m_{(0,0,0)}} - \frac{2m_{(1,0,1)}^2}{m_{(0,0,0)}}$$

$$\gamma_{(0,2,2)} = -2v_3 m_{(0,2,1)} - 2m_{(0,0,0)} v_2^2 v_3^2 - 4m_{(0,1,0)} v_2 v_3^2 - \frac{2m_{(0,1,0)}^2 v_3^2}{m_{(0,0,0)}} - 4m_{(0,0,1)} v_2^2 v_3 + 8m_{(0,1,1)} v_2 v_3 - \frac{8m_{(0,0,1)} m_{(0,1,0)} v_2 v_3}{m_{(0,0,0)}} + \frac{2m_{(0,0,1)} m_{(0,2,0)} v_3}{m_{(0,0,0)}} + \frac{4m_{(0,1,0)} m_{(0,1,1)} v_3}{m_{(0,0,0)}} - \frac{2m_{(0,0,1)}^2 v_2^2}{m_{(0,0,0)}} - 2m_{(0,1,2)} v_2 + \frac{4m_{(0,0,1)} m_{(0,1,1)} v_2}{m_{(0,0,0)}} + \frac{2m_{(0,0,2)} m_{(0,1,0)} v_2}{m_{(0,0,0)}} + m_{(0,2,2)} - \frac{m_{(0,0,2)} m_{(0,2,0)}}{m_{(0,0,0)}} - \frac{2m_{(0,1,1)}^2}{m_{(0,0,0)}}$$

$$\gamma_{(2,1,1)} = -8m_{(1,0,0)} v_1 v_2 v_3 + 2m_{(2,0,0)} v_2 v_3 - \frac{2m_{(1,0,0)}^2 v_2 v_3}{m_{(0,0,0)}} - 2m_{(0,1,0)} v_1^2 v_3 + 4m_{(1,1,0)} v_1 v_3 - \frac{4m_{(0,1,0)} m_{(1,0,0)} v_1 v_3}{m_{(0,0,0)}} - m_{(2,1,0)} v_3 + \frac{m_{(0,1,0)} m_{(2,0,0)} v_3}{m_{(0,0,0)}} + \frac{2m_{(1,0,0)} m_{(1,1,0)} v_3}{m_{(0,0,0)}} - 2m_{(0,0,1)} v_1^2 v_2 + 4m_{(1,0,1)} v_1 v_2 - \frac{4m_{(0,0,1)} m_{(1,0,0)} v_1 v_2}{m_{(0,0,0)}} - m_{(2,0,1)} v_2 + \frac{m_{(0,0,1)} m_{(2,0,0)} v_2}{m_{(0,0,0)}} + \frac{2m_{(1,0,0)} m_{(1,0,1)} v_2}{m_{(0,0,0)}} - \frac{2m_{(0,0,1)} m_{(0,1,0)} v_1^2}{m_{(0,0,0)}} - 2m_{(1,1,1)} v_1 + \frac{2m_{(0,0,1)} m_{(1,1,0)} v_1}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)} m_{(1,0,1)} v_1}{m_{(0,0,0)}} + \frac{2m_{(0,1,1)} m_{(1,0,0)} v_1}{m_{(0,0,0)}} + m_{(2,1,1)} - \frac{m_{(1,1,1)} m_{(2,0,0)}}{m_{(0,0,0)}} - \frac{2m_{(1,0,1)} m_{(1,1,0)}}{m_{(0,0,0)}}$$

$$\gamma_{(1,2,1)} = -2m_{(1,0,0)} v_2^2 v_3 - 8m_{(0,1,0)} v_1 v_2 v_3 + 4m_{(1,1,0)} v_2 v_3 - \frac{4m_{(0,1,0)} m_{(1,0,0)} v_2 v_3}{m_{(0,0,0)}} + 2m_{(0,2,0)} v_1 v_3 - \frac{2m_{(0,1,0)}^2 v_1 v_3}{m_{(0,0,0)}} - m_{(1,2,0)} v_3 + \frac{2m_{(0,1,0)} m_{(1,1,0)} v_3}{m_{(0,0,0)}} + \frac{m_{(0,2,0)} m_{(1,0,0)} v_3}{m_{(0,0,0)}} - 2m_{(0,0,1)} v_1 v_2^2 - \frac{2m_{(0,0,1)} m_{(1,0,0)} v_2^2}{m_{(0,0,0)}} + 4m_{(0,1,1)} v_1 v_2 - \frac{4m_{(0,0,1)} m_{(0,1,0)} v_1 v_2}{m_{(0,0,0)}} - 2m_{(1,1,1)} v_2 + \frac{2m_{(0,0,1)} m_{(1,1,0)} v_2}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)} m_{(1,0,1)} v_2}{m_{(0,0,0)}} + \frac{2m_{(0,1,1)} m_{(1,0,0)} v_2}{m_{(0,0,0)}} - m_{(0,2,1)} v_1 + \frac{m_{(0,0,1)} m_{(0,2,0)} v_1}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)} m_{(0,1,1)} v_1}{m_{(0,0,0)}} + m_{(1,2,1)} - \frac{2m_{(0,1,1)} m_{(1,1,0)}}{m_{(0,0,0)}} - \frac{m_{(0,2,0)} m_{(1,0,1)}}{m_{(0,0,0)}}$$

$$\gamma_{(1,1,2)} = -2m_{(1,0,0)} v_2 v_3^2 - 2m_{(0,1,0)} v_1 v_3^2 - \frac{2m_{(0,1,0)} m_{(1,0,0)} v_3^2}{m_{(0,0,0)}} - 8m_{(0,0,1)} v_1 v_2 v_3 + 4m_{(1,0,1)} v_2 v_3 - \frac{4m_{(0,0,1)} m_{(1,0,0)} v_2 v_3}{m_{(0,0,0)}} + 4m_{(0,1,1)} v_1 v_3 - \frac{4m_{(0,0,1)} m_{(0,1,0)} v_1 v_3}{m_{(0,0,0)}} - 2m_{(1,1,1)} v_3 + \frac{2m_{(0,0,1)} m_{(1,1,0)} v_3}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)} m_{(1,0,1)} v_3}{m_{(0,0,0)}} + \frac{2m_{(0,1,1)} m_{(1,0,0)} v_3}{m_{(0,0,0)}} + 2m_{(0,0,2)} v_1 v_2 - \frac{2m_{(0,0,1)}^2 v_1 v_2}{m_{(0,0,0)}}$$
$$- m_{(1,0,2)} v_2 + \frac{2m_{(0,0,1)} m_{(1,0,1)} v_2}{m_{(0,0,0)}} + \frac{m_{(0,0,2)} m_{(1,0,0)} v_2}{m_{(0,0,0)}} - m_{(0,1,2)} v_1 + \frac{2m_{(0,0,1)} m_{(0,1,1)} v_1}{m_{(0,0,0)}} + \frac{m_{(0,0,2)} m_{(0,1,0)} v_1}{m_{(0,0,0)}} + m_{(1,1,2)} - \frac{m_{(0,0,2)} m_{(1,1,0)}}{m_{(0,0,0)}} - \frac{2m_{(0,1,1)} m_{(1,0,1)}}{m_{(0,0,0)}}$$

$$\gamma_{(1,2,2)} = -m_{(0,0,0)} v_1^2 v_2^2 v_3^2 - 6m_{(0,0,0)} v_1 v_2^2 v_3^2 - m_{(1,0,0)} v_2^2 v_3^2 + 2m_{(0,1,0)} v_1 v_2 v_3^2 - 2m_{(1,1,0)} v_2 v_3^2 + \frac{12m_{(0,1,0)} m_{(1,0,0)} v_2 v_3^2}{m_{(0,0,0)}} - m_{(0,2,0)} v_1 v_3^2 + \frac{6m_{(0,1,0)}^2 v_1 v_3^2}{m_{(0,0,0)}} - \frac{6m_{(0,1,0)} m_{(1,1,0)} v_3^2}{m_{(0,0,0)}} - \frac{3m_{(0,2,0)} m_{(1,0,0)} v_3^2}{m_{(0,0,0)}} + 2m_{(0,0,1)} v_1 v_2^2 v_3 -$$

$2m_{(1,0,1)}v_2^2 v_3 + \frac{12m_{(0,0,1)}m_{(1,0,0)}v_2^2 v_3}{m_{(0,0,0)}} - 12m_{(0,1,1)}v_1 v_2 v_3 + \frac{24m_{(0,0,1)}m_{(0,1,0)}v_1 v_2 v_3}{m_{(0,0,0)}} + 8m_{(1,1,1)}v_2 v_3 - \frac{12m_{(0,0,1)}m_{(1,1,0)}v_2 v_3}{m_{(0,0,0)}} -$
$\frac{12m_{(0,1,0)}m_{(1,0,1)}v_2 v_3}{m_{(0,0,0)}} - \frac{12m_{(0,1,1)}m_{(1,0,0)}v_2 v_3}{m_{(0,0,0)}} + 4m_{(0,2,1)}v_1 v_3 - \frac{6m_{(0,0,1)}m_{(0,2,0)}v_1 v_3}{m_{(0,0,0)}} - \frac{12m_{(0,1,0)}m_{(0,1,1)}v_1 v_3}{m_{(0,0,0)}} - 2m_{(1,2,1)}v_3 +$
$\frac{2m_{(0,0,1)}m_{(1,2,0)}v_3}{m_{(0,0,0)}} + \frac{4m_{(0,1,0)}m_{(1,1,1)}v_3}{m_{(0,0,0)}} + \frac{8m_{(0,1,1)}m_{(1,1,0)}v_3}{m_{(0,0,0)}} + \frac{4m_{(0,2,0)}m_{(1,0,1)}v_3}{m_{(0,0,0)}} + \frac{2m_{(0,2,1)}m_{(1,0,0)}v_3}{m_{(0,0,0)}} - m_{(0,0,2)}v_1 v_2^2 +$
$\frac{6m_{(0,0,1)}^2 v_1 v_2^2}{m_{(0,0,0)}} - \frac{6m_{(0,0,1)}m_{(1,0,1)}v_2^2}{m_{(0,0,0)}} - \frac{3m_{(0,0,2)}m_{(1,0,0)}v_2^2}{m_{(0,0,0)}} + 4m_{(0,1,2)}v_1 v_2 - \frac{12m_{(0,0,1)}m_{(0,1,1)}v_1 v_2}{m_{(0,0,0)}} - \frac{6m_{(0,0,2)}m_{(0,1,0)}v_1 v_2}{m_{(0,0,0)}} -$
$2m_{(1,1,2)}v_2 + \frac{4m_{(0,0,1)}m_{(1,1,1)}v_2}{m_{(0,0,0)}} + \frac{4m_{(0,0,2)}m_{(1,1,0)}v_2}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)}m_{(1,0,2)}v_2}{m_{(0,0,0)}} + \frac{8m_{(0,1,1)}m_{(1,0,1)}v_2}{m_{(0,0,0)}} + \frac{2m_{(0,1,2)}m_{(1,0,0)}v_2}{m_{(0,0,0)}} -$
$m_{(0,2,2)}v_1 + \frac{2m_{(0,0,1)}m_{(0,2,1)}v_1}{m_{(0,0,0)}} + \frac{2m_{(0,0,2)}m_{(0,2,0)}v_1}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)}m_{(0,1,2)}v_1}{m_{(0,0,0)}} + \frac{4m_{(0,1,1)}^2 v_1}{m_{(0,0,0)}} + m_{(1,2,2)} - \frac{m_{(0,0,2)}m_{(1,2,0)}}{m_{(0,0,0)}} -$
$\frac{4m_{(0,1,1)}m_{(1,1,1)}}{m_{(0,0,0)}} - \frac{2m_{(0,1,2)}m_{(1,1,0)}}{m_{(0,0,0)}} - \frac{m_{(0,2,0)}m_{(1,0,2)}}{m_{(0,0,0)}} - \frac{2m_{(0,2,1)}m_{(1,0,1)}}{m_{(0,0,0)}}$

$\gamma_{(2,1,2)} \quad = \quad - \quad m_{(0,0,0)}v_1^2 v_2^2 v_3^2 \quad - \quad 6m_{(0,0,0)}v_1^2 v_2 v_3^2 \quad + \quad 2m_{(1,0,0)}v_1 v_2 v_3^2 \quad - \quad m_{(2,0,0)}v_2 v_3^2 \quad + \quad \frac{6m_{(1,0,0)}^2 v_2 v_3^2}{m_{(0,0,0)}} \quad -$
$m_{(0,1,0)}v_1^2 v_3^2 - 2m_{(1,1,0)}v_1 v_3^2 + \frac{12m_{(0,1,0)}m_{(1,0,0)}v_1 v_3^2}{m_{(0,0,0)}} - \frac{3m_{(0,1,0)}m_{(2,0,0)}v_3^2}{m_{(0,0,0)}} - \frac{6m_{(1,0,0)}m_{(1,1,0)}v_3^2}{m_{(0,0,0)}} + 2m_{(0,0,1)}v_1^2 v_2 v_3 -$
$12m_{(1,0,1)}v_1 v_2 v_3 + \frac{24m_{(0,0,1)}m_{(1,0,0)}v_1 v_2 v_3}{m_{(0,0,0)}} + 4m_{(2,0,1)}v_2 v_3 - \frac{6m_{(0,0,1)}m_{(2,0,0)}v_2 v_3}{m_{(0,0,0)}} - \frac{12m_{(1,0,0)}m_{(1,0,1)}v_2 v_3}{m_{(0,0,0)}} - 2m_{(0,1,1)}v_1^2 v_3 +$
$\frac{12m_{(0,0,1)}m_{(0,1,0)}v_1^2 v_3}{m_{(0,0,0)}} + 8m_{(1,1,1)}v_1 v_3 - \frac{12m_{(0,0,1)}m_{(1,1,0)}v_1 v_3}{m_{(0,0,0)}} - \frac{12m_{(0,1,0)}m_{(1,0,1)}v_1 v_3}{m_{(0,0,0)}} - \frac{12m_{(0,1,1)}m_{(1,0,0)}v_1 v_3}{m_{(0,0,0)}} - 2m_{(2,1,1)}v_3 +$
$\frac{2m_{(0,0,1)}m_{(2,1,0)}v_3}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)}m_{(2,0,1)}v_3}{m_{(0,0,0)}} + \frac{4m_{(0,1,1)}m_{(2,0,0)}v_3}{m_{(0,0,0)}} + \frac{4m_{(1,0,0)}m_{(1,1,1)}v_3}{m_{(0,0,0)}} + \frac{8m_{(1,0,1)}m_{(1,1,0)}v_3}{m_{(0,0,0)}} - m_{(0,0,2)}v_1^2 v_2 +$
$\frac{6m_{(0,0,1)}^2 v_1^2 v_2}{m_{(0,0,0)}} + 4m_{(1,0,2)}v_1 v_2 - \frac{12m_{(0,0,1)}m_{(1,0,1)}v_1 v_2}{m_{(0,0,0)}} - \frac{6m_{(0,0,2)}m_{(1,0,0)}v_1 v_2}{m_{(0,0,0)}} - m_{(2,0,2)}v_2 + \frac{2m_{(0,0,1)}m_{(2,0,1)}v_2}{m_{(0,0,0)}} +$
$\frac{2m_{(0,0,2)}m_{(2,0,0)}v_2}{m_{(0,0,0)}} + \frac{2m_{(1,0,0)}m_{(1,0,2)}v_2}{m_{(0,0,0)}} + \frac{4m_{(1,0,1)}^2 v_2}{m_{(0,0,0)}} - \frac{6m_{(0,0,1)}m_{(0,1,1)}v_1^2}{m_{(0,0,0)}} - \frac{3m_{(0,0,2)}m_{(0,1,0)}v_1^2}{m_{(0,0,0)}} - 2m_{(1,1,2)}v_1 +$
$\frac{4m_{(0,0,1)}m_{(1,1,1)}v_1}{m_{(0,0,0)}} + \frac{4m_{(0,0,2)}m_{(1,1,0)}v_1}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)}m_{(1,0,2)}v_1}{m_{(0,0,0)}} + \frac{8m_{(0,1,1)}m_{(1,0,1)}v_1}{m_{(0,0,0)}} + \frac{2m_{(0,1,2)}m_{(1,0,0)}v_1}{m_{(0,0,0)}} + m_{(2,1,2)} -$
$\frac{m_{(0,0,2)}m_{(2,1,0)}}{m_{(0,0,0)}} - \frac{2m_{(0,1,1)}m_{(2,0,1)}}{m_{(0,0,0)}} - \frac{m_{(0,1,2)}m_{(2,0,0)}}{m_{(0,0,0)}} - \frac{4m_{(1,0,1)}m_{(1,1,1)}}{m_{(0,0,0)}} - \frac{2m_{(1,0,2)}m_{(1,1,0)}}{m_{(0,0,0)}}$

$\gamma_{(2,2,1)} = -m_{(0,0,0)}v_1^2 v_2^2 v_3^2 - 6m_{(0,0,0)}v_1^2 v_2^2 v_3 + 2m_{(1,0,0)}v_1 v_2^2 v_3 - m_{(2,0,0)}v_2^2 v_3 + \frac{6m_{(1,0,0)}^2 v_2^2 v_3}{m_{(0,0,0)}} + 2m_{(0,1,0)}v_1^2 v_2 v_3 -$
$12m_{(1,1,0)}v_1 v_2 v_3$
$+ \frac{24m_{(0,1,0)}m_{(1,0,0)}v_1 v_2 v_3}{m_{(0,0,0)}} + 4m_{(2,1,0)}v_2 v_3 - \frac{6m_{(0,1,0)}m_{(2,0,0)}v_2 v_3}{m_{(0,0,0)}} - \frac{12m_{(1,0,0)}m_{(1,1,0)}v_2 v_3}{m_{(0,0,0)}} - m_{(0,2,0)}v_1^2 v_3 + \frac{6m_{(0,1,0)}^2 v_1^2 v_3}{m_{(0,0,0)}} +$
$4m_{(1,2,0)}v_1 v_3$
$- \frac{12m_{(0,1,0)}m_{(1,1,0)}v_1 v_3}{m_{(0,0,0)}} - \frac{6m_{(0,2,0)}m_{(1,0,0)}v_1 v_3}{m_{(0,0,0)}} - m_{(2,2,0)}v_3 + \frac{2m_{(0,1,0)}m_{(2,1,0)}v_3}{m_{(0,0,0)}} + \frac{2m_{(0,2,0)}m_{(2,0,0)}v_3}{m_{(0,0,0)}} + \frac{2m_{(1,0,0)}m_{(1,2,0)}v_3}{m_{(0,0,0)}} +$
$\frac{4m_{(1,1,0)}^2 v_3}{m_{(0,0,0)}} - m_{(0,0,1)}v_1^2 v_2^2 - 2m_{(1,0,1)}v_1 v_2^2 + \frac{12m_{(0,0,1)}m_{(1,0,0)}v_1 v_2^2}{m_{(0,0,0)}} - \frac{3m_{(0,0,1)}m_{(2,0,0)}v_2^2}{m_{(0,0,0)}} - \frac{6m_{(1,0,0)}m_{(1,0,1)}v_2^2}{m_{(0,0,0)}} -$
$2m_{(0,1,1)}v_1^2 v_2 \quad + \quad \frac{12m_{(0,0,1)}m_{(0,1,0)}v_1^2 v_2}{m_{(0,0,0)}} \quad + \quad 8m_{(1,1,1)}v_1 v_2 \quad - \quad \frac{12m_{(0,0,1)}m_{(1,1,0)}v_1 v_2}{m_{(0,0,0)}} \quad - \quad \frac{12m_{(0,1,0)}m_{(1,0,1)}v_1 v_2}{m_{(0,0,0)}} \quad -$
$\frac{12m_{(0,1,1)}m_{(1,0,0)}v_1 v_2}{m_{(0,0,0)}} - 2m_{(2,1,1)}v_2 + \frac{2m_{(0,0,1)}m_{(2,1,0)}v_2}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)}m_{(2,0,1)}v_2}{m_{(0,0,0)}} + \frac{4m_{(0,1,1)}m_{(2,0,0)}v_2}{m_{(0,0,0)}} + \frac{4m_{(1,0,0)}m_{(1,1,1)}v_2}{m_{(0,0,0)}} +$
$\frac{8m_{(1,0,1)}m_{(1,1,0)}v_2}{m_{(0,0,0)}} - \frac{3m_{(0,0,1)}m_{(0,2,0)}v_1^2}{m_{(0,0,0)}} - \frac{6m_{(0,1,0)}m_{(0,1,1)}v_1^2}{m_{(0,0,0)}} - 2m_{(1,2,1)}v_1 + \frac{2m_{(0,0,1)}m_{(1,2,0)}v_1}{m_{(0,0,0)}} + \frac{4m_{(0,1,0)}m_{(1,1,1)}v_1}{m_{(0,0,0)}} +$
$\frac{8m_{(0,1,1)}m_{(1,1,0)}v_1}{m_{(0,0,0)}} + \frac{4m_{(0,2,0)}m_{(1,0,1)}v_1}{m_{(0,0,0)}} + \frac{2m_{(0,2,1)}m_{(1,0,0)}v_1}{m_{(0,0,0)}} + m_{(2,2,1)} - \frac{2m_{(0,1,1)}m_{(2,1,0)}}{m_{(0,0,0)}} - \frac{m_{(0,2,0)}m_{(2,0,1)}}{m_{(0,0,0)}} - \frac{m_{(0,2,1)}m_{(2,0,0)}}{m_{(0,0,0)}} -$
$\frac{2m_{(1,0,1)}m_{(1,2,0)}}{m_{(0,0,0)}} - \frac{4m_{(1,1,0)}m_{(1,1,1)}}{m_{(0,0,0)}}$

$\gamma_{(2,2,2)} \quad = \quad 2v_2^2 v_3 m_{(2,0,1)} \quad - \quad \frac{4m_{(0,1,0)}v_2 v_3 m_{(2,0,1)}}{m_{(0,0,0)}} \quad + \quad \frac{2m_{(0,2,0)}v_3 m_{(2,0,1)}}{m_{(0,0,0)}} \quad + \quad 2v_1^2 v_3 m_{(0,2,1)} \quad - \quad \frac{4m_{(1,0,0)}v_1 v_3 m_{(0,2,1)}}{m_{(0,0,0)}} \quad +$
$\frac{2m_{(2,0,0)}v_3 m_{(0,2,1)}}{m_{(0,0,0)}} - 4m_{(0,0,0)}v_1 v_2 v_3^4 - 4m_{(1,0,0)}v_2 v_3^4 - 4m_{(0,1,0)}v_1 v_3^4 + 4m_{(1,1,0)}v_3^4 + 16m_{(0,0,1)}v_1 v_2 v_3^3 +$
$\frac{16m_{(0,0,1)}m_{(1,0,0)}v_2 v_3^3}{m_{(0,0,0)}} + \frac{16m_{(0,0,1)}m_{(0,1,0)}v_1 v_3^3}{m_{(0,0,0)}} - \frac{16m_{(0,0,1)}m_{(1,1,0)}v_3^3}{m_{(0,0,0)}} + 2v_2 m_{(2,1,0)}v_3^2 - 7m_{(0,0,0)}v_1^2 v_2^2 v_3^2 + v_1^2 v_2^2 v_3^2 -$
$20m_{(1,0,0)}v_1 v_2^2 v_3^2 + 4m_{(2,0,0)}v_2^2 v_3^2 - \frac{26m_{(1,0,0)}^2 v_2^2 v_3^2}{m_{(0,0,0)}} - 20m_{(0,1,0)}v_1^2 v_2 v_3^2 + 16m_{(1,1,0)}v_1 v_2 v_3^2 - \frac{128m_{(0,1,0)}m_{(1,0,0)}v_1 v_2 v_3^2}{m_{(0,0,0)}} -$
$8m_{(0,0,2)}v_1 v_2 v_3^2 \quad - \quad \frac{16m_{(0,0,1)}^2 v_1 v_2 v_3^2}{m_{(0,0,0)}} \quad - \quad 4m_{(2,1,0)}v_2 v_3^2 \quad + \quad \frac{18m_{(0,1,0)}m_{(2,0,0)}v_2 v_3^2}{m_{(0,0,0)}} \quad + \quad \frac{44m_{(1,0,0)}m_{(1,1,0)}v_2 v_3^2}{m_{(0,0,0)}} \quad -$

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$$\frac{24m_{(0,1,0)}m_{(1,0,0)}{}^2 v_2 v_3^2}{m_{(0,0,0)}{}^2} - \frac{8m_{(0,0,2)}m_{(1,0,0)}v_2 v_3^2}{m_{(0,0,0)}} - \frac{16m_{(0,0,1)}{}^2 m_{(1,0,0)}v_2 v_3^2}{m_{(0,0,0)}{}^2} + 4m_{(0,2,0)}v_1^2 v_3^2 - \frac{26m_{(0,1,0)}{}^2 v_1^2 v_3^2}{m_{(0,0,0)}} - 2m_{(1,2,0)}v_1 v_3^2 +$$

$$\frac{44m_{(0,1,0)}m_{(1,1,0)}v_1 v_3^2}{m_{(0,0,0)}} + \frac{18m_{(0,2,0)}m_{(1,0,0)}v_1 v_3^2}{m_{(0,0,0)}} - \frac{24m_{(0,1,0)}{}^2 m_{(1,0,0)}v_1 v_3^2}{m_{(0,0,0)}{}^2} - \frac{8m_{(0,0,2)}m_{(0,1,0)}v_1 v_3^2}{m_{(0,0,0)}} - \frac{16m_{(0,0,1)}{}^2 m_{(0,1,0)}v_1 v_3^2}{m_{(0,0,0)}{}^2} -$$

$$\frac{6m_{(0,1,0)}m_{(2,1,0)}v_3^2}{m_{(0,0,0)}} - \frac{2m_{(0,2,0)}m_{(2,0,0)}v_3^2}{m_{(0,0,0)}} + \frac{4m_{(0,1,0)}{}^2 m_{(2,0,0)}v_3^2}{m_{(0,0,0)}{}^2} - \frac{6m_{(1,0,0)}m_{(1,2,0)}v_3^2}{m_{(0,0,0)}} - \frac{8m_{(1,1,0)}{}^2 v_3^2}{m_{(0,0,0)}} + \frac{16m_{(0,1,0)}m_{(1,0,0)}m_{(1,1,0)}v_3^2}{m_{(0,0,0)}{}^2} +$$

$$\frac{8m_{(0,0,2)}m_{(1,1,0)}v_3^2}{m_{(0,0,0)}} + \frac{16m_{(0,0,1)}{}^2 m_{(1,1,0)}v_3^2}{m_{(0,0,0)}{}^2} + \frac{4m_{(0,2,0)}m_{(1,0,0)}{}^2 v_3^2}{m_{(0,0,0)}{}^2} - \frac{4m_{(0,0,1)}v_2 m_{(2,1,0)}v_3}{m_{(0,0,0)}} - 4m_{(0,0,1)}v_1^2 v_2 v_3 + 8m_{(1,0,1)}v_1 v_2^2 v_3 -$$

$$\frac{104m_{(0,0,1)}m_{(1,0,0)}v_1 v_2^2 v_3}{m_{(0,0,0)}} - 4m_{(2,0,1)}v_2^2 v_3 + \frac{18m_{(0,0,1)}m_{(2,0,0)}v_2^2 v_3}{m_{(0,0,0)}} + \frac{36m_{(1,0,0)}m_{(1,0,1)}v_2^2 v_3}{m_{(0,0,0)}} - \frac{16m_{(0,0,1)}{}^2 m_{(1,0,0)}{}^2 v_2^2 v_3}{m_{(0,0,0)}{}^2} +$$

$$8m_{(0,1,1)}v_1^2 v_2 v_3 - \frac{104m_{(0,0,1)}m_{(0,1,0)}v_1^2 v_2 v_3}{m_{(0,0,0)}} - 24m_{(1,1,1)}v_1 v_2 v_3 + \frac{88m_{(0,0,1)}m_{(1,1,0)}v_1 v_2 v_3}{m_{(0,0,0)}} + \frac{104m_{(0,1,0)}m_{(1,0,1)}v_1 v_2 v_3}{m_{(0,0,0)}} +$$

$$\frac{104m_{(0,1,1)}m_{(1,0,0)}v_1 v_2 v_3}{m_{(0,0,0)}} - \frac{80m_{(0,0,1)}m_{(0,1,0)}m_{(1,0,0)}v_1 v_2 v_3}{m_{(0,0,0)}{}^2} + \frac{16m_{(0,0,1)}m_{(0,0,2)}v_1 v_2 v_3}{m_{(0,0,0)}} + 8m_{(2,1,1)}v_2 v_3 - \frac{8m_{(0,0,1)}m_{(2,1,0)}v_2 v_3}{m_{(0,0,0)}} -$$

$$\frac{8m_{(0,1,0)}m_{(2,0,1)}v_2 v_3}{m_{(0,0,0)}} - \frac{24m_{(0,1,1)}m_{(2,0,0)}v_2 v_3}{m_{(0,0,0)}} + \frac{16m_{(0,0,1)}m_{(0,1,0)}m_{(2,0,0)}v_2 v_3}{m_{(0,0,0)}{}^2} - \frac{24m_{(1,0,0)}m_{(1,1,1)}v_2 v_3}{m_{(0,0,0)}} - \frac{48m_{(1,0,1)}m_{(1,1,0)}v_2 v_3}{m_{(0,0,0)}} -$$

$$\frac{16m_{(0,0,1)}m_{(1,0,0)}m_{(1,1,0)}v_2 v_3}{m_{(0,0,0)}{}^2} + \frac{32m_{(0,1,0)}m_{(1,0,0)}m_{(1,0,1)}v_2 v_3}{m_{(0,0,0)}{}^2} + \frac{16m_{(0,1,1)}m_{(1,0,0)}{}^2 v_2 v_3}{m_{(0,0,0)}{}^2} + \frac{16m_{(0,0,1)}m_{(0,0,2)}m_{(1,0,0)}v_2 v_3}{m_{(0,0,0)}{}^2} -$$

$$4m_{(0,2,1)}v_1^2 v_3 + \frac{18m_{(0,0,1)}m_{(0,2,0)}v_1^2 v_3}{m_{(0,0,0)}} + \frac{36m_{(0,1,0)}m_{(0,1,1)}v_1^2 v_3}{m_{(0,0,0)}} - \frac{16m_{(0,0,1)}m_{(0,1,0)}{}^2 v_1^2 v_3}{m_{(0,0,0)}{}^2} + 8m_{(1,2,1)}v_1 v_3 -$$

$$\frac{12m_{(0,0,1)}m_{(1,2,0)}v_1 v_3}{m_{(0,0,0)}} - \frac{24m_{(0,1,0)}m_{(1,1,1)}v_1 v_3}{m_{(0,0,0)}} - \frac{48m_{(0,1,1)}m_{(1,1,0)}v_1 v_3}{m_{(0,0,0)}} + \frac{16m_{(0,0,1)}m_{(0,1,0)}m_{(1,1,0)}v_1 v_3}{m_{(0,0,0)}{}^2} - \frac{24m_{(0,2,0)}m_{(1,0,1)}v_1 v_3}{m_{(0,0,0)}} +$$

$$\frac{16m_{(0,1,0)}{}^2 m_{(1,0,1)}v_1 v_3}{m_{(0,0,0)}{}^2} - \frac{8m_{(0,2,1)}m_{(1,0,0)}v_1 v_3}{m_{(0,0,0)}} + \frac{16m_{(0,0,1)}m_{(0,2,0)}m_{(1,0,0)}v_1 v_3}{m_{(0,0,0)}{}^2} + \frac{32m_{(0,1,0)}m_{(0,1,1)}m_{(1,0,0)}v_1 v_3}{m_{(0,0,0)}{}^2} +$$

$$\frac{16m_{(0,0,1)}m_{(0,0,2)}m_{(0,1,0)}v_1 v_3}{m_{(0,0,0)}{}^2} - 2m_{(2,2,1)}v_3 + \frac{2m_{(0,0,1)}m_{(2,2,0)}v_3}{m_{(0,0,0)}} + \frac{4m_{(0,1,0)}m_{(2,1,1)}v_3}{m_{(0,0,0)}} + \frac{8m_{(0,1,1)}m_{(2,1,0)}v_3}{m_{(0,0,0)}} + \frac{2m_{(0,2,0)}m_{(2,0,1)}v_3}{m_{(0,0,0)}} +$$

$$\frac{2m_{(0,2,1)}m_{(2,0,0)}v_3}{m_{(0,0,0)}} - \frac{4m_{(0,0,1)}m_{(0,2,0)}m_{(2,0,0)}v_3}{m_{(0,0,0)}{}^2} - \frac{8m_{(0,1,0)}m_{(0,1,1)}m_{(2,0,0)}v_3}{m_{(0,0,0)}{}^2} + \frac{4m_{(1,0,0)}m_{(1,2,1)}v_3}{m_{(0,0,0)}} + \frac{8m_{(1,0,1)}m_{(1,2,0)}v_3}{m_{(0,0,0)}} +$$

$$\frac{16m_{(1,1,0)}m_{(1,1,1)}v_3}{m_{(0,0,0)}} - \frac{16m_{(0,1,0)}m_{(1,0,1)}m_{(1,1,0)}v_3}{m_{(0,0,0)}{}^2} - \frac{16m_{(0,1,1)}m_{(1,0,0)}m_{(1,1,0)}v_3}{m_{(0,0,0)}{}^2} - \frac{16m_{(0,0,1)}m_{(0,0,2)}m_{(1,1,0)}v_3}{m_{(0,0,0)}{}^2} -$$

$$\frac{8m_{(0,2,0)}m_{(1,0,0)}m_{(1,0,1)}v_3}{m_{(0,0,0)}{}^2} + \frac{2m_{(0,0,2)}v_2 m_{(2,1,0)}}{m_{(0,0,0)}} - \frac{22m_{(0,0,1)}{}^2 v_1^2 v_2^2}{m_{(0,0,0)}} - 2m_{(1,0,2)}v_1 v_2^2 + \frac{36m_{(0,0,1)}m_{(1,0,1)}v_1 v_2^2}{m_{(0,0,0)}} +$$

$$\frac{10m_{(0,0,2)}m_{(1,0,0)}v_1 v_2^2}{m_{(0,0,0)}} - \frac{24m_{(0,0,1)}{}^2 m_{(1,0,0)}v_1 v_2^2}{m_{(0,0,0)}{}^2} - \frac{6m_{(0,0,1)}m_{(2,0,1)}v_2^2}{m_{(0,0,0)}} - \frac{2m_{(0,0,2)}m_{(2,0,0)}v_2^2}{m_{(0,0,0)}} + \frac{4m_{(0,0,1)}{}^2 m_{(2,0,0)}v_2^2}{m_{(0,0,0)}{}^2} -$$

$$\frac{6m_{(1,0,0)}m_{(1,0,2)}v_2^2}{m_{(0,0,0)}} - \frac{4m_{(1,0,1)}{}^2 v_2^2}{m_{(0,0,0)}} + \frac{16m_{(0,0,1)}m_{(1,0,0)}m_{(1,0,1)}v_2^2}{m_{(0,0,0)}{}^2} - 2m_{(0,1,2)}v_1^2 v_2 + \frac{36m_{(0,0,1)}m_{(0,1,1)}v_1^2 v_2}{m_{(0,0,0)}} +$$

$$\frac{10m_{(0,0,2)}m_{(0,1,0)}v_1^2 v_2}{m_{(0,0,0)}} - \frac{24m_{(0,0,1)}{}^2 m_{(0,1,0)}v_1^2 v_2}{m_{(0,0,0)}{}^2} + 8m_{(1,1,2)}v_1 v_2 - \frac{24m_{(0,0,1)}m_{(1,1,1)}v_1 v_2}{m_{(0,0,0)}} - \frac{16m_{(0,0,2)}m_{(1,1,0)}v_1 v_2}{m_{(0,0,0)}} -$$

$$\frac{16m_{(0,0,1)}{}^2 m_{(1,1,0)}v_1 v_2}{m_{(0,0,0)}{}^2} - \frac{12m_{(0,1,0)}m_{(1,0,2)}v_1 v_2}{m_{(0,0,0)}} - \frac{48m_{(0,1,1)}m_{(1,0,1)}v_1 v_2}{m_{(0,0,0)}} + \frac{32m_{(0,0,1)}m_{(0,1,0)}m_{(1,0,1)}v_1 v_2}{m_{(0,0,0)}{}^2} - \frac{12m_{(0,1,2)}m_{(1,0,0)}v_1 v_2}{m_{(0,0,0)}} +$$

$$\frac{32m_{(0,0,1)}m_{(0,1,1)}m_{(1,0,0)}v_1 v_2}{m_{(0,0,0)}{}^2} + \frac{8m_{(0,0,2)}m_{(0,1,0)}m_{(1,0,0)}v_1 v_2}{m_{(0,0,0)}{}^2} - \frac{4m_{(0,0,2)}{}^2 v_1 v_2}{m_{(0,0,0)}} - 2m_{(2,1,2)}v_2 + \frac{4m_{(0,0,1)}m_{(2,1,1)}v_2}{m_{(0,0,0)}} +$$

$$\frac{2m_{(0,0,2)}m_{(2,1,0)}v_2}{m_{(0,0,0)}} + \frac{2m_{(0,1,0)}m_{(2,0,2)}v_2}{m_{(0,0,0)}} + \frac{8m_{(0,1,1)}m_{(2,0,1)}v_2}{m_{(0,0,0)}} + \frac{4m_{(0,1,2)}m_{(2,0,0)}v_2}{m_{(0,0,0)}} - \frac{8m_{(0,0,1)}m_{(0,1,1)}m_{(2,0,0)}v_2}{m_{(0,0,0)}{}^2} -$$

$$\frac{4m_{(0,0,2)}m_{(0,1,0)}m_{(2,0,0)}v_2}{m_{(0,0,0)}{}^2} + \frac{4m_{(1,0,0)}m_{(1,1,2)}v_2}{m_{(0,0,0)}} + \frac{16m_{(1,0,1)}m_{(1,1,1)}v_2}{m_{(0,0,0)}} + \frac{8m_{(1,0,2)}m_{(1,1,0)}v_2}{m_{(0,0,0)}} - \frac{16m_{(0,0,1)}m_{(1,0,1)}m_{(1,1,0)}v_2}{m_{(0,0,0)}{}^2} -$$

$$\frac{8m_{(0,1,0)}m_{(1,0,1)}{}^2 v_2}{m_{(0,0,0)}{}^2} - \frac{16m_{(0,1,1)}m_{(1,0,0)}m_{(1,0,1)}v_2}{m_{(0,0,0)}{}^2} - \frac{4m_{(0,0,2)}{}^2 m_{(1,0,0)}v_2}{m_{(0,0,0)}{}^2} - \frac{6m_{(0,0,1)}m_{(0,2,1)}v_1^2}{m_{(0,0,0)}} - \frac{2m_{(0,0,2)}m_{(0,2,0)}v_1^2}{m_{(0,0,0)}} +$$

$$\frac{4m_{(0,0,1)}{}^2 m_{(0,2,0)}v_1^2}{m_{(0,0,0)}{}^2} - \frac{6m_{(0,1,0)}m_{(0,1,2)}v_1^2}{m_{(0,0,0)}} - \frac{4m_{(0,1,1)}{}^2 v_1^2}{m_{(0,0,0)}} + \frac{16m_{(0,0,1)}m_{(0,1,0)}m_{(0,1,1)}v_1^2}{m_{(0,0,0)}{}^2} - 2m_{(1,2,2)}v_1 + \frac{4m_{(0,0,1)}m_{(1,2,1)}v_1}{m_{(0,0,0)}} +$$

$$\frac{4m_{(0,0,2)}m_{(1,2,0)}v_1}{m_{(0,0,0)}} + \frac{4m_{(0,1,0)}m_{(1,1,2)}v_1}{m_{(0,0,0)}} + \frac{16m_{(0,1,1)}m_{(1,1,1)}v_1}{m_{(0,0,0)}} + \frac{8m_{(0,1,2)}m_{(1,1,0)}v_1}{m_{(0,0,0)}} - \frac{16m_{(0,0,1)}m_{(0,1,1)}m_{(1,1,0)}v_1}{m_{(0,0,0)}{}^2} -$$

$$\frac{4m_{(0,2,0)}m_{(1,0,2)}v_1}{m_{(0,0,0)}} + \frac{8m_{(0,2,1)}m_{(1,0,1)}v_1}{m_{(0,0,0)}} - \frac{8m_{(0,0,1)}m_{(0,2,0)}m_{(1,0,1)}v_1}{m_{(0,0,0)}{}^2} - \frac{16m_{(0,1,0)}m_{(0,1,1)}m_{(1,0,1)}v_1}{m_{(0,0,0)}{}^2} + \frac{2m_{(0,2,2)}m_{(1,0,0)}v_1}{m_{(0,0,0)}} -$$

$$\frac{4m_{(0,0,2)}m_{(0,2,0)}m_{(1,0,0)}v_1}{m_{(0,0,0)}{}^2} - \frac{8m_{(0,1,1)}{}^2 m_{(1,0,0)}v_1}{m_{(0,0,0)}{}^2} - \frac{4m_{(0,0,2)}{}^2 m_{(0,1,0)}v_1}{m_{(0,0,0)}{}^2} + m_{(2,2,2)} - \frac{m_{(0,0,2)}m_{(2,2,0)}}{m_{(0,0,0)}} - \frac{4m_{(0,1,1)}m_{(2,1,1)}}{m_{(0,0,0)}} -$$

$$\frac{2m_{(0,1,2)}m_{(2,1,0)}}{m_{(0,0,0)}} - \frac{m_{(0,2,0)}m_{(2,0,2)}}{m_{(0,0,0)}} - \frac{2m_{(0,2,1)}m_{(2,0,1)}}{m_{(0,0,0)}} - \frac{m_{(0,2,2)}m_{(2,0,0)}}{m_{(0,0,0)}} + \frac{2m_{(0,0,2)}m_{(0,2,0)}m_{(2,0,0)}}{m_{(0,0,0)}{}^2} + \frac{4m_{(0,1,1)}{}^2 m_{(2,0,0)}}{m_{(0,0,0)}{}^2} -$$

$$\frac{4m_{(1,0,1)}m_{(1,2,1)}}{m_{(0,0,0)}} - \frac{2m_{(1,0,2)}m_{(1,2,0)}}{m_{(0,0,0)}} - \frac{4m_{(1,1,0)}m_{(1,1,2)}}{m_{(0,0,0)}} - \frac{4m_{(1,1,1)}{}^2}{m_{(0,0,0)}} + \frac{16m_{(0,1,1)}m_{(1,0,1)}m_{(1,1,0)}}{m_{(0,0,0)}{}^2} + \frac{4m_{(0,0,2)}{}^2 m_{(1,1,0)}}{m_{(0,0,0)}{}^2} +$$

$$\frac{4m_{(0,2,0)}m_{(1,0,1)}{}^2}{m_{(0,0,0)}{}^2}.$$

The equilibrium cumulant vector $\boldsymbol{\gamma}^{(eq)}$ is defined by

$$\boldsymbol{\gamma}^{(eq)} = \left(\rho, 0, 0, 0, 0, 0, 0, \rho c_s^2, \rho c_s^2, \rho c_s^2, 0, 0, \cdots, 0\right)^T.$$

2.6.2 Conservation of mass: ρ

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$\frac{\partial \rho}{\partial t} + \frac{v_1 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_1} + \frac{\rho \delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_2 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_2} + \frac{\rho \delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{v_3 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_3} + \frac{\rho \delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-1 + v_1^2 + 3cs^2)\frac{v_1 \delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_1^3} +$

$(-1 + 3v_1^2 + cs^2)\frac{\rho \delta_l^3}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + 3cs^2 + v_2^2)\frac{v_2 \delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} +$

$(-1 + cs^2 + 3v_2^2)\frac{\rho \delta_l^3}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2 \partial x_3} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$

$(-1 + 3cs^2 + v_3^2)\frac{v_3 \delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2)\frac{\rho \delta_l^3}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$

$(-12cs^2 v_1^2 o_4 + cs^2 o_4 - 6v_1^2 - 2cs^2 - 3v_1^4 o_4 - cs^4 o_4 + 2cs^4 + 3v_1^2 o_4 + 24cs^2 v_1^2 + 6v_1^4)\frac{\delta_l^4}{24\delta_t o_4}\frac{\partial^4 \rho}{\partial x_1^4} +$

$(-4 - 3cs^2 o_4 + 10v_1^2 + 6cs^2 - 5v_1^2 o_4 + 2o_4)\frac{v_1 \rho \delta_l^4}{12\delta_t o_4}\frac{\partial^4 v_1}{\partial x_1^4} +$

$(-o_9 o_4 - 9cs^2 o_4 + o_9 v_1^2 o_4 - o_9 + 3o_9 cs^2 o_4 + 3o_9 cs^2 + o_9 v_1^2 - 3v_1^2 o_4 + 3o_4)\frac{v_1 \rho \delta_l^4}{12\delta_t o_9 o_4}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + (-2 + o_1)\frac{cs^4 \delta_l^4}{6\delta_t o_1}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2}$

$+ (3o_5 + o_5 o_7 v_2^2 + o_7 v_2^2 - 9o_5 cs^2 - o_5 o_7 - o_7 + 3cs^2 o_7 + 3o_5 cs^2 o_7 - 3o_5 v_2^2)\frac{\rho v_2 \delta_l^4}{12 o_5 \delta_t o_7}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$

$(24cs^2 v_2^2 - 3o_5 v_2^4 + 6v_2^4 - 2cs^2 + o_5 cs^2 - 12 o_5 cs^2 v_2^2 + 2cs^4 - o_5 cs^4 + 3o_5 v_2^2 - 6v_2^2)\frac{\delta_l^4}{24 o_5 \delta_t}\frac{\partial^4 \rho}{\partial x_2^4} +$

$(-4 + 2o_5 + 6cs^2 - 3o_5 cs^2 - 5o_5 v_2^2 + 10v_2^2)\frac{\rho v_2 \delta_l^4}{12 o_5 \delta_t}\frac{\partial^4 v_2}{\partial x_2^4} +$

$(-o_1 2 o_4 - 9cs^2 o_4 + o_1 2 v_1^2 o_4 + 3cs^2 o_1 2 - o_1 2 + 3cs^2 o_1 2 o_4 - 3v_1^2 o_4 + o_1 2 v_1^2 + 3o_4)\frac{v_1 \rho \delta_l^4}{12\delta_t o_1 2 o_4}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$

$(3o_5 + 3o_5 cs^2 o_1 1 - 9o_5 cs^2 + 3cs^2 o_1 1 - o_5 o_1 1 + o_1 1 v_2^2 - o_1 1 - 3o_5 v_2^2 + o_5 o_1 1 v_2^2)\frac{\rho v_2 \delta_l^4}{12 o_5 \delta_t o_1 1}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$

$(-2 + o_2)\frac{cs^4 \delta_l^4}{6 o_2 \delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + (-2 + o_3)\frac{cs^4 \delta_l^4}{6\delta_t o_3}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$

$(-o_8 o_6 - 9cs^2 o_6 + o_8 v_3^2 - o_8 - 3v_3^2 o_6 + 3o_8 cs^2 + o_8 v_3^2 o_6 + 3o_8 cs^2 o_6 + 3o_6)\frac{\rho v_3 \delta_l^4}{12\delta_t o_8 o_6}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} +$

$(-9cs^2 o_6 - o_1 0 o_6 - o_1 0 + o_1 0 v_3^2 - 3v_3^2 o_6 + 3o_1 0 cs^2 + o_1 0 v_3^2 o_6 + 3o_6 + 3o_1 0 cs^2 o_6)\frac{\rho v_3 \delta_l^4}{12 o_1 0 \delta_t o_6}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$

$(cs^2 o_6 + 24cs^2 v_3^2 + 6v_3^4 - 2cs^2 + 3v_3^2 o_6 + 2cs^4 - 12cs^2 v_3^2 o_6 - cs^4 o_6 - 3v_3^4 o_6 - 6v_3^2)\frac{\delta_l^4}{24\delta_t o_6}\frac{\partial^4 \rho}{\partial x_3^4} +$

$(-4 - 3cs^2 o_6 + 6cs^2 - 5v_3^2 o_6 + 2o_6 + 10v_3^2)\frac{\rho v_3 \delta_l^4}{12\delta_t o_6}\frac{\partial^4 v_3}{\partial x_3^4} = 0.$

2.6.3 Conservation of momentum: ρv_1

📎 attached text file: `output_d3q27_nse_culbm1_symbolic_pde_01.txt`

$v_1\frac{\partial \rho}{\partial t} + \rho\frac{\partial v_1}{\partial t} + (cs^2 + v_1^2)\frac{\delta_l}{\delta_t}\frac{\partial \rho}{\partial x_1} + \frac{2v_1 \rho \delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_1 v_2 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_2} + \frac{\rho v_2 \delta_l}{\delta_t}\frac{\partial v_1}{\partial x_2} + \frac{v_1 \rho \delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{v_1 v_3 \delta_l}{\delta_t}\frac{\partial \rho}{\partial x_3} + \frac{\rho v_3 \delta_l}{\delta_t}\frac{\partial v_1}{\partial x_3} +$

$\frac{v_1 \rho \delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 - 3o_4 v_1^2 + o_4 - 2o_4 cs^2 + 4cs^2 + 6v_1^2)\frac{\delta_l^2}{o_4 \delta_t}\frac{\partial \rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} + (2 - o_4)\frac{3v_1 \rho \delta_l^2}{o_4 \delta_t}\left(\frac{\partial v_1}{\partial x_1}\right)^2 +$

$(-2 + o_1)\frac{cs^2 \delta_l^2}{2\delta_t o_1}\frac{\partial \rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} + (-2 + o_1)\frac{cs^2 \delta_l^2}{2\delta_t o_1}\frac{\partial \rho}{\partial x_2}\frac{\partial v_1}{\partial x_2} + (-2 + o_2)\frac{cs^2 \delta_l^2}{2\delta_t o_2}\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_1} + (-2 + o_2)\frac{cs^2 \delta_l^2}{2\delta_t o_2}\frac{\partial \rho}{\partial x_3}\frac{\partial v_1}{\partial x_3} +$

$(-2 - o_4 v_1^2 + o_4 - 3o_4 cs^2 + 6cs^2 + 2v_1^2)\frac{v_1 \delta_l^2}{2o_4 \delta_t}\frac{\partial^2 \rho}{\partial x_1^2} + (-2 - 3o_4 v_1^2 + o_4 - o_4 cs^2 + 2cs^2 + 6v_1^2)\frac{\rho \delta_l^2}{2o_4 \delta_t}\frac{\partial^2 v_1}{\partial x_1^2} +$

$(-2 + o_1)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_1}\frac{\partial^2 v_2}{\partial x_1 \partial x_2} + (-2 + o_1)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_1}\frac{\partial^2 v_1}{\partial x_2^2} + (-2 + o_2)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_2}\frac{\partial^2 v_3}{\partial x_1 \partial x_3} + (-2 + o_2)\frac{cs^2 \rho \delta_l^2}{2\delta_t o_2}\frac{\partial^2 v_1}{\partial x_3^2} + C_1\frac{\delta_l^3}{12 o_4^2 \delta_t}\frac{\partial^3 \rho}{\partial x_1^3}$

$+ (-24 - 60o_4 v_1^2 + 24o_4 - 36o_4 cs^2 + 36cs^2 + 60v_1^2 - 4o_4^2 + 11o_4^2 v_1^2 + 5o_4^2 cs^2)\frac{v_1 \rho \delta_l^3}{6 o_4^2 \delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_2\frac{v_1 \rho \delta_l^3}{12 o_4^2 \delta_t o_9 o_1}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} +$

$(-12 + 12o_1 - o_1^2)\frac{cs^4 \delta_l^3}{6\delta_t o_1^2}\frac{\partial^3 \rho}{\partial x_1 \partial x_2^2} - \frac{cs^2 v_1 \rho \delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + (-1 + 3cs^2 + v_2^2)\frac{v_1 v_2 \delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} + C_3\frac{\rho v_2 \delta_l^3}{6\delta_t o_7 o_1}\frac{\partial^3 v_1}{\partial x_2^3} +$

$$(-1 + cs^2 + 3v_2^2)\frac{v_1\rho\delta_l^3}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_4\frac{v_1\rho\delta_l^3}{12o_4^2\delta_t o_2 o_1 2}\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} - \frac{cs^2 v_1\rho\delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} + (-12 + 12o_2 - o_2^2)\frac{cs^4\delta_l^3}{6\delta_t o_2^2}\frac{\partial^3 \rho}{\partial x_1 \partial x_2^2} -$$

$$\frac{cs^2 v_1\rho\delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2 v_1\rho\delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} + (-1 + 3cs^2 + v_3^2)\frac{v_1 v_3\delta_l^3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + C_5\frac{\rho v_3\delta_l^3}{6\delta_t o_8 o_2}\frac{\partial^3 v_1}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2)\frac{v_1\rho\delta_l^3}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$C_6\frac{v_1\delta_l^4}{12o_4^3\delta_t}\frac{\partial^4 \rho}{\partial x_1^4} + C_7\frac{\rho\delta_l^4}{12o_4^3\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_8\frac{\rho\delta_l^4}{12o_4^3\delta_t o_9^2 o_1^3}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + C_9\frac{cs^2 v_1\delta_l^4}{12o_4^3\delta_t o_9^2 o_1^2}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} + C_{10}\frac{cs^2 \rho\delta_l^4}{12o_4^2\delta_t o_9 o_1^3}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} +$$

$$C_{11}\frac{cs^2 v_2\delta_l^4}{12\delta_t o_2^2 o_1^2 o_5}\frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} + (o_7 v_2^2 + o_7 o_5 v_2^2 + 3cs^2 o_7 o_5 + 3cs^2 o_7 - o_7 o_5 - o_7 - 9cs^2 o_5 - 3o_5 v_2^2 + 3o_5)\frac{v_1\rho v_2\delta_l^4}{12\delta_t o_7 o_5}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$$

$$C_{12}\frac{cs^2 \rho\delta_l^4}{12\delta_t o_7 o_1^3 o_5}\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} +$$

$$(6v_2^4 - cs^4 o_5 - 3o_5 v_2^4 - 2cs^2 - 12cs^2 o_5 v_2^2 + cs^2 o_5 + 3o_5 v_2^2 + 24cs^2 v_2^2 - 6v_2^2 + 2cs^4)\frac{v_1\delta_l^4}{24\delta_t o_5}\frac{\partial^4 \rho}{\partial x_2^4} + C_{13}\frac{\rho\delta_l^4}{24\delta_t o_7^2 o_1^3}\frac{\partial^4 v_1}{\partial x_2^4} +$$

$$(-4 + 6cs^2 - 3cs^2 o_5 - 5o_5 v_2^2 + 2o_5 + 10v_2^2)\frac{v_1\rho v_2\delta_l^4}{12\delta_t o_5}\frac{\partial^4 v_2}{\partial x_2^4} + C_{14}\frac{\rho\delta_l^4}{12o_4^3\delta_t o_2^3 o_1 2^2}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} + C_{15}\frac{cs^4 \rho\delta_l^4}{12o_3\delta_t o_2^2 o_1 3o_1^3}\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$(3cs^2 o_1 1o_5 - o_1 1 + o_1 1v_2^2 - o_1 1o_5 + 3cs^2 o_1 1 + o_1 1o_5 v_2^2 - 9cs^2 o_5 - 3o_5 v_2^2 + 3o_5)\frac{v_1\rho v_2\delta_l^4}{12o_1 1\delta_t o_5}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$$

$$C_{16}\frac{cs^2 v_1\delta_l^4}{12o_4^3\delta_t o_2^2 o_1 2^2}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + C_{17}\frac{cs^2 \rho\delta_l^4}{12o_4^2\delta_t o_2^3 o_1 2}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} + C_{18}\frac{cs^4 \rho\delta_l^4}{12o_3\delta_t o_2^2 o_1 3o_1^3}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} + (-2 + o_3)\frac{cs^4 v_1\delta_l^4}{6o_3\delta_t}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$$

$$(-2o_2 o_1 + 2o_2 o_1^2 - o_2^2 - o_2^2 o_1^2 + o_2 o_1 3 + 2o_2^2 o_1 - o_2 o_1 3o_1 + o_1 3o_1 - o_1^2)\frac{cs^4 \rho\delta_l^4}{\delta_t o_2^2 o_1 3o_1^2}\frac{\partial^4 v_1}{\partial x_2^2 \partial x_3^2} + C_{19}\frac{cs^2 v_3\delta_l^4}{12\delta_t o_8^2 o_2^2 o_6}\frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} +$$

$$(-o_8 o_6 - 9cs^2 o_6 - o_8 + 3cs^2 o_8 o_6 + o_8 o_6 v_3^2 + 3o_6 + 3cs^2 o_8 - 3o_6 v_3^2 + o_8 v_3^2)\frac{v_1\rho v_3\delta_l^4}{12\delta_t o_8 o_6}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + C_{20}\frac{cs^2 \rho\delta_l^4}{12\delta_t o_8 o_2^3 o_6}\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} +$$

$$+ (o_6 v_3^2 o_1 0 - 9cs^2 o_6 + v_3^2 o_1 0 + 3cs^2 o_6 o_1 0 + 3o_6 - o_6 o_1 0 + 3cs^2 o_1 0 - o_1 0 - 3o_6 v_3^2)\frac{v_1\rho v_3\delta_l^4}{12\delta_t o_6 o_1 0}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$$

$$(-3o_6 v_3^4 - 2cs^2 + 6v_3^4 + cs^2 o_6 - cs^4 o_6 - 12cs^2 o_6 v_3^2 + 24cs^2 v_3^2 + 3o_6 v_3^2 + 2cs^4 - 6v_3^2)\frac{v_1\delta_l^4}{24\delta_t o_6}\frac{\partial^4 \rho}{\partial x_3^4} + C_{21}\frac{\rho\delta_l^4}{24\delta_t o_8^2 o_2^3}\frac{\partial^4 v_1}{\partial x_3^4}$$

$$+ (-4 + 6cs^2 - 3cs^2 o_6 + 2o_6 - 5o_6 v_3^2 + 10v_3^2)\frac{v_1\rho v_3\delta_l^4}{12\delta_t o_6}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 36o_4 v_1^2 + 12o_4 cs^2 - 12cs^2 + o_4^2 cs^4 + 144cs^2 v_1^2 - 144o_4 cs^2 v_1^2 + 7o_4^2 v_1^4 - 36v_1^2 - 12o_4 cs^4 - 36o_4 v_1^4 - 7o_4^2 v_1^2 + 36v_1^4 + 12cs^4 - o_4^2 cs^2 + 24o_4^2 cs^2 v_1^2$

$C_2 = 3o_4^2 o_9 o_1 - 11o_4^2 cs^2 o_9 o_1 + 12o_4^2 + 12o_9 v_1^2 o_1 - 12o_4^2 o_1 + 18o_4^2 cs^2 o_9 - 6o_4^2 o_9 + 36o_4^2 cs^2 o_1 + 12o_4^2 v_1^2 o_1 - 6o_4 o_9 v_1^2 o_1 + 36cs^2 o_9 o_1 - 36o_4 cs^2 o_1 - 12o_4 v_1^2 o_1 + 6o_4^2 o_9 v_1^2 - 18o_4 cs^2 o_9 o_1 + 12o_4 o_1 + 6o_4 o_9 o_1 - 12o_9 o_1 - 12o_4^2 v_1^2 - 3o_4^2 o_9 v_1^2 o_1 - 36o_4^2 cs^2$

$C_3 = 6 - 3cs^2 o_7 o_1 + 3o_7 v_2^2 - 18cs^2 - o_7 o_1 v_2^2 + o_7 o_1 + 9cs^2 o_7 + 9cs^2 o_1 + 3o_1 v_2^2 - 3o_7 - 3o_1 - 6v_2^2$

$C_4 = 36cs^2 o_2 o_1 2 + 6o_4^2 v_1^2 o_1 2 - 12o_4^2 o_2 - 18o_4 cs^2 o_2 o_1 2 + 18o_4^2 cs^2 o_1 2 + 36o_4^2 cs^2 o_2 - 6o_4^2 o_1 2 + 12o_4^2 + 6o_4 o_2 o_1 2 + 12o_4^2 o_2 v_1^2 - 12o_2 o_1 2 - 3o_4^2 o_2 v_1^2 o_1 2 + 3o_4^2 o_2 o_1 2 - 12o_4 o_2 v_1^2 - 11o_4^2 cs^2 o_2 o_1 2 + 12o_4 o_2 + 12o_2 v_1^2 o_1 2 - 12o_4^2 v_1^2 - 6o_4 o_2 v_1^2 o_1 2 - 36o_4^2 cs^2 - 36o_4 cs^2 o_2$

$C_5 = 6 - 18cs^2 - o_8 o_2 v_3^2 + 3o_2 v_3^2 - 3o_8 - 3o_2 + 9cs^2 o_8 - 3cs^2 o_8 o_2 + 9cs^2 o_2 + o_8 o_2 + 3o_8 v_3^2 - 6v_3^2$

$C_6 = 12 + 234o_4 v_1^2 - 18o_4 + 198o_4 cs^2 - 132cs^2 + 82o_4^2 cs^4 + 672cs^2 v_1^2 - 1008o_4 cs^2 v_1^2 + 90o_4^2 v_1^4 - 156v_1^2 + 8o_4^2 - 34o_4^3 cs^2 v_1^2 - 9o_4^3 v_1^4 - o_4^3 - 5o_4^3 cs^4 + 6o_4^3 cs^2 + 10o_4^3 v_1^2 - 216o_4 cs^4 - 216o_4 v_1^4 - 98o_4^2 v_1^2 + 144v_1^4 + 144cs^4 - 78o_4^2 cs^2 + 404o_4^2 cs^2 v_1^2$

$C_7 = 12 + 378o_4 v_1^2 - 18o_4 + 54o_4 cs^2 - 36cs^2 + 14o_4^2 cs^4 + 432cs^2 v_1^2 - 648o_4 cs^2 v_1^2 + 310o_4^2 v_1^4 - 252v_1^2 + 8o_4^2 - 18o_4^3 cs^2 v_1^2 - 29o_4^3 v_1^4 - o_4^3 - o_4^3 cs^4 + 2o_4^3 cs^2 + 14o_4^3 v_1^2 - 36o_4 cs^4 - 756o_4 v_1^4 - 154o_4^2 v_1^2 + 504v_1^4 + 24cs^4 - 22o_4^2 cs^2 + 252o_4^2 cs^2 v_1^2$

$C_8 = 60o_4^2 cs^2 o_9^2 v_1^2 o_1^3 + 12o_4^2 cs^4 o_9 o_1^3 - 6o_4^3 cs^2 o_9 o_1^3 - 108o_4^2 cs^2 v_1^2 o_1^3 - 36o_4^3 v_1^4 o_1^3 + 12o_4 cs^2 o_9^2 o_1^3 - 99o_4^3 cs^2 o_9 v_1^2 o_1^3 + 72o_4^2 o_9 v_1^4 o_1^3 - 4o_4^3 o_9 v_1^2 o_1^3 + 12o_4^3 cs^4 o_9 o_1 - 36o_4 cs^2 o_9^2 v_1^2 o_1^3 + 36o_4 o_9 v_1^2 o_1^3 + 36o_4^3 v_1^4 o_1^3 - 12cs^2 o_9^2 o_1^3 + 12o_4^3 cs^4 o_9^3 + 18o_4^3 cs^2 o_9 o_1^3 - 6o_4 cs^4 o_9 o_1^3 + 18o_4^2 cs^2 o_9^2 v_1^2 o_1^2 - 306o_4 cs^2 o_9^2 v_1^2 o_1^3 + 36o_4^2 v_1^2 o_1^3 + 6o_4^3 o_9 v_1^2 o_1^2 + 54o_4^3 cs^2 o_9 v_1^2 o_1^2 + 12o_4 cs^2 o_9^2 o_1^2 + 6o_4^3 cs^4 o_9 o_1^3 - 12o_4^2 cs^2 o_9 o_1^3 - 108o_4^3 cs^2 v_1^2 o_1^2 + 36o_4^3 cs^2 o_9 v_1^2 o_1 - 90o_4 o_9 v_1^4 o_1^3 + 252cs^2 o_9^2 v_1^2 o_1^3 - 12o_4 cs^4 o_9^2 o_1^3 - 12o_4^3 cs^2 o_9 o_1 + 36o_4 o_9 v_1^4 o_1^2 + 108o_4^3 cs^2 v_1^2 o_1^3 + 6o_4^3 cs^2 o_9 o_1^3 - 18o_4^3 cs^4 o_9 o_1^2 + 12cs^4 o_9^2 o_1^3 + 72o_9 v_1^4 o_1^3 - 39o_4^3 o_9 v_1^4 o_1^3 - 19o_4^2 o_9 v_1^2 o_1^3 - 12o_4 cs^4 o_9^2 o_1^2 - 36o_4 o_9 v_1^4 o_1^3 - 36o_4^3 v_1^2 o_1^3 - 18o_4^3 cs^2 o_9^2 v_1^2 o_1 + 13o_4^3 cs^4 o_9^2 o_1^2 - o_4^2 cs^2 o_9^2 o_1^3 - 36o_4^3 v_1^4 o_1^3 - 6o_4^3 o_9^2 v_1^4 o_1^2 - 6o_4^2 cs^2 o_9^2 o_1^2 - o_4^3 cs^4 o_9^2 o_1^3 + 36o_4^3 v_1^2 o_1^3 + 4o_4^3 o_9 v_1^4 o_1^3 - 72o_4^2 o_9 v_1^2 o_1^3 + 6o_4^3 cs^2 o_9^2 o_1 + o_4^2 cs^4 o_9^2 o_1^3 - 5o_4^3 cs^2 o_9^2 o_1^2 + 198o_4^2 cs^2 o_9 v_1^2 o_1^3 - 72o_9^2 v_1^2 o_1^3 + 19o_4^2 o_9^2 v_1^4 o_1^3 + 39o_4^3 o_9 v_1^2 o_1^3 + 12o_4^3 cs^2 o_9 v_1^2 o_1^3 + 36o_4^2 cs^2 o_9 v_1^2 o_1^2 + 6o_4^2 cs^4 o_9^2 o_1^2 + 90o_4 o_9 v_1^2 o_1^3 - 3o_4^3 cs^2 o_9^2 v_1^2 o_1^2 - 36o_4^3 o_9 v_1^2 o_1^2 - 24o_4^3 cs^4 o_9^2 o_1 - 108o_4 cs^2 o_9 v_1^2 o_1^3$

$C_9 = 36cs^2 o_9^2 o_1^2 + 12o_4^3 o_9 - 12o_4 o_9 o_1 + 12o_4^3 o_1 - 12o_4^3 o_9 v_1^2 - 12o_4^2 v_1^2 o_1^2 + 12o_4^2 o_9^2 - 36o_4^2 cs^2 o_1^2 + 6o_4^2 o_9^2 v_1^2 o_1 - 18o_4^3 cs^2 o_9 o_1^2 - o_4^3 o_9^2 o_1^2 + 36o_4^2 cs^2 o_9 o_1 + o_4^3 o_9^2 v_1^2 o_1^2 + 12o_4^2 o_1^2 - 54o_4 cs^2 o_9^2 o_1^2 - 36o_4^2 cs^2 o_9^2 - 12o_4^2 o_9^2 v_1^2 - 12o_4^3 o_9^2 v_1^2 o_1 + 18o_4^2 cs^2 o_9 o_1^2 - 12o_9^2 o_1^2 + 18o_4 o_9^2 o_1^2 + 54o_4^2 cs^2 o_9 o_1 + 4o_4^2 o_9^2 v_1^2 o_1^2 + 12o_4^3 o_9 o_1 - 12o_4^3 o_1^2 - 12o_4^3 o_9 - 6o_4^2 o_9 o_1^2 + 36o_4^3 cs^2 o_9 + 18o_4^3 o_9 v_1^2 o_1 + 36o_4^3 cs^2 o_1^2 + 6o_4^2 o_9 v_1^2 o_1^2 - 4o_4^2 o_9^2 o_1^2 + 12o_4^2 cs^2 o_9^2 o_1^2 + 12o_4^3 v_1^2 o_1^2 - 18o_4^3 o_9 o_1 o_1 - 40o_4^3 cs^2 o_9 o_1 - 18o_4 o_9^2 v_1^2 o_1^2 + 6o_4^3 o_9 o_1^2 + 5o_4^3 cs^2 o_9^2 o_1^2 + 18o_4^2 cs^2 o_9^2 o_1 - 12o_4^3 v_1^2 o_1 - 36o_4^3 cs^2 o_1 + 12o_4^3 o_9 v_1^2 o_1 - 6o_4^2 o_9^2 o_1 + 12o_4^3 o_9^2 v_1^2 - 36o_4^3 cs^2 o_9 - 6o_4^2 o_9 v_1^2 o_1^2 + 12o_9^3 v_1^2 o_1^2$

$C_{10} = 12o_4^2cs^2o_1^3 + 36o_4o_9v_1^2o_1^2 - 12o_4^2o_1^3 - 72o_4^2v_1^2o_1^2 - 24o_4^2cs^2o_1^2 - 36o_9v_1^2o_1^2 + 36o_4^2v_1^2o_1^3 + 18o_4^2cs^2o_9o_1 + 24o_4^2o_1^2 - 4o_4^2cs^2o_9o_1^2 - 12o_4^2o_1 - 12o_4^2cs^2o_9 + 12o_4^2cs^2o_1 - o_4^2cs^2o_9o_1^3 + 36o_4^2v_1^4o_1 - 36o_4o_9v_1^2o_1 - 12o_4cs^2o_9o_1 + 12o_9o_1^2 - 12o_4o_9o_1^2 + 12o_4o_9o_1 - 24o_4cs^2o_1^2 - 12o_1^3 + 72o_4v_1^2o_1^2 + 12cs^2o_1^3 - 24o_4o_1^2 + 12o_4cs^2o_9o_1^2 + 36v_1^2o_1^3 - 12cs^2o_9o_1^2 + 24o_4cs^2o_1^2 + 24o_4o_1^3 - 72o_4v_1^2o_1^3$

$C_{11} = -12o_7^2o_1o_5v_2^2 + 36cs^2o_7o_1 - o_7^2o_1^2o_5 + 6o_7o_1^2 - 12o_7o_5v_2^2 - 36cs^2o_7^2 - 36cs^2o_7o_5 - 18o_7o_1o_5 + 12o_7^2 - 6o_1^2o_5 - 3o_7o_1^2o_5v_2^2 + 12o_7o_1v_2^2 - 9cs^2o_7o_1^2o_5 - 12o_7o_1 - 12o_1o_5v_2^2 + 12o_7o_5 - 36cs^2o_7^2o_1o_5 + o_7^2o_1^2v_2^2 - 18cs^2o_7o_1^2 + 18cs^2o_1^2o_5 + 3cs^2o_7^2o_1^2o_5 - 12o_7^2o_5 + 6o_7^2o_1v_2^2 + 18o_7o_1o_5v_2^2 + 3cs^2o_7^2o_1^2 - 36cs^2o_1o_5 + 6o_1^2o_5v_2^2 - 6o_7o_1v_2^2 + 54cs^2o_7o_1o_5 - 6o_7^2o_1 - o_7^2o_1^2 + 36cs^2o_7^2o_5 + 3o_7o_1^2o_5 + 12o_1o_5 + o_7^2o_1^2o_5v_2^2 + 12o_7^2o_5v_2^2 + 12o_7^2o_1o_5 - 12o_7^2v_2^2 + 18cs^2o_7^2o_1$

$C_{12} = -o_7o_1^3 - cs^2o_7o_1^3o_5 - 12cs^2o_7o_1 - 18o_1^3v_2^2 - 6o_7o_1^2 - 12cs^2o_7o_5 + 6cs^2o_1^3o_5 + 18o_1^3o_5v_2^2 + 18o_1^2o_5 + cs^2o_7o_1^3 + 36o_1^2v_2^2 - 3o_7o_1^2o_5v_2^2 - 36o_7o_1v_2^2 - 5cs^2o_7o_1^2o_5 + 12o_7o_1 + 36o_1o_5v_2^2 - 6o_1^3o_5 + 6cs^2o_7o_1^2 - 18cs^2o_1^2o_5 + 12cs^2o_1o_5 - 54o_1^2o_5v_2^2 + 18o_7o_1^2v_2^2 + 18cs^2o_7o_1o_5 + 6o_1^3 + o_7o_1^2o_5 - 12o_1o_5 - 6cs^2o_1^3 - 12o_1^2 + 3o_7o_1^3v_2^2 + 12cs^2o_1^2$

$C_{13} = 6cs^4o_7o_1^3 - 216cs^2o_1^2v_2^2 - 24cs^2o_7o_1 - 36cs^2o_7^2o_1v_2^2 - 36o_1^3v_2^2 - 30o_7o_1^3v_2^4 - 24cs^4o_7o_1^2 + 144cs^2o_7o_1^2v_2^2 - 3o_7^2o_1^3v_2^2 - 6cs^2o_7o_1^3 + 72o_1^3v_2^2 + 108cs^2o_1^3v_2^2 + 24cs^4o_7o_1 + 12o_7^2o_1^2v_2^2 + 24cs^2o_7o_1^2 - 72cs^2o_7o_1^3v_2^2 + 72o_7o_1^3v_2^2 + 24cs^4o_7^2 - 8cs^2o_7^2o_1^2 - 72o_1^4v_2^2 + 6cs^2o_7^2o_1^3v_2^2 + cs^2o_7^2o_1^3 - 72o_7o_1^2v_2^2 - 12o_7o_1^2v_2^4 - 48cs^4o_7^2o_1 + 24cs^4o_7^2o_1^2 + 36o_1^3v_2^4 + 72cs^2o_7o_1v_2^2 - 3cs^4o_7^2o_1^3 + 3o_7^2o_1^3v_2^2 + 30o_7o_1^3v_2^2 - 12cs^2o_7^2o_1^2v_2^2 + 12cs^2o_7^2o_1$

$C_{14} = 54o_4^3cs^2o_2^2v_1^2o_12 + 13o_4^3cs^4o_2^2o_12^2 + 6o_4^2cs^2o_2^3o_12 - 4o_4^3o_2^3v_1^2o_12^2 + 36o_4^3o_2^2v_1^2 - 72o_4^2o_2^3v_1^2o_12 + 60o_4^2cs^2o_2^3v_1^2o_12^2 + 12o_4cs^4o_2^3o_12 - 6o_4^3o_2^2v_1^4o_12^2 - 6o_4^2cs^2o_2^2o_12^2 + 6o_4^3cs^4o_2^3o_12 - 306o_4cs^2o_2^3v_1^2o_12^2 - 36o_4o_2^3v_1^4o_12 - 36o_4^2o_2^3v_1^4 + o_4^2cs^4o_2^3o_12^2 + 18o_4^3cs^2o_2^2o_12 + 12o_4^3cs^4o_2^1o_12^2 - 5o_4^3cs^2o_2^3o_12^2 - 6o_4^2cs^4o_2^3o_12 - o_4^3cs^4o_2^3o_12 - 12o_4^2cs^2o_2^3o_12 - 36o_4^3o_2^3v_1^2 - 108o_4cs^2o_2^3v_1^2o_12 + 252cs^2o_2^3v_1^2o_12^2 - 90o_4o_2^3v_1^4o_12^2 - 19o_4^2o_2^3v_1^2o_12^2 + 72o_2^3v_1^4o_12^2 + 6o_4^2cs^4o_2^2o_12^2 - 6o_4^2cs^2o_2^3o_12 + 198o_4cs^2o_2^3v_1^2o_12 + 36o_4^3o_2^2v_1^4o_12 - 3o_4^3cs^2o_2^2v_1^2o_12^2 - o_4^2cs^2o_2^3o_12^2 - 18o_4^3cs^4o_2^2o_12 + 39o_4^3o_2^3v_1^2o_12 + 36o_4^3o_3^3v_1^4 + 36o_4o_2^3v_1^2o_12 - 36o_4cs^2o_2^3v_1^2o_12^2 + 12cs^4o_2^3o_12^2 + 12o_4^3cs^4o_2o_12 + 18o_4^2cs^2o_2^3v_1^2o_12^2 - 12o_4cs^4o_2^3o_12^2 + 6o_4^2cs^2o_2o_12^2 + 4o_4^3o_2^3v_1^4o_12^2 + 72o_4^2o_2^3v_1^4o_12 - 18o_4^3cs^2o_2v_1^2o_12^2 + 108o_4^2cs^2o_2^3v_1^2 + 12o_4cs^2o_2^3o_12^2 + 6o_4^3o_2^2v_1^2o_12^2 - 99o_4^3cs^2o_2^3v_1^2o_12 + 19o_4^2o_2^3v_1^4o_12^2 - 72o_2^3v_1^2o_12^2 + 36o_4^3cs^2o_2v_1^2o_12 - 36o_4^2o_2^3v_1^2o_12 + 12o_4^3cs^2o_2^3v_1^2o_12^2 + 36o_4^2cs^2o_2^3v_1^2o_12 - 108o_4^2cs^2o_2^3v_1^2 - 12o_4^3cs^2o_2o_12 - 39o_4^3o_2^3v_1^4o_12 - 36o_4^3o_2^3v_1^4 - 12cs^2o_2^3o_12^2 + 12o_4cs^2o_2^3o_12^2 + 36o_4^2o_2^3v_1^2 - 24o_4^3cs^4o_2o_12^2 - 108o_4^3cs^2o_2^3v_1^2 + 90o_4o_2^3v_1^2o_12^2 - 12o_4cs^4o_2^3o_12^2$

$C_{15} = 12o_2^2o_1 3o_1 - 24o_3o_2^2o_1 3 - 12o_3o_2o_1^2 - 6o_3o_2o_1 3o_1^2 + 24o_3o_2o_1^3 + 12o_3o_2o_1 3o_1 - 2o_2^2o_1 3o_1^3 - 12o_3o_1^3 - 12o_2o_1^3 - 6o_2^2o_1 3o_1^2 + 12o_1 3o_1^3 - 6o_2o_1 3o_1^2 + 24o_3o_2^2o_1 3o_1 + 12o_2^2o_1^3 - 12o_2^2o_1^2 - o_3o_2^2o_1 3o_1^3 - 12o_3o_2^2o_1^3 - 2o_3o_2^2o_1 3o_1^2 + 12o_3o_2^2o_1^2$

$C_{16} = 18o_4^3o_2v_1^2o_12 - 12o_4^3o_2^2 + 12o_4^3o_2^2v_1^2 - 4o_4^2o_2^2o_12^2 + 6o_4^2o_2v_1^2o_12^2 - 12o_4^3o_12^2 + 12o_4^2cs^2o_2^2o_12^2 - 18o_4^3o_2o_12 - 18o_4^3cs^2o_2^2o_12 + 12o_4^2o_12^2 - 36o_4^2cs^2o_2^2 + 12o_4^3o_2o_12^2 + 5o_4^3cs^2o_2^3o_12^2 - 18o_4o_2^2v_1^2o_12^2 + 18o_4^2cs^2o_2^3o_12 - 36o_4^2cs^2o_12^2 + 12o_4^2o_2^2 - 12o_4^2v_1^2o_12^2 + 12o_4o_2v_1^2o_12 + 12o_4^3o_12 - 6o_4^2o_2o_12 + 12o_2^2v_1^2o_12^2 + 12o_4^3o_2 - 12o_4^3o_2v_1^2o_12^2 + 36cs^2o_2^2o_12^2 - 36o_4^3cs^2o_2 - 12o_4^2o_2o_12 - 36o_4^3cs^2o_12 - 12o_4^3v_1^2o_12 + 6o_4^2o_2v_1^2o_12 - 40o_4^3cs^2o_2o_12^2 - o_4^3o_2^2o_12^2 + 36o_4^2cs^2o_2o_12 - 12o_4^2o_2v_1^2 - 54o_4cs^2o_2^3o_12^2 + o_4^3o_2v_1^2o_12^2 + 18o_4^2cs^2o_2o_12^2 - 6o_4^2o_2v_1^2o_12 - 12o_2^3o_12^2 + 12o_4^3v_1^2o_12^2 + 18o_4o_2^3o_12^2 + 4o_4^2o_2v_1^2o_12^2 + 54o_4^3cs^2o_2o_12 + 6o_4^3o_2o_12 - 12o_4^3o_2v_1^2 + 36o_4^3cs^2o_12^2 + 36o_4^3cs^2o_2^2 - 6o_4^2o_2o_12^2$

$C_{17} = -36o_2^2v_1^2o_12 - o_4^2cs^2o_2^3o_12 - 12o_4^2o_2 - 72o_4o_2^3v_1^2 - 12o_4cs^2o_2o_12 - 12o_4^2cs^2o_12 + 12o_4^2cs^2o_2 + 36o_2^3v_1^2 + 36o_4o_2^2v_1^2o_12 + 12o_4o_2o_12 - 24o_4^2cs^2o_2^2 - 4o_4^2cs^2o_2^3o_12 + 24o_4^2o_2 + 36o_4^2o_2v_1^2 + 12o_4^2cs^2o_2^3 - 12o_4^2o_2^3 + 72o_4o_2^3v_1^2 + 24o_4cs^2o_2^2 + 24o_4o_2^3 - 24o_4cs^2o_2^3 - 12o_4o_2^2o_12 - 12o_2^3 + 18o_4^2cs^2o_2o_12 - 24o_4o_2^2 - 72o_4^2o_2v_1^2 + 12o_2^2o_12 + 12cs^2o_2^3 + 12o_4cs^2o_2^2o_12 + 36o_4^2o_2^3v_1^2 - 36o_4o_2v_1^2o_12 - 12cs^2o_2^2o_12$

$C_{18} = 12o_2^2o_1 3 + 24o_3o_2o_1 3o_1^2 - 12o_3o_2o_1^3 + 12o_3o_2o_1 3o_1 - o_3o_2^2o_1 3o_1^2 - 6o_2^2o_1 3o_1^2 - 12o_3o_2^2o_1 - 12o_2^2o_1 - 6o_3o_2^2o_1 3o_1 - 12o_3o_2^3o_1^2 + 12o_2o_1 3o_1^2 - 12o_2^2o_1^2 - 6o_2^2o_1 3o_1 - 2o_2^3o_1 3o_1^2 + 24o_3o_2^3o_1 + 12o_2^2o_1^2 - 2o_3o_2^2o_1 3o_1^2 - 24o_3o_1 3o_1^2 + 12o_3o_2^2o_1^2$

$C_{19} = o_8^2o_2^2v_3^2 - 6o_8^2o_2 - 12o_8^2v_3^2 + 3o_8o_2^2o_6 + 12o_8o_6 + 12o_8o_2v_3^2 + 3cs^2o_8^2o_2^2 + 18cs^2o_8^2o_6 + 18o_8o_2o_6v_3^2 + 12o_8^2o_2o_6 + 6o_2^2o_6v_3^2 + 3cs^2o_8^2o_2^2o_6 + 12o_8^2o_6v_3^2 + 18cs^2o_8^2o_2 + o_8^2o_2^2o_6v_3^2 - o_8^2o_2^2 - 36cs^2o_8o_6 + 54cs^2o_8o_2o_6 - 6o_2^2o_6 - 9cs^2o_8o_2^2o_6 + 36cs^2o_8^2o_6 + 6o_8o_2^2 - 12o_8o_6v_3^2 + 12o_2o_6 - 36cs^2o_8^2o_2o_6 - 12o_8^2o_2o_6v_3^2 + 36cs^2o_8o_2 - 18cs^2o_8o_2^2 - 6o_8o_2^2v_3^2 - 36cs^2o_8^2 - 12o_8^2o_6 - o_8^2o_2^2o_6 - 36cs^2o_2o_6 + 12o_8^2 + 6o_8^2o_2v_3^2 - 12o_8o_2 - 3o_8o_2^2o_6v_3^2 - 12o_2o_6v_3^2 - 18o_8o_2o_6$

$C_{20} = o_8o_2^2o_6 - 6o_2^3o_6 - 36o_8o_2v_3^2 - 18cs^2o_2^2o_6 - 54o_2^2o_6v_3^2 - 12cs^2o_8o_6 + 18cs^2o_8o_2o_6 + 6cs^2o_2^3o_6 + 18o_2^2o_6 - 5cs^2o_8o_2^2o_6 + 18o_2^3o_6v_3^2 - 6o_8o_2^2 - 12o_2^2 + 12cs^2o_2^2 + 3o_8o_2^3v_3^2 - 12o_2o_6 + 6o_2^3 - o_8o_2^3 + 36o_2^2v_3^2 - 12cs^2o_8o_2 - 6cs^2o_2^2 + 6cs^2o_8o_2^2 + 18o_8o_2^3v_3^2 + 12cs^2o_2o_6 - cs^2o_8o_2^3o_6 + cs^2o_8o_2^3 - 18o_2^3v_3^2 + 12o_8o_2 - 3o_8o_2^2o_6v_3^2 + 36o_2o_6v_3^2$

$C_{21} = cs^2o_8^2o_2^3 + 12o_8^2o_2^3v_3^2 - 72cs^2o_8o_2^3v_3^2 - 48cs^4o_8^2o_2 + 72o_8o_2^3v_3^4 + 36o_2^3v_3^4 - 8cs^2o_8^2o_2^2 - 30o_8o_2^3v_3^4 - 3cs^4o_8^2o_2^3 + 144cs^2o_8o_2^2v_3^2 - 3o_8^2o_2^3v_3^2 + 12cs^2o_8^2o_2 + 24cs^4o_8^2 + 24cs^4o_8^2o_2^2 - 72o_2^3v_3^4 - 36cs^2o_8^2o_2v_3^2 + 3o_8^2o_2^3v_3^4 - 24cs^4o_8o_2^2 + 30o_8o_2^3v_3^2 - 12cs^2o_8^2o_2^3v_3^2 + 6cs^4o_8o_2^3 + 72o_2^3v_3^2 + 72cs^2o_8o_2v_3^2 + 108cs^2o_2^3v_3^2 - 24cs^2o_8o_2 + 6cs^2o_8^2o_2^3v_3^2 + 24cs^2o_8o_2^2 - 72o_8o_2^3v_3^2 - 12o_8^2o_2^3v_3^4 - 216cs^2o_2^3v_3^2 - 6cs^2o_8o_2^3 - 36o_2^3v_3^2 + 24cs^4o_8o_2$

2.6.4 Conservation of momentum: ρv_2

📎 attached text file: `output_d3q27_nse_culbm1_symbolic_pde_02.txt`

$v_2\dfrac{\partial\rho}{\partial t} + \rho\dfrac{\partial v_2}{\partial t} + \dfrac{v_1v_2\delta_l}{\delta_t}\dfrac{\partial\rho}{\partial x_1} + \dfrac{\rho v_2\delta_l}{\delta_t}\dfrac{\partial v_1}{\partial x_1} + \dfrac{v_1\rho\delta_l}{\delta_t}\dfrac{\partial v_2}{\partial x_1} + \left(cs^2+v_2^2\right)\dfrac{\delta_l}{\delta_t}\dfrac{\partial\rho}{\partial x_2} + \dfrac{2\rho v_2\delta_l}{\delta_t}\dfrac{\partial v_2}{\partial x_2} + \dfrac{v_3v_2\delta_l}{\delta_t}\dfrac{\partial\rho}{\partial x_3} + \dfrac{\rho v_3\delta_l}{\delta_t}\dfrac{\partial v_2}{\partial x_3} + \dfrac{\rho v_2\delta_l}{\delta_t}\dfrac{\partial v_3}{\partial x_3} + \left(-2+o_1\right)\dfrac{cs^2\delta_l^2}{2o_1\delta_t}\dfrac{\partial\rho}{\partial x_1}\dfrac{\partial v_2}{\partial x_1} + \left(-2+o_1\right)\dfrac{cs^2\delta_l^2}{2o_1\delta_t}\dfrac{\partial\rho}{\partial x_1}\dfrac{\partial v_1}{\partial x_2} +$

$$(-2 - 2cs^2 o_5 + 4cs^2 - 3o_5 v_2^2 + o_5 + 6v_2^2)\frac{\delta_l^2}{\delta_t o_5}\frac{\partial \rho}{\partial x_2}\frac{\partial v_2}{\partial x_2} + (2 - o_5)\frac{3\rho v_2 \delta_l^2}{\delta_t o_5}\left(\frac{\partial v_2}{\partial x_2}\right)^2 + (-2 + o_3)\frac{cs^2 \delta_l^2}{2\delta_t o_3}\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_2} +$$

$$(-2+o_3)\frac{cs^2\delta_l^2}{2\delta_t o_3}\frac{\partial \rho}{\partial x_3}\frac{\partial v_2}{\partial x_3} + (-2+o_1)\frac{cs^2\rho\delta_l^2}{2o_1\delta_t}\frac{\partial^2 v_2}{\partial x_1^2} + (-2+o_1)\frac{cs^2\rho\delta_l^2}{2o_1\delta_t}\frac{\partial^2 v_1}{\partial x_1 \partial x_2} +$$

$$(-2-3cs^2 o_5 + 6cs^2 - o_5 v_2^2 + o_5 + 2v_2^2)\frac{v_2\delta_l^2}{2\delta_t o_5}\frac{\partial^2\rho}{\partial x_2^2} + (-2 - cs^2 o_5 + 2cs^2 - 3o_5 v_2^2 + o_5 + 6v_2^2)\frac{\rho\delta_l^2}{2\delta_t o_5}\frac{\partial^2 v_2}{\partial x_2^2} +$$

$$(-2+o_3)\frac{cs^2\rho\delta_l^2}{2\delta_t o_3}\frac{\partial^2 v_3}{\partial x_2 \partial x_3} + (-2+o_3)\frac{cs^2\rho\delta_l^2}{2\delta_t o_3}\frac{\partial^2 v_2}{\partial x_3^2} + (-1 + v_1^2 + 3cs^2)\frac{v_1 v_2 \delta_l^3}{12\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + (-1 + 3v_1^2 + cs^2)\frac{\rho v_2 \delta_l^3}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} +$$

$$C_1 \frac{v_1 \rho \delta_l^3}{6o_1 \delta_t o_9}\frac{\partial^3 v_2}{\partial x_1^3} + (-12 + 12o_1 - o_1^2)\frac{cs^4\delta_l^3}{6o_1^2\delta_t}\frac{\partial^3\rho}{\partial x_1^2 \partial x_2} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} + C_2\frac{\rho v_2\delta_l^3}{12o_7 o_1\delta_t o_5^2}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + C_3 \frac{\delta_l^3}{12\delta_t o_5^2}\frac{\partial^3\rho}{\partial x_2^3} +$$

$$(-24 + 5cs^2 o_5^2 - 36cs^2 o_5 + 36cs^2 + 11o_5^2 v_2^2 - 60o_5 v_2^2 + 24o_5 + 60v_2^2 - 4o_5^2)\frac{\rho v_2 \delta_l^3}{6\delta_t o_5^2}\frac{\partial^3 v_2}{\partial x_2^3} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} +$$

$$C_4 \frac{\rho v_2\delta_l^3}{12\delta_t o_3 o_{11} o_5^2}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} + (-12 - o_3^2 + 12o_3)\frac{cs^4\delta_l^3}{6\delta_t o_3^2}\frac{\partial^3\rho}{\partial x_2 \partial x_3^2} - \frac{cs^2\rho v_2\delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$$

$$(-1 + 3cs^2 + v_3^2)\frac{v_3 v_2\delta_l^3}{12\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + C_5\frac{\rho v_3\delta_l^3}{6\delta_t o_{10} o_3}\frac{\partial^3 v_2}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2)\frac{\rho v_2\delta_l^3}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$(-cs^4 o_4 - 6v_1^2 - 3o_4 v_1^4 - 2cs^2 - 12cs^2 o_4 v_1^2 + 3o_4 v_1^2 + 2cs^4 + cs^2 o_4 + 6v_1^4 + 24cs^2 v_1^2)\frac{v_2\delta_l^4}{24o_4\delta_t}\frac{\partial^4\rho}{\partial x_1^4} +$$

$$(-4 + 2o_4 + 10v_1^2 + 6cs^2 - 5o_4 v_1^2 - 3cs^2 o_4)\frac{v_1\rho v_2\delta_l^4}{12o_4\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_6\frac{\rho\delta_l^4}{24o_1^3\delta_t o_9^2}\frac{\partial^4 v_2}{\partial x_1^4} + C_7\frac{cs^2 v_1\delta_l^4}{12o_1^2 o_4\delta_t o_9^2}\frac{\partial^4\rho}{\partial x_1^3 \partial x_2} +$$

$$C_8\frac{cs^2\rho\delta_l^4}{12o_1^3 o_4\delta_t o_9}\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + (-o_4 o_9 + o_4 o_9 v_1^2 + o_9 v_1^2 + 3o_4 - o_9 + 3cs^2 o_9 - 3o_4 v_1^2 - 9cs^2 o_4 + 3cs^2 o_4 o_9)\frac{v_1\rho v_2\delta_l^4}{12o_4\delta_t o_9}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} +$$

$$C_9\frac{cs^2 v_2\delta_l^4}{12o_7^2 o_1^2\delta_t o_5}\frac{\partial^4\rho}{\partial x_1^2 \partial x_2^2} + C_{10}\frac{cs^2\rho\delta_l^4}{12o_7 o_1^3\delta_t o_5}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} + C_{11}\frac{\rho\delta_l^4}{12o_7^2 o_1^3\delta_t o_5}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} + C_{12}\frac{v_2\delta_l^4}{12\delta_t o_5^3}\frac{\partial^4\rho}{\partial x_2^4} + C_{13}\frac{\rho\delta_l^4}{12\delta_t o_5^3}\frac{\partial^4 v_2}{\partial x_2^4} +$$

$$(3cs^2 o_{12} + 3o_4 - o_4 o_{12} + 3cs^2 o_4 o_{12} - 3o_4 v_1^2 - 9cs^2 o_4 + o_4 v_1^2 o_{12} - o_{12} + v_1^2 o_{12})\frac{v_1\rho v_2\delta_l^4}{12o_4\delta_t o_{12}}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$$

$$C_{14}\frac{cs^4\rho\delta_l^4}{12o_1^3\delta_t o_2 o_3^2 o_{13}}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + C_{15}\frac{\rho\delta_l^4}{12\delta_t o_3 o_{11}^2 o_5}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} + (-2 + o_2)\frac{cs^4 v_2\delta_l^4}{6\delta_t o_2}\frac{\partial^4\rho}{\partial x_1^2 \partial x_3^2} +$$

$$(-2o_1 o_3 - o_1 o_3 o_{13} + o_1 o_{13} + o_3 o_{13} - o_1^2 - o_3^2 + 2o_1 o_3^2 - o_1^2 o_3^2 + 2o_1^2 o_3)\frac{cs^4\rho\delta_l^4}{o_1^2\delta_t o_3^2 o_{13}}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_3^2} +$$

$$C_{16}\frac{cs^4\rho\delta_l^4}{12o_1^2\delta_t o_2 o_3^3 o_{13}}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + C_{17}\frac{cs^2 v_2\delta_l^4}{12\delta_t o_2^2 o_{11}^2 o_5}\frac{\partial^4\rho}{\partial x_2^2 \partial x_3^2} + C_{18}\frac{cs^2\rho\delta_l^4}{12\delta_t o_3^3 o_{11} o_5^2}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} +$$

$$(-3o_6 v_3^2 + 3cs^2 o_8 - o_6 o_8 + v_3^2 o_8 - 9cs^2 o_6 + o_6 v_3^2 o_8 + 3o_6 + 3cs^2 o_6 o_8 - o_8)\frac{\rho v_3 v_2\delta_l^4}{12\delta_t o_6 o_8}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + C_{19}\frac{cs^2 v_3\delta_l^4}{12\delta_t o_{10}^2 o_3^2 o_6}\frac{\partial^4\rho}{\partial x_2 \partial x_3^3}$$

$$+ (3cs^2 o_{10} - 3o_6 v_3^2 + o_{10} v_3^2 - o_{10} + 3cs^2 o_{10} o_6 - 9cs^2 o_6 - o_{10} o_6 + 3o_6 + o_{10} o_6 v_3^2)\frac{\rho v_3 v_2\delta_l^4}{12\delta_t o_{10} o_6}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$$

$$C_{20}\frac{cs^2\rho\delta_l^4}{12\delta_t o_{10} o_3^3 o_6}\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} + (3o_6 v_3^2 - cs^4 o_6 + 6v_3^4 + 24cs^2 v_3^2 - 2cs^2 + cs^2 o_6 + 2cs^4 - 12cs^2 o_6 v_3^2 - 3o_6 v_3^4 - 6v_3^2)\frac{v_2\delta_l^4}{24\delta_t o_6}\frac{\partial^4\rho}{\partial x_3^4} +$$

$$+ C_{21}\frac{\rho\delta_l^4}{24\delta_t o_{10}^2 o_3^3}\frac{\partial^4 v_2}{\partial x_3^4} + (-4 - 5o_6 v_3^2 + 6cs^2 - 3cs^2 o_6 + 2o_6 + 10v_3^2)\frac{\rho v_3 v_2\delta_l^4}{12\delta_t o_6}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 6 - 3o_1 + 3o_9 v_1^2 - 6v_1^2 + 3o_1 v_1^2 - o_1 o_9 v_1^2 - 18cs^2 - 3cs^2 o_1 o_9 - 3o_9 + 9cs^2 o_9 + o_1 o_9 + 9cs^2 o_1$

$C_2 = 36cs^2 o_1 o_5^2 + 12o_1 o_5^2 v_2^2 + 12o_7 o_1 v_2^2 + 36o_7 cs^2 o_1 - 36cs^2 o_5^2 + 3o_7 o_1 o_5^2 + 6o_7 o_1 o_5 - 6o_7 o_1 o_5 v_2^2 - 12o_5^2 v_2^2 - 36cs^2 o_1 o_5 - 12o_7 o_1 - 11o_7 cs^2 o_1 o_5^2 + 12o_1 o_5 - 3o_7 o_1 o_5^2 v_2^2 - 6o_7 o_5^2 + 6o_7 o_5^2 v_2^2 + 18o_7 cs^2 o_5^2 - 18o_7 cs^2 o_1 o_5 - 12o_1 o_5 v_2^2 - 12o_1 o_5^2 + 12o_5^2$

$C_3 = 36v_2^4 + 144cs^2 v_2^2 - cs^2 o_5^2 + 12cs^2 o_5 - 12cs^2 - 36o_5 v_2^4 - 144cs^2 o_5 v_2^2 - 7o_5^2 v_2^2 + 24cs^2 o_5^2 v_2^2 + cs^4 o_5^2 + 12cs^4 + 36o_5 v_2^2 + 7o_5^2 v_2^4 - 36v_2^2 - 12cs^4 o_5$

$C_4 = -12o_3 o_5 v_2^2 - 11cs^2 o_3 o_{11} o_5^2 + 6o_{11} o_5^2 v_2^2 - 36cs^2 o_3 o_5 - 12o_3 o_{11} - 3o_3 o_{11} o_5^2 v_2^2 - 36cs^2 o_5^2 - 18cs^2 o_3 o_{11} o_5 - 6o_{11} o_5^2 + 36cs^2 o_3 o_5^2 - 12o_5^2 v_2^2 - 12o_3 o_5^2 + 18cs^2 o_1 1o_5^2 + 6o_3 o_{11} o_5 + 12o_3 o_{11} v_2^2 - 6o_3 o_{11} o_5 v_2^2 + 36cs^2 o_3 o_{11} + 12o_3 o_5^2 v_2^2 + 3o_3 o_{11} o_5^2 + 12o_3 o_5 + 12o_5^2$

$C_5 = 6 + 9cs^2 o_{10} - 3cs^2 o_{10} o_3 + 3o_{10} v_3^2 - 18cs^2 - 3o_{10} - o_{10} o_3 v_3^2 - 3o_3 + 3o_3 v_3^2 + o_{10} o_3 + 9cs^2 o_3 - 6v_3^2$

$C_6 = 3o_1^3 o_9^2 v_1^4 - 72o_1^2 v_1^4 + 24cs^4 o_1 o_9 + 12cs^2 o_1 o_9^2 - 216cs^2 o_1^2 v_1^2 + 6cs^2 o_1^3 o_9^2 v_1^2 + 30o_1^3 o_9 v_1^2 - 36cs^2 o_1 o_9^2 v_1^2 + 36o_1^3 v_1^4 - 24cs^2 o_1 o_9 + 72o_1^2 o_9 v_1^4 - 48cs^4 o_1 o_9^2 + 144cs^2 o_1^2 o_9 v_1^2 + 12o_1^2 o_9^2 v_1^2 + 108cs^2 o_1^3 v_1^2 - 36o_1^3 v_1^2 + 24cs^4 o_1^2 o_9^2 - 12cs^2 o_1^2 o_9^2 v_1^2 - 72o_1^2 o_9 v_1^2 + cs^2 o_1^3 o_9^2 + 6cs^4 o_1^3 o_9 + 72cs^2 o_1 o_9 v_1^2 + 24cs^2 o_1^2 o_9 - 12o_1^2 o_9^2 v_1^4 + 24cs^4 o_9^2 - 8cs^2 o_1^2 o_9^2 - 72cs^2 o_1^3 o_9 v_1^2 - 3o_1^3 o_9^2 v_1^2 + 72o_1^2 v_1^2 - 3cs^4 o_1^3 o_9^2 - 6cs^2 o_1^3 o_9 - 30o_1^3 o_9 v_1^4 - 24cs^4 o_1^2 o_9$

$C_7 = 12o_4 o_9 + 12o_1 o_4 o_9^2 - 36cs^2 o_9^2 - 12o_4 o_9 v_1^2 + 18cs^2 o_1 o_9^2 - 12o_1 o_4 o_9^2 v_1^2 + 3cs^2 o_1 o_4 o_9^2 - o_1^2 o_9^2 + 6o_1^2 o_4 v_1^2 - 9cs^2 o_1^2 o_4 o_9 + 12o_1 o_9 v_1^2 + 6o_1^2 o_9 - 3o_1^2 o_4 o_9 v_1^2 + 36cs^2 o_1 o_9 - 18o_1 o_4 o_9 + 18cs^2 o_1^2 o_4 + o_1^2 o_9^2 v_1^2 - 12o_4 o_9^2 + 12o_1 o_4 - 36cs^2 o_1 o_4 + 36cs^2 o_4 o_9^2 - 6o_1 o_9^2 v_1^2 + 54cs^2 o_1 o_4 o_9 - 6o_1^2 o_4 + 6o_1 o_9^2 v_1^2 - 12o_1 o_9 + 3o_1^2 o_4 o_9 - 18cs^2 o_1^2 o_9 + o_1^2 o_4 o_9^2 v_1^2 + 3cs^2 o_1^2 o_9^2 - 12o_9^2 v_1^2 + 18o_1 o_4 o_9 v_1^2 - 6o_1 o_9^2 + 12o_9^2 - o_1^2 o_4 o_9^2 + 12o_4 o_9^2 v_1^2 - 36cs^2 o_4 o_9 - 12o_1 o_4 v_1^2 - 36cs^2 o_1 o_4 o_9^2$

$C_8 = -o_1^3 o_9 - 54o_1^2 o_4 v_1^2 + 6cs^2 o_1^3 o_4 + 3o_1^3 o_9 v_1^2 - 5cs^2 o_1^2 o_4 o_9 - 36o_1 o_9 v_1^2 - 6o_1^2 o_9 - 3o_1^2 o_4 o_9 v_1^2 - 12cs^2 o_1 o_9 - 12o_1^2 - 18cs^2 o_1^2 o_4 + 6o_1^3 -$

$12o_1o_4 - 18o_1^3v_1^2 + 18o_3^3o_4v_1^2 + 12cs^2o_1o_4 + 18o_1^2o_9v_1^2 + 18cs^2o_1o_4o_9 + 12cs^2o_1^2 + 18o_1^3o_4 + 12o_1o_9 + o_1^2o_4o_9 + 6cs^2o_1^2o_9 - 6cs^2o_1^3 - 6o_1^3o_4 + 36o_1^2v_1^2 + cs^2o_1^3o_9 - cs^2o_1^3o_4o_9 - 12cs^2o_4o_9 + 36o_1o_4v_1^2$

$C_9 = 6o_7^2o_1o_5^2v_2^2 - 6o_7o_1^2o_5v_2^2 + 36o_7^2cs^2o_5^3 - 18o_7o_1o_5^3 - 4o_7^2o_1o_5^2 + 18o_7^2cs^2o_1o_5^2 + 12o_1o_5^2 - 36cs^2o_1o_5^3 - 18o_7^2o_1o_5v_2^2 + 12o_7o_5^3v_2^2 + 12o_7^2o_1^2v_2^2 - 12o_1^3o_5 - 40o_7^2cs^2o_1o_5^3 - o_7^2o_1^3o_5 - 36o_7^2cs^2o_5^2 - 12o_7o_1o_5^2 + 12o_7^2o_5^3 - 18o_7cs^2o_1^2o_5^3 - 12o_1o_5^3v_2^2 + 6o_7o_1^2o_5^2v_2^2 - 12o_7^2o_1o_5^3v_2^2 + 18o_7cs^2o_1^2o_5^2 - 12o_7^2o_5^3 + 18o_7o_1^2o_5 - 12o_7o_5^3v_2^2 + 12o_1^3o_5^2v_2^2 + 36o_7cs^2o_1o_5^2 + 12o_7o_5^3 - 54o_7^2cs^2o_1o_5 + o_7^2o_1o_5^3v_2^2 + 12o_7o_1o_5^3v_2^2 + 36o_7^2cs^2o_1^2 + 54o_7cs^2o_1o_5^3 + 18o_7o_1o_5^3v_2^2 + 36cs^2o_1^2o_5^3 + 4o_7^2o_1^2o_5^2v_2^2 + 5o_7^2cs^2o_1^2o_5^3 + 12o_1o_5^3 - 6o_7o_1^2o_5^2 - 12o_1^2o_5^2v_2^2 - 36o_7cs^2o_5^3 + 12o_7^2o_1o_5^3 - 12o_7o_5^3v_2^2 - 12o_7^2o_1^2 - 36cs^2o_1^2o_5^2 - 6o_7o_1o_5^2 + 6o_7o_1^2o_5^3 + 12o_7^2cs^2o_1^2o_5^2$

$C_{10} = 12o_7o_1^2 + 12cs^2o_1o_5^2 + 36o_1o_5^2v_2^2 + 12o_7cs^2o_1^2o_5 + 24o_1^2o_5^2 + 24o_1^3o_5 + 72o_1^2o_5v_2^2 - o_7cs^2o_1^3o_5^2 - 12o_1^3o_5^2 + 12o_7o_1o_5 - 12o_7cs^2o_1^2 + 36o_1^3v_2^2 - 4o_7cs^2o_1^2o_5^2 - 24o_1^4o_5 + 36o_1^3o_5^2v_2^2 - 12o_1^3 - 36o_7o_1o_5v_2^2 + 18o_7cs^2o_1o_5 - 72o_1^3o_5v_2^2 + 24cs^2o_1^2o_5 - 12o_7o_1o_5 + 36o_7o_1^2o_5v_2^2 + 12cs^2o_1^3o_5 + 12cs^2o_1^3 - 24cs^2o_1^3o_5 - 72o_1^2o_5^2v_2^2 - 24cs^2o_1^2o_5^2 - 12o_7cs^2o_5^2 - 12o_7cs^2o_1o_5 - 12o_1o_5^2 - 36o_7o_1^2v_2^2$

$C_{11} = 36o_7o_1o_5^3v_2^2 - 18o_7cs^4o_1^2o_5^3 - 36o_7o_1^2o_5^3v_2^2 + 12o_7^2cs^4o_1^3 - 6o_7cs^2o_1^3o_5 + 18o_7^2cs^2o_1^2o_5^2v_2^2 + 12o_7cs^4o_1^2o_5^2 - 4o_7o_1^3o_5v_2^2 + 36o_7cs^2o_1^2o_5^2v_2^2 + 72o_7o_1^3o_5^2v_2^4 - 36o_1^3o_5^3v_2^2 + 6o_7cs^2o_1o_5^3 + 6o_7cs^2o_1^2o_5^3 - 6o_7o_1o_5^3v_2^2 - 3o_7cs^2o_1^2o_5^3v_2^2 + 18o_7cs^2o_1^2o_5^2o_5^3 - 306cs^2o_1^3o_5v_2^2 - 90o_7^2o_1^3o_5v_2^4 - 36o_1^2o_5^3v_2^4 + 6o_7cs^4o_1^3o_5^3 - 12o_7cs^2o_1^2o_5^2 - 72o_7^2o_1^3v_2^2 - 39o_7o_1^3o_5^3v_2^4 - 108cs^2o_1^2o_5^3v_2^2 + 36o_1^3o_5^2v_2^2 - 24o_7^2cs^4o_1o_5^3 + 54o_7cs^2o_1^2o_5^3v_2^2 - 19o_7^2o_1^3o_5^3v_2^2 - 6o_7cs^4o_1^3o_5^2 - 108o_7cs^2o_1^3o_5v_2^2 + 252o_7o_1^2cs^2o_1^3v_2^2 + 36o_1o_5^3v_2^2 - 108cs^2o_1^3o_5^2v_2^2 - 18o_7^2cs^2o_1o_5^3v_2^2 + 12o_7^2cs^2o_1o_5 - 12o_7cs^4o_1^3o_5 + 6o_7^2o_1^3o_5^3v_2^2 + 13o_7^2cs^4o_1^3o_5^3 + 198o_7cs^2o_1^3o_5^2v_2^2 + 90o_7^2o_1^3o_5v_2^2 - o_7^2cs^2o_1^3o_5^3 + 19o_7^2o_1^3o_5^2v_2^4 + 60o_7^2cs^2o_1^3o_5^2v_2^2 - 12o_7cs^2o_1o_5^3 + 12o_7^2cs^4o_1^3o_5 - 12o_7^2cs^2o_1^3 + 6o_7cs^4o_1^3o_5 + 72o_7^2o_1^3v_2^4 + 36o_7cs^2o_1o_5^3v_2^2 + 39o_7o_1^3o_5^3v_2^2 - 36o_1^3o_5^3v_2^4 - 99o_7cs^2o_1^3o_5^3v_2^2 - 12o_7cs^4o_1^2o_5 - o_7^2cs^4o_1^3o_5^3 - 5o_7cs^2o_1^2o_5^3 + 12o_7^2cs^2o_1^3o_5 - 36o_7o_1^3o_5v_2^4 + 36o_7o_1^2o_5^3v_2^2 + 108cs^2o_1^3o_5^3v_2^2 - 72o_7o_1o_5^3v_2^2 + o_7^2cs^4o_1^3o_5^2 + 36o_1^3o_5^3v_2^2 + 12o_7cs^4o_1o_5^3 + 12o_7^2cs^2o_1^3o_5^3v_2^2 + 4o_7^2o_1^3o_5^3v_2^2 - 36o_7^2cs^2o_1^2o_5v_2^2 - 6o_7^2cs^2o_1^2o_5^2$

$C_{12} = 12 + 144v_2^4 + 672cs^2v_2^2 + 6cs^2o_5^3 + 10o_5^3v_2^2 - 78cs^2o_5^2 + 198cs^2o_5 - 132cs^2 - 216o_5v_2^4 - 1008cs^2o_5v_2^2 - 98o_5^2v_2^2 + 404cs^2o_5^2v_2^2 + 82cs^4o_5^2 + 144cs^4 + 234o_5v_2^2 + 90o_5^2v_2^2 - 5cs^4o_5^2 - 18o_5 - o_5^3 - 34cs^2o_5^2v_2^2 - 156v_2^2 - 216cs^4o_5^2 - 9o_5^3v_2^2 + 8o_5^3$

$C_{13} = 12 + 504v_2^4 + 432cs^2v_2^2 + 2cs^2o_5^3 + 14o_5^3v_2^2 - 22cs^2o_5^2 + 54cs^2o_5 - 36cs^2 - 756o_5v_2^4 - 648cs^2o_5v_2^2 - 154o_5^2v_2^2 + 252cs^2o_5^2v_2^2 + 14cs^4o_5^2 + 24cs^4 + 378o_5v_2^2 + 310o_5^2v_2^4 - cs^4o_5^2 - 18o_5 - o_5^3 - 18cs^2o_5^2v_2^2 - 252v_2^2 - 36cs^4o_5 - 29o_5^3v_2^2 + 8o_5^2$

$C_{14} = -6o_1^2o_3^2o_{13} - 12o_1^3o_2o_3^2 - 2o_1^2o_2o_3^2o_{13} - 12o_1^3o_2 + 12o_1o_2o_3o_{13} - 6o_1^3o_3o_{13} - o_1^3o_2o_3^2o_{13} + 24o_1^3o_2o_3 - 24o_2o_3^2o_{13} - 12o_1^2o_3^3 + 12o_1^3o_{13} + 12o_1^2o_2o_3^2 - 12o_1^3o_3 + 24o_1o_2o_3^2o_{13} - 2o_1^3o_3^2o_{13} + 12o_1o_3o_{13} - 6o_1^2o_2o_3o_{13} + 12o_1^3o_3^2 - 12o_1^2o_2o_3$

$C_{15} = -5cs^2o_3^2o_{11}^2o_5^3 + 12cs^4o_{11}^2o_5^3 - 19o_3o_{11}^2o_5^2v_2^2 + cs^4o_3^3o_{11}^2o_5^2 + 198cs^2o_3^2o_{11}o_5^2v_2^2 + 72o_3o_{11}o_5^2v_2^4 + 36o_3o_5^3v_2^4 + 36o_3o_{11}o_5^3v_2^4 + 36o_3o_{11}o_5v_2^2 + 54cs^2o_3^2o_{11}o_5^3v_2^2 - 6cs^2o_3^2o_{11}^2o_5^2 - 12cs^2o_3o_{11}o_5^3 - 12cs^2o_3^2o_{11}^2 + 108cs^2o_3o_5^3v_2^2 - cs^4o_3^3o_{11}^2o_5^3 - 90o_3o_{11}^2o_5v_2^2 + 6o_3^2o_{11}^2o_5^3v_2^2 - 306cs^2o_3o_{11}^2o_5v_2^2 - 24cs^4o_3o_{11}^2o_5^3 + 12cs^4o_3^2o_{11}o_5 - 36o_3^3o_5^4 - 39o_3o_{11}o_5^3v_2^4 - 99cs^2o_3^3o_{11}o_5^3v_2^2 - 72o_3o_{11}^2v_2^2 - 4o_3o_{11}^2o_5^3v_2^2 - 36cs^2o_3^2o_{11}^2o_5v_2^2 - 6cs^2o_3o_{11}o_5^3 + 12cs^2o_3o_{11}^2o_5 - 12cs^4o_3o_{11}^2o_5 - 18cs^4o_3o_{11}o_5 + 12cs^4o_3o_{11}^2 + 36o_3^3o_5^3 - 108cs^2o_3^2o_5o_5^2v_2^2 - 18cs^2o_3o_{11}^2o_5^2v_2 + 36cs^2o_3o_{11}o_5^2v_2^2 + 6cs^2o_3^3o_{11}o_5^2 + 72o_3o_{11}^2v_2^2 + 4o_3o_{11}^2o_5^3v_2^4 + 12cs^2o_3o_{11}^2o_5^2v_2^2 + 13cs^4o_3o_{11}^2o_5^3 - 108cs^2o_3^2o_5v_2^2 + 39o_3o_{11}o_5^3v_2^2 + 36o_3^3o_5^3v_2^2 - cs^2o_3o_{11}^2o_5^2 - 36o_3^3o_5^4v_2^2 + 6cs^4o_3o_{11}^2o_5^2 + 12cs^4o_3o_{11}o_5 + 18cs^2o_3^2o_{11}^2o_5^2v_2^2 + 252cs^2o_3o_{11}^2v_2^2 + 36cs^2o_3o_{11}o_5^2v_2^2 - 36o_3^3o_5^3v_2^2 - 72o_3o_{11}o_5^3v_2^2 + 6cs^2o_3o_{11}^2o_5^3 - 12cs^2o_3o_{11}o_5^2 - 12cs^4o_3o_{11}^2o_5 + 60cs^2o_3o_{11}^2o_5^2v_2^4 + 19o_3o_{11}^2o_5^2v_2^2 + 6cs^4o_3o_{11}o_5 + 18cs^2o_3^2o_{11}o_5^2 - 6o_3^2o_{11}^2o_5^3v_2^2 + 12cs^2o_3^2o_{11}^2o_5 + 90o_3o_{11}^2o_5v_2^2 - 3cs^2o_3^2o_{11}^2o_5^3v_2^2 - 36o_3^3o_{11}o_5v_2^2 - 36o_3o_{11}o_5^3v_2^2 - 6cs^4o_3o_{11}o_5 - 108cs^2o_3o_{11}o_5v_2^2$

$C_{16} = -6o_1^2o_3^2o_{13} - 12o_2o_3^3 - 2o_1^2o_2o_3^2o_{13} + 12o_1o_2o_3o_{13} - 12o_1o_3^3 - 12o_1o_2o_3^2 - 2o_1^2o_3^3o_{13} - o_1^2o_2o_3^2o_{13} + 24o_1o_2o_3^2 - 12o_1^2o_3^3 - 6o_1o_3^3o_{13} + 12o_1^2o_2o_3^2 - 6o_1o_2o_3^2o_{13} + 12o_1^2o_3^3 - 12o_1^2o_2o_3 - 24o_1^2o_2o_3 + 24o_1^2o_2o_3o_{13} + 12o_1^2o_3o_{13} + 12o_3^3o_{13}$

$C_{17} = 36cs^2o_3o_{11}o_5^3 + 5cs^2o_3o_{11}^2o_5^3 + 6o_3o_{11}o_5^3 - 6o_3o_{11}^2o_5^2 + 12o_3o_{11}^2o_5^3 - 6o_3^2o_{11}o_5^3 + 12cs^2o_3^2o_{11}^2o_5^3 - 12o_3^2o_5^3v_2^2 + 54cs^2o_3o_{11}o_5^3 + 12o_3o_{11}o_5^2v_2^2 + o_3^2o_{11}^2o_5^3v_2^2 - 12o_3^2o_5^3 + 36cs^2o_3o_{11}^2o_5^3 - 36cs^2o_3o_5^3 - 54cs^2o_3^2o_{11}^2o_5 + 12o_1o_3o_5^3 - 12o_1o_5^3v_2^2 - 36cs^2o_3o_{11}^2o_5^2 + 4o_3o_{11}^2o_5^2v_2^2 + 12o_3^3o_5^2 + 18o_3o_{11}o_5^3v_2^2 + 12o_3o_5^3v_2^2 + 36cs^2o_3^2o_{11}^2 - 18o_3o_{11}^2o_5v_2^2 - 12o_3o_{11}^2 - 36cs^2o_3^2o_5^2 + 12o_1o_5^3v_2^2 + 12o_1o_{11}^2o_5 - 12o_3o_{11}o_5^3v_2^2 - 36cs^2o_3o_{11}o_5^3 + 6o_3o_{11}o_5^2v_2^2 + 12o_3o_5^3 + 18o_3o_{11}^2o_5 - 12o_1o_{11}^2o_5 - 12o_3o_5^3v_2^2 + 36cs^2o_3^2o_5^3 - 4o_3o_{11}^2o_5^2 - 18o_3o_{11}o_5^3 - 40cs^2o_3o_{11}^2o_5^3 - 12o_1o_{11}^2o_5v_2^2 + 18cs^2o_3^2o_{11}o_5 - 18cs^2o_3o_{11}o_5^3 + 18cs^2o_3o_{11}^2o_5^3 + 12o_3^2o_{11}^2v_2^2 - 12o_3o_{11}o_5^3 - o_3^2o_{11}^2o_5^3 - 6o_3^2o_{11}o_5^3v_2^2 + 6o_3o_{11}^2o_5^3v_2^2$

$C_{18} = -36o_3^2o_{11}v_2^2 + 18cs^2o_3o_{11}o_5^3 - 12cs^2o_3^2o_{11} - 24o_3o_5 + 36o_3^3v_2^2 - 72o_3^2o_5v_2^2 - 12o_3^3o_5^2 - 12o_3^3 + 36o_3o_{11}o_5^2v_2^2 + 24o_3^3o_5 - 12o_3^2o_{11}o_5 + 24o_3^3o_5^2 - 12cs^2o_3o_{11}o_5 + 12cs^2o_3o_5^2 - cs^2o_3^3o_{11}o_5^2 - 72o_3^3o_5v_2^2 - 12o_3o_5^2 + 12cs^2o_3^3 - 12cs^2o_{11}o_5^2 - 24cs^2o_3^2o_5^2 + 12o_3o_{11}o_5 + 36o_3^3o_5^2v_2^2 - 24cs^2o_3^2o_5 + 12cs^2o_3^2o_{11}o_5 + 12cs^2o_3^2o_5^2 + 72o_3^2o_5v_2^2 - 4cs^2o_3^2o_{11}o_5 - 36o_3o_{11}o_5v_2^2 + 24cs^2o_3^2o_5 + 36o_3o_5^2v_2^2 + 12o_3^2o_{11}$

$C_{19} = 12o_{10}^2o_3o_6 + o_{10}^2o_3^2o_6v_3^2 + 3cs^2o_{10}^2o_3^2o_6 + 12o_{10}^2o_6v_3^2 + 54cs^2o_{10}o_3o_6 + 3o_{10}o_3o_6 + 18cs^2o_3^2o_6 + 36cs^2o_{10}o_3 - 6o_{10}^2o_3 + 12o_3o_6 - o_{10}^2o_3^2 + o_{10}^2o_3^2v_3^2 + 18o_{10}o_3o_6v_3^2 - 18cs^2o_{10}o_3 - 12o_{10}^2o_6 + 6o_3o_6v_3^2 + 12o_{10}o_3v_3^2 - 36cs^2o_{10}^2 - 36cs^2o_{10}o_6 + 12o_{10}o_6 - 3o_{10}o_3^2o_6v_3^2 - 6o_{10}o_3v_3^2 + 36cs^2o_{10}^2o_6 + 6o_{10}o_3^3 + 3cs^2o_{10}^2o_3^2 + 12o_{10}^2 + 6o_{10}^2o_3v_3^2 - 12o_3o_6v_3^2 - 9cs^2o_{10}o_3^2o_6 - 12o_{10}^2o_3o_6v_3^2 + 18cs^2o_{10}^2o_3 - 36cs^2o_3o_6 - 18o_{10}o_3o_6 - 12o_{10}^2v_3^2 - 12o_{10}o_6v_3^2 - 6o_3^2o_6 - 12o_{10}o_3 - o_{10}^2o_3^2o_6 - 36cs^2o_{10}^2o_3o_6$

$C_{20} = 18cs^2o_{10}o_3o_6 + o_{10}o_3^2o_6 - 18cs^2o_3^2o_6 - 12cs^2o_{10}o_3 - 12o_3o_6 - 18o_3^3v_3^2 + 6o_3^3 + 6cs^2o_{10}o_3^2 - 12o_3^2 + 36o_3^3v_3^2 + cs^2o_{10}o_3^3 - 54o_3o_6v_3^2 - 36o_{10}o_3o_6v_3^2 + 6cs^2o_3^2o_6 - 12cs^2o_{10}o_6 - 6o_3^3o_6 - 6cs^2o_3^3 - o_{10}o_3^3 - 3o_{10}o_3^2o_6v_3^2 + 18o_{10}o_3^2v_3^2 - cs^2o_{10}o_3^3o_6 + 12cs^2o_3^2 - 6o_{10}o_3^2 + 36o_3o_6v_3^2 - 5cs^2o_{10}o_3^2o_6 + 18o_3^3o_6v_3^2 + 12cs^2o_3o_6 + 3o_{10}o_3o_3^2v_3^2 + 18o_3^2o_6 + 12o_{10}o_3$

$C_{21} = -3o_{10}^2o_3^3v_3^2 - 24cs^4o_{10}o_3^2 - 30o_{10}o_3^3v_3^4 - 72cs^2o_{10}o_3^3v_3^2 - 24cs^2o_{10}o_3 + 6cs^4o_{10}o_3 - 36o_3^3v_3^2 + 72o_{10}o_3^2v_3^4 - 36cs^2o_{10}^2o_3v_2^2 + 12o_{10}^2o_3^2v_3^2 + 24cs^2o_{10}o_3 + 72o_3^3v_3^2 + 24cs^4o_{10}o_3 - 6cs^2o_{10}o_3^3 + 144cs^2o_{10}o_3v_3^2 - 12o_{10}^2o_3^3v_3^4 - 48cs^4o_{10}^2o_3 - 216cs^2o_3^3v_3^2 + cs^2o_{10}^2o_3^3 - 72o_{10}o_3^3v_3^2 + 72cs^2o_{10}o_3o_3^2 - 12cs^2o_{10}^2o_3^3v_3^2 - 72o_3^3v_3^4 - 8cs^2o_{10}^2o_3^3 + 12cs^2o_{10}^2o_3^2 + 108cs^2o_3^3v_3^2 + 30o_{10}o_3^3v_3^2 - 3cs^4o_{10}^2o_3^3 + 24cs^4o_{10}^2 + 3o_{10}^2o_3^3v_3^4 + 6cs^2o_{10}^2o_3^2o_3^2v_3^2 + 36o_3^3v_3^2 + 24cs^4o_{10}^2o_3^2$

2.6.5 Conservation of momentum: ρv_3

 attached text file: `output_d3q27_nse_culbm1_symbolic_pde_03.txt`

$v_3\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_3}{\partial t} + \frac{v_1 v_3\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{\rho v_3\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{v_1\rho\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_1} + \frac{v_3 v_2\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{\rho v_3\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\rho v_2\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_2} + (cs^2+v_3^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} +$

$\frac{2\rho v_3\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2+o_2)\frac{cs^2\delta_l^2}{2\delta_t o_2}\frac{\partial\rho}{\partial x_1}\frac{\partial v_3}{\partial x_1} + (-2+o_2)\frac{cs^2\delta_l^2}{2\delta_t o_2}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_3} + (-2+o_3)\frac{cs^2\delta_l^2}{2o_3\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_2} + (-2+o_3)\frac{cs^2\delta_l^2}{2o_3\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_3} +$

$(-2-2cs^2 o_6+4cs^2-3v_3^2 o_6+o_6+6v_3^2)\frac{\delta_l^2}{\delta_t o_6}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_3} + (2-o_6)\frac{3\rho v_3\delta_l^2}{\delta_t o_6}\left(\frac{\partial v_3}{\partial x_3}\right)^2 + (-2+o_2)\frac{cs^2\rho\delta_l^2}{2\delta_t o_2}\frac{\partial^2 v_3}{\partial x_1^2} +$

$(-2+o_3)\frac{cs^2\rho\delta_l^2}{2o_3\delta_t}\frac{\partial^2 v_3}{\partial x_2^2} + (-2+o_2)\frac{cs^2\rho\delta_l^2}{2\delta_t o_2}\frac{\partial^2 v_1}{\partial x_1\partial x_3} + (-2+o_3)\frac{cs^2\rho\delta_l^2}{2o_3\delta_t}\frac{\partial^2 v_2}{\partial x_2\partial x_3} +$

$(-2-3cs^2 o_6+6cs^2-v_3^2 o_6+o_6+2v_3^2)\frac{v_3\delta_l^2}{2\delta_t o_6}\frac{\partial^2\rho}{\partial x_3^2} + (-2-cs^2 o_6+2cs^2-3v_3^2 o_6+o_6+6v_3^2)\frac{\rho\delta_l^2}{2\delta_t o_6}\frac{\partial^2 v_3}{\partial x_3^2} +$

$(-1+v_1^2+3cs^2)\frac{v_1 v_3\delta_l^3}{12\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + (-1+3v_1^2+cs^2)\frac{\rho v_3\delta_l^3}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_1\frac{v_1\rho\delta_l^3}{6\delta_t o_2 o_1 2}\frac{\partial^3 v_3}{\partial x_1^3} - \frac{cs^2\rho v_3\delta_l^3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} - \frac{cs^2\rho v_3\delta_l^3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} +$

$(-1+3cs^2+v_2^2)\frac{v_3 v_2\delta_l^3}{12\delta_t}\frac{\partial^3\rho}{\partial x_2^3} + (-1+cs^2+3v_2^2)\frac{\rho v_3\delta_l^3}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_2\frac{\rho v_2\delta_l^3}{6o_3\delta_t o_1 1}\frac{\partial^3 v_3}{\partial x_2^3} + (-12-o_2^2+12o_2)\frac{cs^4\delta_l^3}{6\delta_t o_2^2}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} -$

$\frac{cs^2\rho v_3\delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} + (-12-o_3^2+12o_3)\frac{cs^4\delta_l^3}{6o_3^2\delta_t}\frac{\partial^3\rho}{\partial x_2^2\partial x_3} - \frac{cs^2\rho v_3\delta_l^3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C_3\frac{\rho v_3\delta_l^3}{12\delta_t o_8 o_2 o_6^2}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} + C_4\frac{\rho v_3\delta_l^3}{12o_3\delta_t o_6^2 o_1 0}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} +$

$C_5\frac{\delta_l^3}{12\delta_t o_6^2}\frac{\partial^3\rho}{\partial x_3^3} + (-24+11v_3^2 o_6^2-36cs^2 o_6+36cs^2+5cs^2 o_6^2-60v_3^2 o_6-4o_6^2+24o_6+60v_3^2)\frac{\rho v_3\delta_l^3}{6\delta_t o_6^2}\frac{\partial^3 v_3}{\partial x_3^3} +$

$(-3o_4 v_1^4-6v_1^2-2cs^2-12o_4 cs^2 v_1^2-o_4 cs^4+2cs^4+o_4 cs^2+3o_4 v_1^2+6v_1^4+24cs^2 v_1^2)\frac{v_3\delta_l^4}{24\delta_t o_4}\frac{\partial^4\rho}{\partial x_1^4} +$

$(-4+10v_1^2+6cs^2+2o_4-3o_4 cs^2-5o_4 v_1^2)\frac{v_1\rho v_3\delta_l^4}{12\delta_t o_4}\frac{\partial^4 v_1}{\partial x_1^4} + C_6\frac{\rho\delta_l^4}{24\delta_t o_2^3 o_1 2^2}\frac{\partial^4 v_3}{\partial x_1^4} +$

$(3o_4 cs^2 o_9+v_1^2 o_9+3o_4-o_4 o_9-9o_4 cs^2+3cs^2 o_9-o_9-3o_4 v_1^2+o_4 v_1^2 o_9)\frac{v_1\rho v_3\delta_l^4}{12\delta_t o_4 o_9}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + (-2+o_1)\frac{cs^4 v_3\delta_l^4}{6\delta_t o_1}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} +$

$+ (-o_3^2-o_3^2 o_2+o_3 o_1 3-o_2^2+2o_3^2 o_2-2o_3 o_2+o_1 3o_2-o_3 o_1 3o_2+2o_3 o_2^2)\frac{cs^4\rho\delta_l^4}{o_3^2\delta_t o_1 3o_2^2}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2^2} +$

$(-3o_5 v_2^2-o_7+o_7 o_5 v_2^2+3o_5-o_7 o_5+3o_7 cs^2-9o_5 cs^2+3o_7 o_5 cs^2+o_7 v_2^2)\frac{\rho v_3 v_2\delta_l^4}{12o_7 o_5\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^2} +$

$(3o_5 v_2^2+6v_2^4+24cs^2 v_2^2-o_5 cs^4-2cs^2+o_5 cs^2+2cs^4-12o_5 cs^2 v_2^2-3o_5 v_2^4-6v_2^2)\frac{v_3\delta_l^4}{24o_5\delta_t}\frac{\partial^4\rho}{\partial x_2^4} +$

$(-4-5o_5 v_2^2+2o_5+6cs^2-3o_5 cs^2+10v_2^2)\frac{\rho v_3 v_2\delta_l^4}{12o_5\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} + C_7\frac{\rho\delta_l^4}{24o_3^3\delta_t o_1 1^2}\frac{\partial^4 v_3}{\partial x_2^4} + C_8\frac{cs^2 v_1\delta_l^4}{12\delta_t o_4 o_2^2 o_1 2^2}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} +$

$C_9\frac{cs^2\rho\delta_l^4}{12\delta_t o_4 o_2^3 o_1 2}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} +$

$(o_4 v_1^2 o_1 2-o_4 o_1 2+3o_4+3cs^2 o_1 2+v_1^2 o_1 2-9o_4 cs^2+3o_4 cs^2 o_1 2-o_1 2-3o_4 v_1^2)\frac{v_1\rho v_3\delta_l^4}{12\delta_t o_4 o_1 2}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$

$C_{10}\frac{cs^4\rho\delta_l^4}{12o_3^2\delta_t o_1 3o_2^2 o_1}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} + C_{11}\frac{cs^4\rho\delta_l^4}{12o_3^3\delta_t o_1 3o_2^2 o_1}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} + C_{12}\frac{cs^2 v_2\delta_l^4}{12o_5 o_3^2\delta_t o_1 1^2}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} + C_{13}\frac{cs^2\rho\delta_l^4}{12o_5 o_3^3\delta_t o_1 1}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} +$

$(-3o_5 v_2^2+3o_5 o_1 1cs^2+3o_5-o_1 1+o_1 1v_2^2+o_5 o_1 1v_2^2-9o_5 cs^2-o_5 o_1 1+3o_1 1cs^2)\frac{\rho v_3 v_2\delta_l^4}{12o_5\delta_t o_1 1}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} +$

$C_{14}\frac{cs^2 v_3\delta_l^4}{12\delta_t o_6^2 o_2^3 o_6^3}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} + C_{15}\frac{cs^2\rho\delta_l^4}{12\delta_t o_8 o_2^3 o_6^2}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} + C_{16}\frac{cs^2 v_3\delta_l^4}{12o_3^3\delta_t o_6^3 o_1 0^2}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} + C_{17}\frac{cs^2\rho\delta_l^4}{12o_3^3\delta_t o_6^2 o_1 0}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} +$

$C_{18}\frac{\rho\delta_l^4}{12\delta_t o_8 o_2^3 o_6^3}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + C_{19}\frac{\rho\delta_l^4}{12o_3^3\delta_t o_6^3 o_1 0^2}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} + C_{20}\frac{v_3\delta_l^4}{12\delta_t o_6^3}\frac{\partial^4\rho}{\partial x_3^4} + C_{21}\frac{\rho\delta_l^4}{12\delta_t o_6^3}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$

where:

$C_1 = 6-6v_1^2+3o_2 v_1^2-18cs^2-3cs^2 o_2 o_1 2+9cs^2 o_1 2+3v_1^2 o_1 2-3o_2+o_2 o_1 2-3o_1 2-o_2 v_1^2 o_1 2+9cs^2 o_2$

$C_2 = 6-3o_3-3o_1 1-18cs^2+3o_1 1v_2^2-o_3 o_1 1v_2^2+3o_3 v_2^2+9o_1 1cs^2-3o_3 o_1 1cs^2-6v_2^2+o_3 o_1 1+9o_3 cs^2$

$C_3 = -12v_3^2 o_6^2+6o_8 o_2 o_6-12o_2 v_3^2 o_6+36o_8 cs^2 o_2-36cs^2 o_2 o_6+12o_8 o_2 v_3^2+36cs^2 o_2 o_6^2+3o_8 o_2 o_6^2+12o_2 v_3^2 o_6^2-36cs^2 o_6^2-12o_8 o_2-6o_8 o_2 v_3^2 o_6-12o_2 o_6^2+12o_6^2+18o_8 cs^2 o_6^2-18cs^2 o_2 o_6+6o_8 v_3^2 o_6^2+12o_2 o_6-11o_8 cs^2 o_2 o_6^2-3o_8 o_2 v_3^2 o_6^2-6o_8 o_6^2$

$C_4 = -6o_3 v_3^2 o_6 o_1 0-12v_3^2 o_6^2+12o_3 v_3^2 o_6^2+36o_3 cs^2 o_1 0-12o_3 o_6^2-36o_3 cs^2 o_6+18cs^2 o_6^2 o_1 0+6o_3 o_6 o_1 0-11o_3 cs^2 o_6^2 o_1 0+36o_3 cs^2 o_6^2+12o_3 o_6+12o_3 v_3^2 o_1 0-36cs^2 o_6^2-12o_3 v_3^2 o_6-12o_3 o_1 0+12o_6^2-18o_3 cs^2 o_6 o_1 0+3o_3 o_6^2 o_1 0-6o_6^2 o_1 0-3o_3 v_3^2 o_6^2 o_1 0+6v_3^2 o_6^2 o_1 0$

$C_5 = -7v_3^2 o_6^2+12cs^2 o_6+36v_3^4+144cs^2 v_3^2-12cs^2-cs^2 o_6^2+36v_3^2 o_6-144cs^2 v_3^2 o_6+12cs^4+7v_3^4 o_6^2-12cs^4 o_6+cs^4 o_6^2-36v_3^4 o_6+24cs^2 v_3^2 o_6^2-36v_3^2$

$$C_6 = 6cs^2o_3^2v_1^2o_1 2^2 + 72cs^2o_2v_1^2o_1 2 - 72o_2^2v_1^4 + 24cs^4o_2o_1 2 + 12cs^2o_2o_1 2^2 - 216cs^2o_3^2v_1^2 - 72o_2^2v_1^2o_1 2 - 30o_3^3v_1^4o_1 2 + 3o_2^3v_1^4o_1 2^2 + 36o_2^3v_1^4 - 24cs^2o_2o_1 2 + 12o_2^3v_1^2o_1 2^2 - 48cs^4o_2o_1 2 - 72cs^2o_3^3v_1^2o_1 2 + 108cs^2o_2^3v_1^2 - 36o_2^3v_1^2 + 24cs^4o_2o_1 2^2 + 72o_2^2v_1^4o_1 2 + 30o_3^3v_1^2o_1 2 + cs^2o_3^3o_1 2^2 + 6cs^4o_3^2o_1 2 + 24cs^2o_2^2o_1 2 - 12cs^2o_2^2v_1^2o_1 2^2 + 24cs^4o_1 2^2 - 8cs^2o_2^2o_1 2^2 + 144cs^2o_2^2v_1^2o_1 2 + 72o_2^2v_1^2 - 3cs^4o_3^2o_1 2^2 - 6cs^2o_2^2o_1 2 - 3o_2^3v_1^2o_1 2^2 - 24cs^4o_2^2o_1 2 - 12o_2^2v_1^4o_1 2^2$$

$$C_7 = 36o_3^3v_2^4 + 24o_3^2o_1 1cs^2 + 3o_3^3o_1 1^2v_2^4 + 24o_3o_1 1cs^4 - 12o_3^3o_1 1^2cs^2v_2^2 + 30o_3^3o_1 1v_2^2 + 12o_3o_1 1^2cs^2 + 24o_3^3o_1 1^2cs^4 + 72o_3^3o_1 1v_2^4 + 6o_3^3o_1 1^2cs^2v_2^2 + o_3^3o_1 1^2cs^2 - 72o_3^2v_2^4 + 6o_3^3o_1 1cs^4 + 108o_3^3cs^2v_2^2 + 12o_3^3o_1 1^2v_2^2 + 72o_3o_1 1cs^2v_2^2 - 72o_3^3o_1 1cs^2v_2^2 - 3o_3^3o_1 1^2cs^4 + 72o_3^2v_2^2 - 72o_3^3o_1 1v_2^2 - 12o_3^2o_1 1^2v_2^4 - 6o_3^3o_1 1cs^2 - 36o_3o_1 1^2cs^2v_2^2 - 3o_3^3o_1 1^2v_2^2 - 24o_3o_1 1cs^2 - 36o_3^3v_2^2 - 216o_3^2cs^2v_2^2 - 24o_3^2o_1 1cs^4 - 8o_3^2o_1 1^2cs^2 + 144o_3^2o_1 1cs^2v_2^2 + 24o_1 1^2cs^4 - 30o_3^3o_1 1v_2^2 - 48o_3o_1 1^2cs^4$$

$$C_8 = 54o_4cs^2o_2o_1 2 + o_4o_2^2v_1^2o_1 2^2 - 18o_4o_2o_1 2 - 36cs^2o_1 2^2 - 12o_4v_1^2o_1 2 + 18cs^2o_2o_1 2^2 - 6o_2^2v_1^2o_1 2 - 12o_4o_1 2^2 - o_2^2o_1 2^2 + 18o_4cs^2o_2^2 + 12o_4o_1 2 + 6o_2^2o_1 2 - 36o_4cs^2o_2 + 12o_4v_1^2o_1 2^2 + 36cs^2o_2o_1 2 + o_2^2v_1^2o_1 2^2 + 6o_4o_2v_1^2 - 36o_4cs^2o_2o_1 2^2 + 12o_4o_2o_1 2^2 - 3o_4o_2^2v_1^2o_1 2 + 6o_2^2v_1^2o_1 2^2 + 3o_4cs^2o_2^2o_1 2^2 - 12o_4o_2v_1^2 - o_4o_2^2o_1 2^2 - 12o_2o_1 2 - 18cs^2o_2^2o_1 2 + 36o_4cs^2o_1 2 + 18o_4o_2v_1^2o_1 2 - 6o_4o_2 + 3cs^2o_2o_1 2^2 - 12o_4o_2v_1^2o_1 2^2 - 36o_4cs^2o_1 2 + 12o_4o_2 - 6o_2o_1 2^2 + 12o_1 2^2 + 12o_2v_1^2o_1 2 - 9o_4cs^2o_2^2o_1 2 + 3o_4o_2^2o_1 2 - 12v_1^2o_1 2^2$$

$$C_9 = 18o_4cs^2o_2o_1 2 + 6o_4cs^2o_2^3 - o_2^3o_1 2 + 18o_4o_2^3v_1^2 + 18o_2^2v_1^2o_1 2 - 18o_4cs^2o_2^2 - 6o_2o_1 2 + 12o_4cs^2o_2 - 12cs^2o_2o_1 2 - 12o_2^2 + 6o_2^3 - 54o_4o_2^2v_1^2 - 3o_4o_2^2v_1^2o_1 2 - 18o_2^3v_1^2 + 12cs^2o_2^2 + 36o_4o_2v_1^2 - 6o_4o_2^3 + 3o_2^3v_1^2o_1 2 + 12o_2o_1 2 + 6cs^2o_2^2o_1 2 - 6cs^2o_2^3 + 18o_4o_2^2 - o_4cs^2o_2^3o_1 2 - 12o_4cs^2o_1 2 - 12o_4o_2 + 36o_2v_1^2 - 36o_2v_1^2o_1 2 - 5o_4cs^2o_2^2o_1 2 + cs^2o_2^3o_1 2 + o_4o_2^2o_1 2$$

$$C_{10} = -6o_3^3o_1 3o_2^2 - 12o_3^2o_2^2 + 12o_3^2o_2^3 - 12o_3^2o_2o_1 + 24o_3o_2^2o_1 - 2o_3^2o_1 3o_2^3 - 6o_3o_1 3o_2^2o_1 + 24o_3^2o_1 3o_2o_1 + 12o_3^2o_1 3o_2 - 12o_3o_2^2o_1 - 2o_3^2o_1 3o_2^2o_1 + 12o_3^2o_2^2o_1 - 24o_3o_1 3o_1 - 12o_3o_2^3 + 12o_3o_1 3o_2o_1 - 6o_3o_1 3o_2^2 - 12o_3^2o_2^3o_1 + 12o_1 3o_2^3 - o_3^2o_1 3o_2^3o_1$$

$$C_{11} = -6o_3^2o_1 3o_2^2 - 12o_3^3o_2o_1 - 12o_2^2o_2^2 - 24o_1 3o_2^2o_1 - 12o_3^2o_2 + 24o_3o_1 3o_2^2o_1 - 6o_3o_1 3o_2o_1 + 12o_3^3o_2 - 12o_3^2o_2o_1 - 12o_3o_1 - 2o_3^2o_1 3o_2^2o_1 - 2o_3^3o_1 3o_2^2 + 12o_3^2o_2^2o_1 - 6o_3^3o_1 3o_2 - o_3^3o_1 3o_2^2o_1 + 12o_3o_1 3o_2 + 12o_3o_1 3o_2o_1 + 12o_3^3o_1 3 + 24o_3^3o_2o_1$$

$$C_{12} = -18o_3^2o_1 1cs^2 - 18o_5o_3o_1 1 - 36o_5o_1 1cs^2 - 12o_5o_3o_1 1^2v_2^2 + 12o_1 1^2 - 36o_1 1^2cs^2 - 36o_5o_3cs^2 + 18o_3o_1 1^2cs^2 - 3o_5o_3o_1 1v_2^2 + 6o_3^2o_1 1 - o_3^2o_1 1^2 + 3o_5o_3o_1 1^2cs^2 + 12o_3o_1 1v_2^2 + 6o_5o_3^2v_2^2 + 54o_5o_3o_1 1cs^2 + 12o_5o_1 1^2v_2^2 + o_3^2o_1 1^2v_2^2 + 12o_5o_3o_1 1^2 - 12o_5o_1 1v_2^2 - 36o_5o_3o_1 1^2cs^2 - 6o_3^2o_1 1v_2^2 - o_5o_3^2o_1 1^2 - 9o_5o_3^2o_1 1cs^2 - 6o_3o_1 1^2 + 12o_5o_3 - 12o_1 1^2v_2^2 + 12o_5o_1 1 - 12o_5o_3v_2^2 + 6o_3o_1 1^2v_2^2 - 12o_5o_1 1^2 + 36o_3o_1 1cs^2 + 18o_5o_3cs^2 - 6o_5o_3^2 + o_5o_3o_1 1^2v_2^2 - 12o_3o_1 1 + 3o_3^2o_1 1^2cs^2 + 3o_5o_3^2o_1 1 + 18o_5o_3o_1 1v_2^2 + 36o_5o_1 1^2cs^2$$

$$C_{13} = -12o_3^2 + 6o_3^2o_1 1cs^2 + 18o_5o_3v_2^2 - 12o_5o_1 1cs^2 + 12o_3^2cs^2 - o_5o_3^2o_1 1cs^2 + 3o_3^3o_1 1v_2^2 + 6o_3^3 + 12o_5o_3cs^2 - 3o_5o_3^2o_1 1v_2^2 - 6o_3^2o_1 1 - 6o_3^2cs^2 - 36o_3o_1 1v_2^2 - 54o_5o_3v_2^2 - o_3^3o_1 1 + 18o_5o_3o_1 1cs^2 + 36o_3^2v_2^2 + 18o_3^2o_1 1v_2^2 + 6o_5o_3^3cs^2 - 5o_5o_3o_1 1cs^2 - 12o_5o_3 + o_3^3o_1 1cs^2 + 36o_5o_3v_2^2 - 12o_3o_1 1cs^2 - 18o_5o_3^2cs^2 - 18o_3^3v_2^2 + 18o_5o_3^2 + 12o_3o_1 1 + o_5o_3^2o_1 1 - 6o_5o_3^3$$

$$C_{14} = -6o_8o_2^2v_3^2o_3^3 - 12o_8^2v_3^2o_6^2 - 18o_8cs^2o_2^2o_3^3 + 12o_8^2o_6^3 + 12o_8o_2^2v_3^3 + 12o_8v_3^2o_3^3 + 6o_8o_2^2v_3^2o_6^2 - 12o_8^2o_6^3 + 18o_8cs^2o_2^2o_6^3 + 18o_8^2o_2o_6 - 12o_2v_3^2o_3^3 + 18o_8cs^2o_2o_6^2 + 12o_2^2o_6^2 + 36o_8cs^2o_3^3 - 18o_8o_2o_6^3 - 4o_2^2o_6^2 - 12o_8o_2v_3^2o_3^3 - o_8^2o_2^2o_3^3 - 36o_8cs^2o_6^2 - 12o_8o_2o_6^2 - 12o_2^2o_3^3 - 40o_8^2cs^2o_2o_3^3 - 36cs^2o_2o_3^3 + 6o_8^2o_2v_3^2o_6^2 - 6o_8o_2o_6^2 - 36o_8cs^2o_3^3 + 12o_2^2o_3^3 + 5o_8^2cs^2o_2o_3^3 + 12o_2^2v_3^3o_6^2 + 12o_8o_2o_6^3 + o_8^2o_2v_3^2o_3^3 + 36o_8cs^2o_2^2 + 36cs^2o_2^2o_3^3 - 12o_2v_3^2o_6^2 + 12o_8cs^2o_2^2o_6^2 - 6o_8o_2o_6^2 + 6o_8o_2o_3^3 - 36cs^2o_2^2o_3^3 + 4o_8^2o_2v_3^2o_6^2 - 18o_8^2o_2v_3^2o_6 + 18o_8o_2v_3o_3^3 - 54o_8^2cs^2o_2o_6 + 12o_8o_6^3 + 36o_8cs^2o_2o_6^2 + 12o_8o_2v_3^2o_6^2 - 12o_8^2o_2^2 - 12o_8v_3^2o_3^3 + 54o_8cs^2o_2o_3^3$$

$$C_{15} = 12o_8o_2^2 + 12o_8o_2o_6 + 36o_3^3v_3^2o_6^2 - 12o_2^2o_6^2 - 24o_2^2o_6 - 4o_8cs^2o_2^2o_6^2 + 24o_2^2o_6^2 + 36o_3^3v_3^2 + 12o_8cs^2o_2^2o_6 - 12o_8cs^2o_2^2 + 12cs^2o_2o_6^2 + 36o_8o_2^2v_3^2o_6 - 72o_2^2v_3^2o_6 - o_8cs^2o_3^2o_6^2 + 36o_2v_3^2o_6^2 + 24o_3^2o_6 - 12o_2^2 - 36o_8o_2v_3^2o_6 - 24cs^2o_2^2o_6 - 12o_2o_6^2 - 72o_2^2v_3^2o_6^2 - 12o_8cs^2o_2o_6^2 - 12o_8cs^2o_2o_6 - 24cs^2o_2^2o_6^2 + 12cs^2o_2^2 + 24cs^2o_2^2o_6 + 72o_2^2v_3^2o_6 - 36o_8o_2v_3^2 + 18o_8cs^2o_2o_6 + 12cs^2o_2^2o_6^2 - 12o_8o_2^2o_6$$

$$C_{16} = 36cs^2o_6^3o_1 0^2 + 4o_3^2v_3^2o_6^2o_1 0^2 - 40o_3cs^2o_6^3o_1 0^2 - 6o_3^2o_6^2o_1 0 - 6o_3^2v_3^2o_6^2o_1 0 - 12o_3v_3^2o_6^3 + 36o_3cs^2o_6^2o_1 0 - o_3^2o_6^3o_1 0^2 - 54o_3^2cs^2o_6o_1 0^2 + 12o_3o_6^3 + 18o_3cs^2o_6^2o_1 0^2 + 6o_3^3o_6^2o_1 0 - 36o_3cs^2o_6^3 + o_3^2v_3^2o_6^3o_1 0^2 - 36cs^2o_6^2o_1 0^2 + 54o_3cs^2o_6^3o_1 0 - 4o_3^2o_6^2o_1 0 - 36cs^2o_6^3o_1 0 + 6o_3^2v_3^2o_6^2o_1 0 + 36o_3^2cs^2o_6^3 + 5o_3^2cs^2o_6^3o_1 0^2 + 12o_6^3o_1 0 - 18o_3o_6^3o_1 0 - 12v_3^2o_6^2o_1 0^2 + 18o_3^2o_6o_1 0^2 + 6o_3v_3^2o_6^2o_1 0^2 - 6o_3o_6^2o_1 0^2 - 12v_3^2o_6^3o_1 0 - 36o_3^2cs^2o_6^2 + 18o_3^2cs^2o_6^2o_1 0 + 12o_6^2o_1 0^2 + 36o_3^2cs^2o_1 0^2 + 18o_3v_3^2o_6^3o_1 0 - 12o_2^2v_3^2o_6^2 - 12o_3v_3^2o_6^3o_1 0^2 + 12v_3^2o_6^3o_1 0^2 - 12o_3o_6^3o_1 0 + 12o_3v_3^2o_1 0^2 - 12o_3o_6^3 + 12o_3^2cs^2o_6^3o_1 0^2 + 12o_3v_3^2o_6^3o_1 0 - 12o_3o_1 0^2 + 12o_3v_3^2o_6^3 - 18o_3v_3^2o_6^2o_1 0^2 - 12o_6^3o_1 0^2 + 12o_3o_6^2 - 18cs^2o_6^3o_1 0 + 12o_3o_6^3o_1 0^2$$

$$C_{17} = -36o_3v_3^2o_6o_1 0 - 72o_3^3v_3^2o_6 + 36o_3v_3^2o_6^2 - 12o_3o_6^2 + 12o_3^2cs^2o_6^2 - 12cs^2o_6^2o_1 0 - 12o_3^3 + 12o_3o_6o_1 0 + 18o_3cs^2o_6^2o_1 0 + 12o_3^3cs^2 + 12o_3^2cs^2o_6o_1 0 + 12o_3cs^2o_6^2 - 24o_3^3cs^2o_6 + 36o_3^3v_3^2o_6^2 - 24o_3o_6 + 36o_3^3v_3^2o_6o_1 0 + 12o_3^2o_1 0 - 36o_3^2v_3^2o_1 0 - 24o_3^2cs^2o_6^2 - 4o_3^2cs^2o_6^2o_1 0 - 12o_3o_6^2 + 72o_3^3v_3^2o_6 - 12o_3^2cs^2o_1 0 - o_3^2cs^2o_6^2o_1 0 - 72o_3^3v_3^2o_6^2 - 12o_3cs^2o_6o_1 0 + 24o_3^3o_6 + 24o_3^2cs^2o_6 + 24o_3^2o_6^2 + 36o_3^3v_3^2 - 12o_3^2o_6o_1 0$$

$C_{18} =$
$$-19o_8^2o_3^2v_3^2o_6^2 - 36o_8o_2^2v_3^2o_6^2 + 6o_8cs^4o_2^2o_3^3 + 18o_8cs^2o_2^2o_3^3 + 12o_8cs^4o_2^3 - 39o_8o_2^3v_3^4o_6^3 + 36o_2^2v_3^2o_6^2 - 36o_8cs^2o_2^2v_3^2o_6 - 6o_8cs^4o_2^2o_6^3 - 24o_8^2cs^4o_2o_3^3 - 4o_2^2o_3^2v_3^2o_3^3 - 36o_2^2v_3^4o_3^3 - 6o_8^2o_2^3v_3^4o_6^3 - 36o_3^3v_3^2o_6^3 + 72o_8o_3^2v_3^4o_6^3 - 12o_8cs^2o_2^2o_6^2 - 36o_8o_3^3v_3^4o_6 - 3o_8^2cs^2o_2^2v_3^2o_3^3 - 6o_8cs^2o_3^2o_3^3 - 72o_8^2o_3^3v_3^2 - 18o_8cs^4o_2^2o_3^3 + 36o_8cs^2o_2^2v_3^2o_3^3 + 18o_8^2cs^2o_2^2v_3^2o_3^3 - 108cs^2o_2^2v_3^2o_3^3 + 6o_8cs^2o_2^2o_6^2 + 6o_8^2cs^2o_2o_6^3 + 90o_8^2o_3^2v_3^2o_6 + 12o_8cs^4o_2o_6^2 + 54o_8cs^2o_2^2v_3^2o_6^3 - 18o_8^2cs^2o_2v_3^2o_6^3 - 5o_8^2cs^2o_2^2o_6^3 + 36o_2^2v_3^2o_6^3 + 12o_8^2cs^2o_2o_6 + 4o_8^2o_2v_3^4o_6^3 - 12o_8cs^4o_2o_6 - 108o_8cs^2o_3^2v_3^2o_6 - o_8cs^4o_2^3o_3^3 + 36o_2^2v_3^4o_6^3 - 72o_8o_2^3v_3^2o_6^2 + 6o_8^2o_2^2v_3^2o_6^3 + 72o_8^2o_3^2v_3^4 + 36o_8o_2^2v_3^4o_6^3 - 306o_8^2cs^2o_2^2v_3^2o_6 + 19o_8^2o_2^2v_3^4o_6^2 - 6o_8cs^2o_2^2o_6^2 + 252o_8cs^2o_2^2v_3^2 - 12o_8cs^2o_2^3 + 12o_8cs^4o_2o_6^3 + 39o_8o_3^2v_3^2o_6^3 - 36o_3^3v_3^4o_6^2 + 36o_8cs^2o_2v_3^2o_6^3 + o_8cs^4o_3^2o_6^3 - 12o_8cs^4o_3^2o_6 + 13o_8cs^4o_2^2o_6^3 - 99o_8cs^2o_2^2v_3^2o_6^3 + 108cs^2o_3^2v_3^2o_6^3 - 90o_8^2o_3^2v_3^4o_6 + 60o_8^2cs^2o_2^2v_3^2o_6^2 + 12o_8^2cs^2o_2^2o_6 + 198o_8cs^2o_2^2v_3^2o_6^2 + 6o_8cs^4o_2^2o_6^2 + 36o_8o_2^2v_3^2o_6 + 12o_8^2cs^4o_6^2 - 12o_8cs^2o_2^2o_6^2 - 108cs^2o_2^2v_3^2o_6^3 - o_8cs^2o_2^2o_6^2 + 12o_8cs^2o_2^2v_3^2o_6^3$$

$$C_{19} = 252o_3^2cs^2v_3^2o_1 0^2 - 12o_3^2cs^2o_1 0^2 - 18o_3cs^2v_3^2o_6^3o_1 0^2 - 39o_3^3v_3^4o_6^3o_1 0 - 12o_3^3cs^4o_6o_1 0^2 - 72o_3^3v_3^2o_6^3o_1 0 - 6o_3^2v_3^4o_6^3o_1 0^2 - 108o_3^3cs^2v_3^2o_6^3 + 36o_3^2cs^2v_3^2o_6^2o_1 0 + 6o_3cs^2o_6^3o_1 0^2 - 108o_3^3cs^2v_3^2o_6o_1 0 - 36o_3^2v_3^2o_6^3o_1 0 + 19o_3^3v_3^4o_6^2o_1 0^2 + 12o_3cs^4o_6^3o_1 0 - 3o_3^2cs^2v_3^2o_6^3o_1 0^2 + 108o_3^3cs^2v_3^2o_6^3 +$$

$12o_3^2cs^2o_6o_1o^2 - 4o_3^3v_3^2o_6^3o_1o^2 + 12cs^4o_6^3o_1o^2 + 54o_3^2cs^2v_3^2o_6^3o_1o + 39o_3^3v_3^2o_6^3o_1o - 36o_3^2v_3^4o_6^3 - 306o_3^3cs^2v_3^2o_6o_1o^2 + 72o_3^3v_3^4o_6^2o_1o + 6o_3^2v_3^2o_6^3o_1o^2 +$
$12o_3^3cs^2o_6o_1o^2 - 108o_3^2cs^2v_3^2o_6^3 - 24o_3cs^4o_6^3o_1o^2 - 36o_3^3v_3^2o_6^3 + 36o_3^2v_3^4o_6^3o_1o - 19o_3^3v_3^2o_6^2o_1o^2 - 12o_3cs^2o_6^3o_1o + 18o_3^2cs^2v_3^2o_6^2o_1o^2 -$
$72o_3^3v_3^2o_1o^2 + 36o_3^3v_3^2o_6^2 + 36o_3^2cs^2v_3^2o_6^3o_1o + 4o_3^3v_3^4o_6^3o_1o^2 - 12o_3cs^4o_6o_1o^2 - 5o_3^2cs^2o_6^3o_1o^2 - 6o_3cs^4o_6^2o_1o + 90o_3^3v_3^2o_6o_1o^2 - 36o_3^2cs^2v_3^2o_6o_1o^2 +$
$6o_3^2cs^4o_6^2o_1o^2 - 6o_3^3cs^2o_6^3o_1o - 99o_3^3v_3^2o_6^3o_1o + 12o_3^3cs^4o_1o^2 - o_3^3cs^4o_6^3o_1o^2 - 12o_3^2cs^2o_6^2o_1o - 36o_3^3v_3^4o_6o_1o - o_3^2cs^2o_6^3o_1o^2 -$
$18o_3^2cs^4o_6^3o_1o + 60o_3^3cs^2v_3^2o_6^2o_1o^2 - 90o_3^3v_3^4o_6o_1o^2 + 13o_3^2cs^4o_6^3o_1o^2 + 6o_3^3cs^2o_6^2o_1o + 198o_3^3cs^2v_3^2o_6^2o_1o + 72o_3^3v_3^4o_1o^2 - 36o_3^3v_3^4o_6^2 -$
$6o_3^2cs^2o_6^2o_1o^2 + 6o_3^3cs^4o_6^3o_1o + 36o_3^3v_3^2o_6^3 + 12o_3^2cs^4o_6^2o_1o + 12o_3^3cs^2v_3^2o_6^3o_1o^2 + o_3^3cs^4o_6^3o_1o^2 + 18o_3^2cs^2o_6^3o_1o + 36o_3^3v_3^2o_6o_1o + 36o_3^3v_3^4o_6^3$

$C_{20} = 12 - 98v_3^2o_6^2 + 198cs^2o_6 + 10v_3^2o_6^3 + 144v_3^4 + 672cs^2v_3^2 + 6cs^2o_6^3 - 132cs^2 - 78cs^2o_6^2 + 234v_3^2o_6 - 1008cs^2v_3^2o_6 - 9v_3^4o_6^3 - o_6^3 + 144cs^4 + 90v_3^4o_6^2 + 8o_6^2 - 216cs^4o_6 + 82cs^4o_6^2 - 216v_3^4o_6 - 34cs^2v_3^2o_6^3 - 5cs^4o_6^3 - 18o_6 + 404cs^2v_3^2o_6^2 - 156v_3^2$

$C_{21} = 12 - 154v_3^2o_6^2 + 54cs^2o_6 + 14v_3^2o_6^3 + 504v_3^4 + 432cs^2v_3^2 + 2cs^2o_6^3 - 36cs^2 - 22cs^2o_6^2 + 378v_3^2o_6 - 648cs^2v_3^2o_6 - 29v_3^4o_6^3 - o_6^3 + 24cs^4 + 310v_3^4o_6^2 + 8o_6^2 - 36cs^4o_6 + 14cs^4o_6^2 - 756v_3^4o_6 - 18cs^2v_3^2o_6^3 - cs^4o_6^3 - 18o_6 + 252cs^2v_3^2o_6^2 - 252v_3^2$

2.7 CuLBM2

2.7.1 Definitions

Based on [2], collision operator $\boldsymbol{C}$:

$$\boldsymbol{C}\left(\boldsymbol{f}\right) = \mathbf{M}^{-1}\boldsymbol{G}^{-1}\left(\mathbf{N}^{-1}\mathbf{S}\mathbf{N}\left(\boldsymbol{\gamma}^{(eq)} - \boldsymbol{G}\left(\mathbf{M}\boldsymbol{f}\right)\right)\right),$$

where

$$\mathbf{S} = \mathrm{diag}(0,0,0,0,\omega_1,\omega_1,\omega_1,\omega_1,\omega_1,\omega_2,\omega_3,\omega_3,\omega_3,\omega_4,\omega_4,\omega_4,\omega_5,\omega_6,\omega_6,\omega_7,\omega_8,\omega_8,\omega_8,\omega_9,\omega_9,\omega_9,\omega_{10}),$$

$\omega_1,\omega_2,\cdots,\omega_{10} \in (0,2)$ and matrix $\mathbf{N}$ defines combination of cumulants for the collision by

$$\mathbf{N} = \begin{pmatrix}
1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & -1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -2 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & -2 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0
\end{pmatrix},$$

The nonlinear operator $\boldsymbol{G}$ is the same as in CuLBM1 in Section **??** and, again, the equilibrium cumulant vector $\boldsymbol{\gamma}^{(eq)}$ is defined by

$$\boldsymbol{\gamma}^{(eq)} = \left(\rho,0,0,0,0,0,0,0,0,3\rho c_s^2,0,0,\cdots,0\right)^T.$$

2.7.2 Conservation of mass: ρ

📎 attached text file: `output_d3q27_nse_culbm2_symbolic_pde_00.txt`

$\frac{\partial\rho}{\partial t} + \frac{\delta_l v_1}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{\delta_l\rho}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l v_2}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{\delta_l\rho}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_3}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{\delta_l\rho}{\delta_t}\frac{\partial v_3}{\partial x_3} + \left(-1 + v_1^2 + 3cs^2\right)\frac{\delta_l^3 v_1}{12\delta_t}\frac{\partial^3\rho}{\partial x_1^3} +$

$\left(-1 + 3v_1^2 + cs^2\right)\frac{\delta_l^3\rho}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} - \frac{cs^2\delta_l^3\rho}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} - \frac{cs^2\delta_l^3\rho}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + \left(-1 + v_2^2 + 3cs^2\right)\frac{\delta_l^3 v_2}{12\delta_t}\frac{\partial^3\rho}{\partial x_2^3} +$

$$(-1 + 3v_2^2 + cs^2)\frac{\delta_l^3 \rho}{12\delta_t}\frac{\partial^3 v_2}{\partial x_3^3} - \frac{cs^2\delta_l^3 \rho}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} - \frac{cs^2\delta_l^3 \rho}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{cs^2\delta_l^3 \rho}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2} - \frac{cs^2\delta_l^3 \rho}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} +$$

$$(-1 + v_3^2 + 3cs^2)\frac{\delta_l^3 v_3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + (-1 + 3v_3^2 + cs^2)\frac{\delta_l^3 \rho}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} + C_1 \frac{\delta_l^4}{72\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^4} +$$

$$(-9\omega_1 cs^2\omega_2 - 4\omega_1 + 6\omega_1\omega_2 - 15\omega_1\omega_2 v_1^2 + 6\omega_1 cs^2 - 8\omega_2 + 10\omega_1 v_1^2 + 12cs^2\omega_2 + 20\omega_2 v_1^2)\frac{\delta_l^4 \rho v_1}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - 3cs^2\omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4 v_1 v_2}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - 3cs^2\omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4 \rho v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + C_2 \frac{\delta_l^4 \rho v_1}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} +$$

$$(6\omega_1 cs^2\omega_2 - 2\omega_1 + 2\omega_1 cs^2 + 2\omega_2 + 3\omega_1 v_1^2 - 14cs^2\omega_2 + 3\omega_1 v_2^2 - 3\omega_2 v_1^2 - 3\omega_2 v_2^2)\frac{cs^2\delta_l^4}{36\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - 3cs^2\omega_2 - \omega_2 v_1^2)\frac{\delta_l^4 \rho v_1}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - 3cs^2\omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4 \rho v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - 3cs^2\omega_2 - \omega_2 v_1^2)\frac{\delta_l^4 v_1 v_2}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} + C_3 \frac{\delta_l^4 \rho v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - 3cs^2\omega_2 - \omega_2 v_1^2)\frac{\delta_l^4 \rho v_1}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} + C_4 \frac{\delta_l^4}{72\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_2^4} +$$

$$(-9\omega_1 cs^2\omega_2 - 4\omega_1 - 15\omega_1\omega_2 v_2^2 + 6\omega_1\omega_2 + 6\omega_1 cs^2 - 8\omega_2 + 12cs^2\omega_2 + 10\omega_1 v_2^2 + 20\omega_2 v_2^2)\frac{\delta_l^4 \rho v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 - 3cs^2\omega_2 + \omega_1 v_3^2)\frac{\delta_l^4 v_1 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^3 \partial x_3} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 - 3cs^2\omega_2 + \omega_1 v_3^2)\frac{\delta_l^4 \rho v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} + C_5 \frac{\delta_l^4 \rho v_1}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$$

$$C_6 \frac{\delta_l^4 \rho v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} + C_7 \frac{\delta_l^4 \rho v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + C_8 \frac{\delta_l^4 \rho v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} + C_9 \frac{\delta_l^4 \rho v_1}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3}$$

$$+ (-\omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 - 3cs^2\omega_2 + \omega_1 v_3^2)\frac{\delta_l^4 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_2^3 \partial x_3} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 - 3cs^2\omega_2 + \omega_1 v_3^2)\frac{\delta_l^4 \rho v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} + C_{10} \frac{\delta_l^4 \rho v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} +$$

$$(6\omega_1 cs^2\omega_2 - 2\omega_1 + 2\omega_1 cs^2 + 2\omega_2 + 3\omega_1 v_1^2 - 3\omega_2 v_3^2 - 14cs^2\omega_2 - 3\omega_2 v_1^2 + 3\omega_1 v_3^2)\frac{cs^2\delta_l^4}{36\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - 3cs^2\omega_2 - \omega_2 v_1^2)\frac{\delta_l^4 \rho v_1}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 - 3cs^2\omega_2 + \omega_1 v_3^2)\frac{\delta_l^4 \rho v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + C_{11} \frac{\delta_l^4 \rho v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C_{12} \frac{\delta_l^4 \rho v_1}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$(6\omega_1 cs^2\omega_2 - 2\omega_1 + 2\omega_1 cs^2 + 2\omega_2 - 3\omega_2 v_3^2 - 14cs^2\omega_2 + 3\omega_1 v_2^2 + 3\omega_1 v_3^2 - 3\omega_2 v_2^2)\frac{cs^2\delta_l^4}{36\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - 3cs^2\omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4 \rho v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 - 3cs^2\omega_2 + \omega_1 v_3^2)\frac{\delta_l^4 \rho v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - 3cs^2\omega_2 - \omega_2 v_1^2)\frac{\delta_l^4 v_1 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} + C_{13} \frac{\delta_l^4 \rho v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - 3cs^2\omega_2 - \omega_2 v_1^2)\frac{\delta_l^4 \rho v_1}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - 3cs^2\omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_2 \partial x_3^3} + C_{14} \frac{\delta_l^4 \rho v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} +$$

$$(-\omega_1 + 3\omega_1 cs^2 + \omega_2 - 3cs^2\omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4 \rho v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} + C_{15} \frac{\delta_l^4}{72\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_3^4} +$$

$$(-9\omega_1 cs^2\omega_2 - 15\omega_1\omega_2 v_3^2 - 4\omega_1 + 6\omega_1\omega_2 + 6\omega_1 cs^2 - 8\omega_2 + 20\omega_2 v_3^2 + 12cs^2\omega_2 + 10\omega_1 v_3^2)\frac{\delta_l^4 \rho v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 12\omega_2 v_1^4 + 4cs^4\omega_2 + 3\omega_1 cs^2\omega_2 + 6\omega_1 v_1^4 + 2\omega_1 cs^4 + 9\omega_1\omega_2 v_1^2 - 2\omega_1 cs^2 - 6\omega_1 v_1^2 + 48cs^2\omega_2 v_1^2 - 4cs^2\omega_2 - 9\omega_1\omega_2 v_1^4 - 3\omega_1 cs^4\omega_2 - 12\omega_2 v_1^2 + 24\omega_1 cs^2 v_1^2 - 36\omega_1 cs^2\omega_2 v_1^2$

$C_2 = 12\omega_4\omega_1 cs^2\omega_3 - 8\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4 cs^2\omega_2\omega_3 + 6\omega_4\omega_1\omega_2 v_1^2\omega_3 - 9\omega_1\omega_2 v_1^2\omega_3 + 18\omega_4\omega_1 v_2^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 4\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2 - 18\omega_4\omega_2 v_2^2\omega_3$

$C_3 = 12\omega_4\omega_1 cs^2\omega_3 - 8\omega_4\omega_1\omega_3 + 6\omega_4\omega_1\omega_2 v_2^2\omega_3 - 9\omega_1\omega_2 v_2^2\omega_3 + 18\omega_4\omega_1 v_1^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4 cs^2\omega_2\omega_3 + 2\omega_4\omega_1 v_2^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 - 18\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_2^2 + 4\omega_4\omega_2 v_2^2\omega_3$

$C_4 = 4cs^4\omega_2 + 3\omega_1 cs^2\omega_2 + 12\omega_2 v_2^4 + 9\omega_1\omega_2 v_2^2 + 2\omega_1 cs^4 + 6\omega_1 v_2^2 - 2\omega_1 cs^2 - 9\omega_1\omega_2 v_2^4 - 4cs^2\omega_2 - 3\omega_1 cs^4\omega_2 - 6\omega_1 v_2^2 + 48cs^2\omega_2 v_2^2 - 36\omega_1 cs^2\omega_2 v_2^2 + 24\omega_1 cs^2 v_2^2 - 12\omega_2 v_2^2$

$C_5 = 12\omega_4\omega_1 cs^2\omega_3 - 8\omega_4\omega_1\omega_3 - 18\omega_4\omega_2\omega_3 v_3^2 + 2\omega_4\omega_1 v_1^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4 cs^2\omega_2\omega_3 + 6\omega_4\omega_1\omega_2 v_1^2\omega_3 - 9\omega_1\omega_2 v_1^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 18\omega_4\omega_1\omega_3 v_3^2 + 4\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2$

$C_6 = 6\omega_4\omega_1 cs^2\omega_3 - 2\omega_4\omega_1\omega_3 - 2\omega_4\omega_2\omega_3 v_3^2 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 - 6\omega_4 cs^2\omega_2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 + 27\omega_1 cs^2\omega_2\omega_3 + 9\omega_1\omega_2\omega_3 v_3^2$

$C_7 = 6\omega_4\omega_1 cs^2\omega_3 - 2\omega_4\omega_1\omega_3 + 9\omega_1\omega_2 v_2^2\omega_3 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 - 6\omega_4 cs^2\omega_2\omega_3 + 2\omega_4\omega_1 v_2^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_2^2 - 2\omega_4\omega_2 v_2^2\omega_3$

$C_8 = 6\omega_4\omega_1 cs^2\omega_3 - 2\omega_4\omega_1\omega_3 - 2\omega_4\omega_2\omega_3 v_3^2 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 - 6\omega_4 cs^2\omega_2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 + 27\omega_1 cs^2\omega_2\omega_3 + 9\omega_1\omega_2\omega_3 v_3^2$

$C_9 = 6\omega_4\omega_1 cs^2\omega_3 - 2\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 - 6\omega_4 cs^2\omega_2\omega_3 + 9\omega_1\omega_2 v_1^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 - 2\omega_4\omega_2 v_1^2\omega_3 + 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2$

$C_{10} = 12\omega_4\omega_1 cs^2\omega_3 - 8\omega_4\omega_1\omega_3 + 6\omega_4\omega_1\omega_2 v_2^2\omega_3 - 18\omega_4\omega_2\omega_3 v_3^2 - 9\omega_1\omega_2 v_2^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4 cs^2\omega_2\omega_3 + 2\omega_4\omega_1 v_2^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 18\omega_4\omega_1\omega_3 v_3^2 - 6\omega_4\omega_1\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_2^2 + 4\omega_4\omega_2 v_2^2\omega_3$

$C_{11} = 6\omega_4\omega_1 cs^2\omega_3 - 2\omega_4\omega_1\omega_3 + 9\omega_1\omega_2 v_2^2\omega_3 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 - 6\omega_4 cs^2\omega_2\omega_3 + 2\omega_4\omega_1 v_2^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_2^2 - 2\omega_4\omega_2 v_2^2\omega_3$

$C_{12} = 6\omega_4\omega_1 cs^2\omega_3 - 2\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 - 6\omega_4 cs^2\omega_2\omega_3 + 9\omega_1\omega_2 v_1^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 - 2\omega_4\omega_2 v_1^2\omega_3 + 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2$

$C_{13} = 12\omega_4\omega_1 cs^2\omega_3 - 8\omega_4\omega_1\omega_3 + 4\omega_4\omega_2\omega_3 v_3^2 + 18\omega_4\omega_1 v_1^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4 cs^2\omega_2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 - 18\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_1\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1\omega_2\omega_3 v_3^2$

$C_{14} = 12\omega_4\omega_1 cs^2\omega_3 - 8\omega_4\omega_1\omega_3 + 4\omega_4\omega_2\omega_3 v_3^2 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4 cs^2\omega_2\omega_3 + 18\omega_4\omega_1 v_2^2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 - 6\omega_4\omega_1\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 - 9\omega_1\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1\omega_2\omega_3 v_3^2 - 18\omega_4\omega_2 v_2^2\omega_3$

$C_{15} = 4cs^4\omega_2 + 6\omega_1 v_3^4 + 3\omega_1 cs^2\omega_2 + 9\omega_1\omega_2 v_3^2 + 12\omega_2 v_3^4 + 2\omega_1 cs^4 - 2\omega_1 cs^2 - 12\omega_2 v_3^2 + 24\omega_1 cs^2 v_3^2 - 36\omega_1 cs^2\omega_2 v_3^2 - 4cs^2\omega_2 - 3\omega_1 cs^4\omega_2 + 48cs^2\omega_2 v_3^2 - 6\omega_1 v_3^2 - 9\omega_1\omega_2 v_3^4$

2.7.3 Conservation of momentum: ρv_1

📎 attached text file: `output_d3q27_nse_culbm2_symbolic_pde_01.txt`

$v_1\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_1}{\partial t} + (cs^2 + v_1^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{2\delta_l\rho v_1}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l v_1 v_2}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{\delta_l\rho v_2}{\delta_t}\frac{\partial v_1}{\partial x_2} + \frac{\delta_l\rho v_1}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_1 v_3}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{\delta_l\rho v_3}{\delta_t}\frac{\partial v_1}{\partial x_3} +$
$\frac{\delta_l\rho v_1}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-6\omega_1 cs^2\omega_2 - 2\omega_1 + 3\omega_1\omega_2 - 9\omega_1\omega_2 v_1^2 + 8cs^2\omega_2 - 4\omega_2 + 6\omega_1 v_1^2 + 4\omega_1 cs^2 + 12\omega_2 v_1^2)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} +$
$(2\omega_1 - 3\omega_1\omega_2 + 4\omega_2)\frac{\delta_l^2\rho v_1}{\omega_1\omega_2\delta_t}\left(\frac{\partial v_1}{\partial x_1}\right)^2 + (-\omega_1 - cs^2\omega_2 + \omega_2 + \omega_1 cs^2 + 3\omega_1 v_2^2 - 3\omega_2 v_2^2)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_2} +$
$(\omega_1 - \omega_2)\frac{2\delta_l^2\rho v_2}{\omega_1\omega_2\delta_t}\frac{\partial v_2}{\partial x_1}\frac{\partial v_2}{\partial x_2} + (-\omega_1 - cs^2\omega_2 + \omega_2 - 3\omega_2 v_3^2 + \omega_1 cs^2 + 3\omega_1 v_3^2)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_3}{\partial x_3} + (\omega_1 - \omega_2)\frac{2\delta_l^2\rho v_3}{\omega_1\omega_2\delta_t}\frac{\partial v_3}{\partial x_1}\frac{\partial v_3}{\partial x_3}$
$+ (3\omega_1 cs^2\omega_2 - 2\omega_1 - 12cs^2\omega_2 + 2\omega_2 + 6\omega_1 cs^2 + 6\omega_1 v_2^2 - 6\omega_2 v_2^2)\frac{\delta_l^2}{6\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} + (-2 + \omega_1)\frac{cs^2\delta_l^2}{2\omega_1\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_2} +$
$(3\omega_1 cs^2\omega_2 - 2\omega_1 - 12cs^2\omega_2 + 2\omega_2 - 6\omega_2 v_3^2 + 6\omega_1 cs^2 + 6\omega_1 v_3^2)\frac{\delta_l^2}{6\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_1} + (-2 + \omega_1)\frac{cs^2\delta_l^2}{2\omega_1\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_3} +$
$(-9\omega_1 cs^2\omega_2 - 2\omega_1 + 3\omega_1\omega_2 - 3\omega_1\omega_2 v_1^2 + 12cs^2\omega_2 - 4\omega_2 + 2\omega_1 v_1^2 + 6\omega_1 cs^2 + 4\omega_2 v_1^2)\frac{\delta_l^2 v_1}{6\omega_1\omega_2\delta_t}\frac{\partial^2\rho}{\partial x_1^2} +$
$(-3\omega_1 cs^2\omega_2 - 2\omega_1 + 3\omega_1\omega_2 - 9\omega_1\omega_2 v_1^2 + 4cs^2\omega_2 - 4\omega_2 + 6\omega_1 v_1^2 + 2\omega_1 cs^2 + 12\omega_2 v_1^2)\frac{\delta_l^2\rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_1}{\partial x_1^2} +$
$(-\omega_1 - 3cs^2\omega_2 + \omega_2 + 3\omega_1 cs^2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^2 v_2}{3\omega_1\omega_2\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_2} +$
$(3\omega_1 cs^2\omega_2 - 2\omega_1 - 8cs^2\omega_2 + 2\omega_2 + 2\omega_1 cs^2 + 6\omega_1 v_2^2 - 6\omega_2 v_2^2)\frac{\delta_l^2\rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_2}{\partial x_1\partial x_2} + (-2 + \omega_1)\frac{cs^2\delta_l^2\rho}{2\omega_1\delta_t}\frac{\partial^2 v_1}{\partial x_2^2} +$
$(-\omega_1 - 3cs^2\omega_2 + \omega_2 - \omega_2 v_3^2 + 3\omega_1 cs^2 + \omega_1 v_3^2)\frac{\delta_l^2 v_3}{3\omega_1\omega_2\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_3} +$

$$(3\omega_1 cs^2\omega_2 - 2\omega_1 - 8cs^2\omega_2 + 2\omega_2 - 6\omega_2 v_3^2 + 2\omega_1 cs^2 + 6\omega_1 v_3^2)\frac{\delta_l^2\rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_3}{\partial x_1\partial x_3} + (-2+\omega_1)\frac{cs^2\delta_l^2\rho}{2\omega_1\delta_t}\frac{\partial^2 v_1}{\partial x_3^2} +$$

$$C_1\frac{\delta_l^3}{12\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + C_2\frac{\delta_l^3\rho v_1}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_3\frac{\delta_l^3 v_1 v_2}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} + C_4\frac{\delta_l^3\rho v_2}{6\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_2} + C_5\frac{\delta_l^3\rho v_1}{12\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} +$$

$$C_6\frac{\delta_l^3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2^2} - \frac{cs^2\delta_l^3\rho v_1}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C_7\frac{\delta_l^3\rho v_2}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2^2} + (-1+v_2^2+3cs^2)\frac{\delta_l^3 v_1 v_2}{12\delta_t}\frac{\partial^3\rho}{\partial x_2^2} + C_8\frac{\delta_l^3\rho v_2}{12\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_2^2} +$$

$$(-1+3v_2^2+cs^2)\frac{\delta_l^3\rho v_1}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^2} + C_9\frac{\delta_l^3 v_1 v_3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} + C_{10}\frac{\delta_l^3\rho v_3}{6\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_3} + C_{11}\frac{\delta_l^3\rho v_1}{12\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} +$$

$$C_{12}\frac{\delta_l^3 v_2 v_3}{3\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2\partial x_3} + C_{13}\frac{\delta_l^3\rho v_3}{6\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2\partial x_3} + C_{14}\frac{\delta_l^3\rho v_2}{6\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_2\partial x_3} + C_{15}\frac{\delta_l^3\rho v_3}{4\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_2^2\partial x_3} -$$

$$\frac{cs^2\delta_l^3\rho v_1}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C_{16}\frac{\delta_l^3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} - \frac{cs^2\delta_l^3\rho v_1}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} + C_{17}\frac{\delta_l^3\rho v_3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_3^2} + C_{18}\frac{\delta_l^3\rho v_2}{4\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_2\partial x_3^2} -$$

$$\frac{cs^2\delta_l^3\rho v_1}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + (-1+v_3^2+3cs^2)\frac{\delta_l^3 v_1 v_3}{12\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + C_{19}\frac{\delta_l^3\rho v_3}{12\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_3^3} + (-1+3v_3^2+cs^2)\frac{\delta_l^3\rho v_1}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$$

$$C_{20}\frac{\delta_l^4 v_1}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4\rho}{\partial x_1^4} + C_{21}\frac{\delta_l^4\rho}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_{22}\frac{\delta_l^4 v_2}{36\omega_1^3\omega_2^2\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} + C_{23}\frac{\delta_l^4\rho v_1 v_2}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} +$$

$$C_{24}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C_{25}\frac{\delta_l^4 v_1}{36\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} + C_{26}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} + C_{27}\frac{\delta_l^4\rho v_1 v_2}{18\omega_3^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} +$$

$$C_{28}\frac{\delta_l^4 v_2}{72\omega_4^2\omega_1^3\omega_2^3\omega_2^2\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + C_{29}\frac{\delta_l^4\rho v_1 v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} + C_{30}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} + C_{31}\frac{\delta_l^4 v_1}{72\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_2^4} +$$

$$C_{32}\frac{\delta_l^4\rho}{24\omega_4^2\omega_1^3\omega_2^3\delta_t}\frac{\partial^4 v_1}{\partial x_2^4} +$$

$$(-9\omega_1 cs^2\omega_2 - 4\omega_1 - 15\omega_1\omega_2 v_2^2 + 6\omega_1\omega_2 + 12cs^2\omega_2 - 8\omega_2 + 6\omega_1 cs^2 + 10\omega_1 v_2^2 + 20\omega_2 v_2^2)\frac{\delta_l^4\rho v_1 v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} +$$

$$C_{33}\frac{\delta_l^4 v_3}{36\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} + C_{34}\frac{\delta_l^4\rho v_1 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} + C_{35}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} + C_{36}\frac{\delta_l^4 v_1 v_2 v_3}{6\omega_1^3\omega_2^3\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C_{37}\frac{\delta_l^4\rho v_2 v_3}{6\omega_4\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} + C_{38}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} + C_{39}\frac{\delta_l^4\rho v_1 v_2}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C_{40}\frac{\delta_l^4 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_2^2\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} + C_{41}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} + C_{42}\frac{\delta_l^4\rho v_2 v_3}{6\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3} +$$

$$C_{43}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + (-\omega_1 - 3cs^2\omega_2 + \omega_2 - \omega_2 v_3^2 + 3\omega_1 cs^2 + \omega_1 v_3^2)\frac{\delta_l^4 v_1 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} +$$

$$C_{44}\frac{\delta_l^4\rho v_2 v_3}{8\omega_4^2\omega_1\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_2^3\partial x_3} + (-\omega_1 - 3cs^2\omega_2 + \omega_2 - \omega_2 v_3^2 + 3\omega_1 cs^2 + \omega_1 v_3^2)\frac{\delta_l^4\rho v_1 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} + C_{45}\frac{\delta_l^4\rho v_1 v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} +$$

$$C_{46}\frac{\delta_l^4 v_1}{36\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} + C_{47}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} + C_{48}\frac{\delta_l^4\rho v_1 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} + C_{49}\frac{\delta_l^4 v_2}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C_{50}\frac{\delta_l^4\rho v_1 v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2} + C_{51}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} + C_{52}\frac{\delta_l^4\rho v_2 v_3}{6\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2} +$$

$$(6\omega_1 cs^2\omega_2 - 2\omega_1 - 14cs^2\omega_2 + 2\omega_2 - 3\omega_2 v_3^2 + 2\omega_1 cs^2 + 3\omega_1 v_2^2 + 3\omega_1 v_3^2 - 3\omega_2 v_2^2)\frac{cs^2\delta_l^4 v_1}{36\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} +$$

$$C_{53}\frac{\delta_l^4\rho}{8\omega_4^2\omega_1^3\omega_5\omega_2^2\delta_t}\frac{\partial^4 v_1}{\partial x_2^2\partial x_3^2} + (-\omega_1 - 3cs^2\omega_2 + \omega_2 + 3\omega_1 cs^2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4\rho v_1 v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} +$$

$$(-\omega_1 - 3cs^2\omega_2 + \omega_2 - \omega_2 v_3^2 + 3\omega_1 cs^2 + \omega_1 v_3^2)\frac{\delta_l^4\rho v_1 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} + C_{54}\frac{\delta_l^4 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_3^3} +$$

$$C_{55}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + C_{56}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_3^3} +$$

$$(-\omega_1 - 3cs^2\omega_2 + \omega_2 + 3\omega_1 cs^2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4 v_1 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} + C_{57}\frac{\delta_l^4\rho v_2 v_3}{8\omega_4^2\omega_1\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_2\partial x_3^3} + C_{58}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3}$$

$$+ (-\omega_1 - 3cs^2\omega_2 + \omega_2 + 3\omega_1 cs^2 + \omega_1 v_2^2 - \omega_2 v_2^2)\frac{\delta_l^4\rho v_1 v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} + C_{59}\frac{\delta_l^4 v_1}{72\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_3^4} + C_{60}\frac{\delta_l^4\rho}{24\omega_4^2\omega_1^3\omega_2^3\delta_t}\frac{\partial^4 v_1}{\partial x_3^4} +$$

$$(-15\omega_1\omega_2 v_3^2 - 9\omega_1 cs^2\omega_2 - 4\omega_1 + 6\omega_1\omega_2 + 12cs^2\omega_2 - 8\omega_2 + 20\omega_2 v_3^2 + 6\omega_1 cs^2 + 10\omega_1 v_3^2)\frac{\delta_l^4\rho v_1 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = \omega_1^2 cs^4\omega_2^2 + 72cs^2\omega_2^2 v_1^2 + 24\omega_1^2 cs^2 v_1^2 - 16\omega_2^2 v_1^2 - 48\omega_1^2 cs^2\omega_2 v_1^2 - 96\omega_1 cs^2\omega_2^2 v_1^2 + 8\omega_1 cs^2\omega_2^2 - 7\omega_1^2\omega_2^2 v_1^2 - 24\omega_1\omega_2^2 v_1^4 + 8cs^4\omega_2^2 - 4\omega_1^2 cs^4\omega_2 - 16\omega_1\omega_2 v_1^2 - 4\omega_1^2 cs^2 - 12\omega_1^2\omega_2 v_1^4 - 4\omega_1^2 v_1^4 + 24\omega_1\omega_2^2 v_1^2 - \omega_1^2 cs^2\omega_2^2 + 7\omega_1^2\omega_2^2 v_1^4 + 48\omega_1 cs^2\omega_2 v_1^2 + 12\omega_1^2\omega_2 v_1^2 + 4\omega_1^2 cs^4 + 4\omega_1^2 v_1^4 + 16\omega_1\omega_2 v_1^4 + 24\omega_1^2 cs^2\omega_2^2 v_1^2 - 8\omega_1 cs^4\omega_2^2 + 16\omega_2^2 v_1^4 - 8cs^2\omega_2^2 + 4\omega_1^2 cs^2\omega_2$

$C_2 = 16\omega_1\omega_2^2 + 8\omega_1 cs^2\omega_2 + 28\omega_2^2 v_1^2 - 24\omega_1 cs^2\omega_2^2 + 11\omega_2^2\omega_2^2 v_1^2 - 8\omega_1\omega_2 - 12\omega_2^2 + 24\omega_1\omega_2 v_1^2 + 8\omega_1^2 cs^2 + 8\omega_1^2 v_1^2 - 40\omega_1\omega_2^2 v_1^2 + 5\omega_1^2 cs^2\omega_2^2 - 20\omega_1^2\omega_2 v_1^2 + 8\omega_1^2\omega_2 - 4\omega_1^2\omega_2^2 + 20cs^2\omega_2^2 - 4\omega_1^2 - 12\omega_1^2 cs^2\omega_2$

$C_3 = -4\omega_2^2 v_2^2 - 3\omega_1\omega_2^2 - 6\omega_1 cs^2\omega_2 + 2\omega_2^2 v_1^2 + 9\omega_1 cs^2\omega_2^2 + 2\omega_1\omega_2 v_2^2 + 2\omega_1\omega_2 + 2\omega_1^2 v_2^2 + 2\omega_2^2 - 4\omega_1\omega_2 v_1^2 + 12\omega_1^2 cs^2 + 2\omega_1^2 v_1^2 - 3\omega_1^2\omega_2 v_2^2 + 3\omega_1\omega_2^2 v_2^2 + 3\omega_1^2\omega_2 - 6cs^2\omega_2^2 - 4\omega_1^2 - 9\omega_1^2 cs^2\omega_2$

$C_4 = 3\omega_1 cs^2\omega_2^2\omega_3 - 2\omega_1\omega_2^2 - 4\omega_1^2\omega_3 + 2\omega_1^2 v_2^2\omega_3 + 4\omega_1\omega_2\omega_3 + 6\omega_1 cs^2\omega_2^2 - 12\omega_1\omega_2 v_1^2\omega_3 + 8\omega_1^2 cs^2\omega_3 - 4cs^2\omega_2^2\omega_3 - 3\omega_1^2 cs^2\omega_2\omega_3 + 6\omega_1^2 v_1^2\omega_3 - \omega_1^2\omega_2 v_2^2\omega_3 - 2\omega_1^2\omega_2 v_2^2 + 2\omega_1\omega_2 v_2^2 - 2\omega_2^2 v_2^2\omega_3 + 2\omega_1^2\omega_2 + \omega_1\omega_2^2 v_2^2\omega_3 - \omega_1\omega_2^2\omega_3 + 6\omega_2^2 v_1^2\omega_3 - 4\omega_1 cs^2\omega_2\omega_3 - 6\omega_1^2 cs^2\omega_2 + \omega_1^2\omega_2\omega_3$

$C_5 = -3\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3 - 8\omega_4\omega_1\omega_2^2 v_1^2 - 6\omega_4\omega_1^2\omega_2^2 + 18\omega_4\omega_1^2 cs^2\omega_2^2 + 6\omega_1^2\omega_2^2 v_1^2\omega_3 + 12\omega_4\omega_1\omega_2 v_2^2\omega_3 - 36 cs^2\omega_2^2\omega_3 - 6\omega_1^2\omega_2^2\omega_3 + 12\omega_4\omega_1 cs^2\omega_2^2\omega_3 - 24\omega_4\omega_2^2 v_2^2\omega_3 - 4\omega_4\omega_1^2\omega_2 v_1^2 - 8\omega_4\omega_1\omega_2\omega_3 + 8\omega_4\omega_2^2 v_1^2\omega_3 - 12\omega_4\omega_1^2 cs^2\omega_2\omega_3 + 4\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1^2\omega_2\omega_3 - 12\omega_4\omega_1^2 cs^2\omega_2 - 11\omega_4\omega_1^2 cs^2\omega_2^2\omega_3 - 18\omega_4\omega_1^2\omega_2 v_2^2\omega_3 + 18\omega_1^2 cs^2\omega_2^2\omega_3 - 12\omega_1\omega_2^2 v_1^2\omega_3 + 2\omega_4\omega_1\omega_2 v_1^2\omega_3 + 3\omega_4\omega_1^2\omega_2^2\omega_3 + 12\omega_4\omega_1^2 v_2^2\omega_3 - 4\omega_4\omega_1\omega_2\omega_3 - 24\omega_4\omega_1 cs^2\omega_2^2 + 6\omega_4\omega_1^2\omega_2^2 v_1^2 - 2\omega_4\omega_1^2\omega_2 v_1^2\omega_3 + 12\omega_1\omega_2^2\omega_3 + 18\omega_4\omega_1\omega_2 v_2^2\omega_3 + 8\omega_4\omega_1\omega_2^2 + 16 cs^2\omega_2^2\omega_3 + 16\omega_4\omega_1^2 cs^2\omega_3 + 4\omega_4\omega_1 v_1^2\omega_3 - 8\omega_4\omega_1^2\omega_3 + 4\omega_4\omega_1 cs^2\omega_2\omega_3$

$C_6 = -18cs^2\omega_2^2 v_2^2 + 12\omega_1^2 cs^2 v_2^2 + 4\omega_2^2 v_2^2 - 15\omega_1^2 cs^2\omega_2 v_2^2 - \omega_1^2 cs^4\omega_2^2 - 2\omega_1 cs^2\omega_2^2 - 2\omega_1\omega_2 v_2^2 - 14 cs^4\omega_2^2 - 3\omega_1^2 v_2 v_2^4 - 2\omega_1^2 v_2^2 - 2\omega_1 cs^4\omega_2 + 15\omega_1 cs^2\omega_2^2 v_2^2 + 3\omega_1\omega_2^2 v_2^4 - 2\omega_1^2 cs^2 + 6\omega_1 cs^2\omega_2 v_2^2 + 3\omega_1^2\omega_2 v_2^2 + 2\omega_1 v_2^4 + 2\omega_1\omega_2 v_2^2 - 3\omega_1\omega_2^2 v_2^2 + 2\omega_1^2 cs^4 - 4\omega_2^2 v_2^4 + 14\omega_1 cs^4\omega_2^2 + 2cs^2\omega_2^2 + 2\omega_1^2 cs^2\omega_2$

$C_7 = -14\omega_2^2 v_2^2 - 5\omega_1\omega_2^2 + 2\omega_1 cs^2\omega_2 + 9\omega_1 cs^2\omega_2^2 + 6\omega_1\omega_2 v_2^2 - 2\omega_1\omega_2 + 8\omega_1^2 v_2^2 + 6\omega_2^2 + 8\omega_1^2 cs^2 - 11\omega_1^2\omega_2 v_2^2 + 11\omega_1\omega_2^2 v_2^2 + 5\omega_1^2\omega_2 - 10 cs^2\omega_2^2 - 4\omega_1^2 - 9\omega_1^2 cs^2\omega_2$

$C_8 = -6\omega_4 v_2^2 + 2\omega_4\omega_1\omega_3 - 18cs^2\omega_3 - 18\omega_4 cs^2 - 6\omega_4\omega_1 cs^2\omega_3 + 6\omega_4 - 3\omega_4\omega_1 + 9\omega_4\omega_1 cs^2 - 6v_2^2\omega_3 - 2\omega_4\omega_1 v_2^2\omega_3 - 6\omega_4\omega_3 + 3\omega_4\omega_1 v_2^2 + 6\omega_4 v_2^2\omega_3 + 9\omega_1 cs^2\omega_3 - 3\omega_1\omega_3 + 18\omega_4 cs^2\omega_3 + 6\omega_3 + 3\omega_1 v_2^2\omega_3$

$C_9 = 2\omega_1\omega_2 v_3^2 - 3\omega_1\omega_2^2 - 6\omega_1 cs^2\omega_2 + 2\omega_1^2 v_3^2 + 2\omega_2^2 v_1^2 + 9\omega_1 cs^2\omega_2^2 + 2\omega_1\omega_2 + 2\omega_2^2 - 4\omega_1\omega_2 v_1^2 + 12\omega_1^2 cs^2 - 4\omega_2^2 v_3^2 + 2\omega_1^2 v_1^2 + 3\omega_1^2\omega_2 + 3\omega_1\omega_2^2 v_3^2 - 3\omega_1^2\omega_2 v_3^2 - 6cs^2\omega_2^2 - 4\omega_1^2 - 9\omega_1^2 cs^2\omega_2$

$C_{10} = 3\omega_1 cs^2\omega_2^2\omega_3 - 2\omega_1\omega_2^2 - 4\omega_1^2\omega_3 + \omega_1\omega_2\omega_3 v_3^2 + 4\omega_1\omega_2\omega_3 + 6\omega_1 cs^2\omega_2^2 - 12\omega_1\omega_2 v_1^2\omega_3 - 2\omega_2\omega_3 v_3^2 + 8\omega_1^2 cs^2\omega_3 - 4cs^2\omega_2^2\omega_3 - 3\omega_1^2 cs^2\omega_2\omega_3 + 6\omega_1^2 v_1^2\omega_3 - \omega_1^2\omega_2\omega_3 v_3^2 + 2\omega_1^2\omega_2 + 2\omega_1\omega_2 v_3^2 + 2\omega_1^2\omega_2 v_3^2 - \omega_1\omega_2^2\omega_3 + 6\omega_2^2 v_1^2\omega_3 - 2\omega_2^2 v_3^2 - 4\omega_1 cs^2\omega_2\omega_3 - 6\omega_1^2 cs^2\omega_2 + \omega_1^2\omega_2\omega_3$

$C_{11} = -3\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3 - 8\omega_4\omega_1\omega_2^2 v_1^2 - 6\omega_4\omega_1^2\omega_2^2 + 18\omega_4\omega_1^2 cs^2\omega_2^2 + 6\omega_1^2\omega_2^2 v_1^2\omega_3 - 36 cs^2\omega_2^2\omega_3 - 6\omega_1^2\omega_2^2\omega_3 + 12\omega_4\omega_1 cs^2\omega_2^2\omega_3 + 18\omega_4\omega_1\omega_2^2\omega_3 v_3^2 - 4\omega_4\omega_1^2\omega_2 v_1^2 - 8\omega_4\omega_1\omega_2\omega_3 + 12\omega_4\omega_1\omega_3 v_3^2 + 8\omega_4\omega_2^2 v_1^2\omega_3 - 12\omega_4\omega_1^2 cs^2\omega_2\omega_3 - 18\omega_4\omega_1^2\omega_2\omega_3 v_3^2 + 4\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1^2\omega_2\omega_3 - 12\omega_4\omega_1^2 cs^2\omega_2 - 11\omega_4\omega_1^2 cs^2\omega_2^2\omega_3 + 18\omega_1^2 cs^2\omega_2^2\omega_3 - 12\omega_1\omega_2^2 v_1^2\omega_3 + 2\omega_4\omega_1\omega_2 v_1^2\omega_3 + 3\omega_4\omega_1^2\omega_2^2\omega_3 - 4\omega_4\omega_1\omega_2\omega_3 - 24\omega_4\omega_1 cs^2\omega_2^2 + 6\omega_4\omega_1^2\omega_2^2 v_1^2 - 2\omega_4\omega_1^2\omega_2 v_1^2\omega_3 + 12\omega_1\omega_2^2\omega_3 - 24\omega_4\omega_2^2\omega_3 v_3^2 + 8\omega_4\omega_1\omega_2^2 + 16 cs^2\omega_2^2\omega_3 + 16\omega_4\omega_1^2 cs^2\omega_3 + 12\omega_4\omega_1\omega_2\omega_3 v_3^2 + 4\omega_4\omega_1^2 v_1^2\omega_3 - 8\omega_4\omega_1^2\omega_3 + 4\omega_4\omega_1 cs^2\omega_2\omega_3$

$C_{12} = \omega_2^2 v_2^2 - 2\omega_1\omega_2 v_3^2 - 12\omega_1 cs^2\omega_2 + \omega_1^2 v_3^2 - 2\omega_1\omega_2 v_2^2 + 4\omega_1\omega_2 + \omega_1^2 v_2^2 - 2\omega_2^2 + 6\omega_1^2 cs^2 + \omega_2^2 v_3^2 + 6cs^2\omega_2^2 - 2\omega_1^2$

$C_{13} = -3\omega_4\omega_1^2\omega_2^2 + 9\omega_4\omega_1^2 cs^2\omega_2^2 - 12\omega_4\omega_1\omega_2 v_2^2\omega_3 + 18\omega_1 cs^2\omega_2^2\omega_3 + 3\omega_1^2\omega_2^2\omega_3 + 3\omega_4\omega_1 cs^2\omega_2^2\omega_3 + \omega_4\omega_1\omega_2^2\omega_3 v_3^2 + 6\omega_4\omega_2^2 v_2^2\omega_3 + 6\omega_1\omega_2^2 v_2^2\omega_3 - 4\omega_4\omega_1\omega_2^2 v_3^2 - \omega_4\omega_1\omega_2^2\omega_3 + 2\omega_4\omega_1\omega_2^2 v_3^2 - 3\omega_4\omega_1^2 cs^2\omega_2\omega_3 - 2\omega_4\omega_1^2\omega_2 v_3^2 - \omega_4\omega_1^2\omega_2\omega_3 v_3^2 + 2\omega_4\omega_1^2\omega_2 + \omega_4\omega_1^2\omega_2\omega_3 - 6\omega_4\omega_1^2 cs^2\omega_2 - 9\omega_1^2 cs^2\omega_2^2\omega_3 + 3\omega_4\omega_1^2\omega_2^2 v_3^2 + 6\omega_4\omega_1^2 v_2^2\omega_3 - 3\omega_1^2\omega_2^2 v_3^2 + 4\omega_4\omega_1\omega_2\omega_3 - 12\omega_4\omega_1 cs^2\omega_2^2 - 6\omega_1\omega_2^2\omega_3 - 2\omega_4\omega_2^2\omega_3 v_3^2 + 4\omega_4\omega_1\omega_2^2 - 4\omega_4 cs^2\omega_2^2\omega_3 + 8\omega_4\omega_1^2 cs^2\omega_3 - 4\omega_4\omega_1^2\omega_3 - 4\omega_4\omega_1 cs^2\omega_2\omega_3$

$C_{14} = -3\omega_4\omega_1^2\omega_2 + 9\omega_4\omega_1^2 cs^2\omega_2^2 - 2\omega_4\omega_1^2\omega_2 v_2^2 + 18\omega_1 cs^2\omega_2^2\omega_3 + 3\omega_1^2\omega_2^2\omega_3 + 3\omega_4\omega_1 cs^2\omega_2^2\omega_3 - 2\omega_4\omega_2^2 v_2^2\omega_3 - 4\omega_4\omega_1\omega_2^2 v_2^2 - 3\omega_1^2\omega_2^2 v_2^2\omega_3 - \omega_4\omega_1\omega_2^2\omega_3 + 6\omega_4\omega_1^2\omega_3 v_3^2 - 3\omega_4\omega_1^2 cs^2\omega_2\omega_3 + 2\omega_4\omega_1^2\omega_2 + \omega_4\omega_1^2\omega_2\omega_3 - 6\omega_4\omega_1^2 cs^2\omega_2 - \omega_4\omega_1^2\omega_2 v_2^2\omega_3 - 9\omega_1^2 cs^2\omega_2^2\omega_3 + 2\omega_4\omega_1^2 v_2^2\omega_3 + 4\omega_4\omega_1\omega_2\omega_3 - 12\omega_4\omega_1 cs^2\omega_2^2 + 6\omega_1\omega_2^2 v_2^2\omega_3 - 6\omega_1\omega_2^2\omega_3 + 4\omega_4\omega_1\omega_2^2 v_2^2\omega_3 + 6\omega_4\omega_2^2\omega_3 v_3^2 + 4\omega_4\omega_1\omega_2^2 - 4\omega_4 cs^2\omega_2^2\omega_3 + 8\omega_4\omega_1^2 cs^2\omega_3 - 12\omega_4\omega_1\omega_2\omega_3 v_3^2 + 3\omega_4\omega_1^2\omega_2^2 v_2^2 - 4\omega_4\omega_1^2\omega_3 - 4\omega_4\omega_1 cs^2\omega_2\omega_3$

$C_{15} = 6cs^2\omega_3 + \omega_4\omega_1 v_3^2 - \omega_1\omega_3 v_3^2 - 6\omega_4 cs^2 + 2\omega_4 - \omega_4\omega_1 + 3\omega_4\omega_1 cs^2 - 2\omega_4 v_3^2 + 2\omega_3 v_3^2 - 3\omega_1 cs^2\omega_3 + \omega_1\omega_3 - 2\omega_3$

$C_{16} = 15\omega_1 cs^2\omega_2^2 v_3^2 + 3\omega_1\omega_2^2 v_3^4 - 2\omega_1\omega_2 v_3^2 - \omega_1^2 cs^4\omega_2^2 - 2\omega_1^2 v_3^2 - 3\omega_1^2\omega_2 v_3^4 - 2\omega_1 cs^2\omega_2^2 - 14 cs^4\omega_2^2 - 2\omega_1^2 cs^4\omega_2 + 12\omega_1^2 cs^2 v_3^2 - 18 cs^2\omega_2^2 v_3^2 - 2\omega_1^2 cs^2 - 15\omega_1^2 cs^2\omega_2 v_3^2 + 4\omega_2^2 v_3^2 + 2\omega_1^2 cs^4 - 4\omega_2^2 v_3^4 - 3\omega_1\omega_2^2 v_3^2 + 14\omega_1 cs^4\omega_2^2 + 6\omega_1 cs^2\omega_2 v_3^2 + 2\omega_1^2 v_3^4 + 3\omega_1^2\omega_2 v_3^2 + 2\omega_1\omega_2 v_3^2 + 2cs^2\omega_2^2 + 2\omega_1^2 cs^2\omega_2$

$C_{17} = 6\omega_1\omega_2 v_3^2 - 5\omega_1\omega_2^2 + 2\omega_1 cs^2\omega_2 + 8\omega_1^2 v_3^2 + 9\omega_1 cs^2\omega_2^2 - 2\omega_1\omega_2 + 6\omega_2^2 + 8\omega_1^2 cs^2 - 14\omega_2^2 v_3^2 + 5\omega_1^2\omega_2 + 11\omega_1\omega_2^2 v_3^2 - 11\omega_1^2\omega_2 v_3^2 - 10 cs^2\omega_2^2 - 4\omega_1^2 - 9\omega_1^2 cs^2\omega_2$

$C_{18} = -2\omega_4 v_3^2 + 6cs^2\omega_3 - 6\omega_4 cs^2 + 2\omega_4 - \omega_4\omega_1 + 3\omega_4\omega_1 cs^2 + 2v_3^2\omega_3 + \omega_4\omega_1 v_3^2 - 3\omega_1 cs^2\omega_3 + \omega_1\omega_3 - 2\omega_3 - \omega_1 v_3^2\omega_3$

$C_{19} = 2\omega_4\omega_1\omega_3 - 18cs^2\omega_3 + 3\omega_4\omega_1 v_3^2 + 3\omega_1\omega_3 v_3^2 - 18\omega_4 cs^2 - 6\omega_4\omega_1 cs^2\omega_3 + 6\omega_4 - 3\omega_4\omega_1 + 9\omega_4\omega_1 cs^2 - 6\omega_4 v_3^2 + 6\omega_4\omega_3 v_3^2 - 6\omega_4\omega_3 - 2\omega_4\omega_1\omega_3 v_3^2 - 6\omega_3 v_3^2 + 9\omega_1 cs^2\omega_3 - 3\omega_1\omega_3 + 18\omega_4 cs^2\omega_3 + 6\omega_3$

$C_{20} = 122\omega_1^3 cs^2\omega_2\omega_3 - 372\omega_1 cs^4\omega_2^3\omega_3 + 280\omega_1^2\omega_2^2 v_1^2\omega_3 - 84\omega_1^3\omega_2 v_1^4\omega_3 + 656\omega_1 cs^2\omega_2^2 v_1^2\omega_3 - 80\omega_1 cs^2\omega_2^2\omega_3 - 16\omega_1^2\omega_2^2\omega_3 + 180\omega_1^2\omega_2^3 v_1^4\omega_3 + 8cs^2\omega_2^3 v_1^2 + 328\omega_1\omega_2^3 v_1^2\omega_3 - 1088\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 - 48\omega_1^2 cs^4\omega_2^2 + 72\omega_1^2 cs^4\omega_2\omega_3 - 464\omega_1^3 cs^2\omega_2 v_1^2\omega_3 + 168\omega_1\omega_2^3 v_1^4\omega_3 + 16\omega_2^3\omega_3 - 184 cs^2\omega_2^3 v_1^2 - 156\omega_1^3 cs^4\omega_2\omega_3 + 760 cs^2\omega_2^3 v_1^2\omega_3 + 16\omega_1^2\omega_2^3\omega_3 - 10\omega_1^3 cs^2\omega_2^3 v_1^2\omega_3 - 8\omega_1^3 cs^2\omega_2 + 320\omega_1^3 cs^2\omega_2^3 v_1^2\omega_3 - 160\omega_2^3 v_1^2\omega_3 + 8\omega_1^3 cs^2\omega_2 v_1^2 + 72\omega_1 cs^4\omega_2^2\omega_3 - 98\omega_1^3\omega_2 v_1^2\omega_3 + 96\omega_1\omega_2 v_1^4\omega_3 - 80\omega_1^2 cs^2\omega_2\omega_3 - 8\omega_1 cs^2\omega_2^3 + 4\omega_1^3\omega_3 - 27\omega_1^3\omega_2 v_1^4\omega_3 + 72\omega_1^3 cs^4\omega_3 + 24\omega_1^3 v_1^4\omega_3 + 216 cs^4\omega_2^3\omega_3 - 300\omega_1\omega_2^3 v_1^4\omega_3 + 16\omega_1^2 cs^2\omega_2^2 + 152\omega_1^2 cs^2\omega_2^2\omega_3 - 28\omega_1\omega_2^3\omega_3 + 164\omega_1^2 cs^4\omega_2^3\omega_3 - 176\omega_1\omega_2^2 v_1^2\omega_3 + 808\omega_1^2 cs^2\omega_2^3 v_1^2\omega_3 + 160\omega_1^3 cs^2 v_1^2\omega_3 - 1472\omega_1 cs^2\omega_2^3 v_1^2\omega_3 + 82\omega_1^3 cs^4\omega_2\omega_3 + 94\omega_1^3\omega_2 v_1^2\omega_3 + 8\omega_1^3\omega_2\omega_3 - 264\omega_1^2\omega_2^2 v_1^4\omega_3 + 18\omega_1^3 cs^2\omega_2^3\omega_3 - 196\omega_1^2\omega_2^3 v_1^2\omega_3 - 104\omega_1^2\omega_2 v_1^2\omega_3 + 90\omega_1^3\omega_2^2 v_1^4\omega_3 - 120\omega_1^2 cs^4\omega_2^2\omega_3 + 24\omega_1 cs^4\omega_2^3 - 156\omega_1^2 cs^2\omega_2^3\omega_3 + 8\omega_1\omega_2^3\omega_3 - 52\omega_1^3 cs^2\omega_3 + 30\omega_1^3\omega_2^3 v_1^2\omega_3 - 16\omega_1^2 cs^2\omega_2^2 v_1^2 - 28\omega_1^3 v_1^2\omega_3 - 78\omega_1^3 cs^2\omega_2^2\omega_3 + 24\omega_1^3 cs^4\omega_2 + 440\omega_1^2 cs^2\omega_2 v_1^2\omega_3 + 144\omega_2^3 v_1^4\omega_3 - 3\omega_1^3\omega_2^3\omega_3 + 404\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 - 15\omega_1^3 cs^4\omega_2^3\omega_3 + 8\omega_1^2\omega_2\omega_3$

$C_{21} = 42\omega_1^3 cs^2\omega_2\omega_3 - 68\omega_1 cs^4\omega_2^3\omega_3 + 408\omega_1^2\omega_2^2 v_1^2\omega_3 - 312\omega_1^3\omega_2 v_1^4\omega_3 + 336\omega_1 cs^2\omega_2^2 v_1^2\omega_3 - 16\omega_1 cs^2\omega_2^2\omega_3 - 16\omega_1^2\omega_2^2\omega_3 + 620\omega_1^2\omega_2^3 v_1^4\omega_3 + 24\omega_1 cs^2\omega_2^3 v_1^2 + 552\omega_1\omega_2^3 v_1^2\omega_3 - 576\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 - 16\omega_1 cs^4\omega_2^2 + 8\omega_1^2 cs^4\omega_2\omega_3 - 360\omega_1^3 cs^2\omega_2 v_1^2\omega_3 + 552\omega_1\omega_2^3 v_1^4\omega_3 + 16\omega_2^3\omega_3 - 56 cs^2\omega_2^3\omega_3 - 32\omega_1^3 cs^4\omega_2\omega_3 + 552 cs^2\omega_2^3 v_1^2\omega_3 + 16\omega_1^2\omega_2^3\omega_3 - 10\omega_1^3\omega_2\omega_3 - 8\omega_1^3 cs^2\omega_2 + 96\omega_1 cs^2\omega_2^3\omega_3 - 54\omega_1^3 cs^2\omega_2 v_1^2\omega_3 - 288\omega_2^3 v_1^2\omega_3 + 24\omega_1^3 cs^2\omega_2 v_1^2 + 8\omega_1 cs^4\omega_2^2\omega_3 - 154\omega_1^3\omega_2 v_1^2\omega_3 + 336\omega_1^2\omega_2 v_1^4\omega_3 - 16\omega_1^2 cs^2\omega_2\omega_3 - 8\omega_1 cs^2\omega_2^3 + 4\omega_1^3\omega_3 - 87\omega_1^3\omega_2 v_1^4\omega_3 + 16\omega_1^3 cs^4\omega_3 + 96\omega_1^3 v_1^4\omega_3 + 40 cs^4\omega_2^3\omega_3 -$

$$1068\omega_1\omega_3^2 v_1^4\omega_3 + 16\omega_1^2 cs^2\omega_2^2 + 24\omega_1^2 cs^2\omega_2^2\omega_3 - 28\omega_1\omega_3^2\omega_3 + 28\omega_2^2 cs^4\omega_3^2\omega_3 - 240\omega_1\omega_2^2 v_1^2\omega_3 + 504\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 + 144\omega_1^3 cs^2 v_1^2\omega_3 -$$
$$1008\omega_1 cs^2\omega_2^3 v_1^2\omega_3 + 14\omega_1^3 cs^4\omega_2^2\omega_3 + 174\omega_1^3\omega_2 v_1^2\omega_3 + 8\omega_1^3\omega_2^2\omega_3 - 888\omega_1^2\omega_2^2 v_1^4\omega_3 + 6\omega_1^3 cs^2\omega_3^2\omega_3 - 308\omega_3^2 v_1^4\omega_3 - 168\omega_2 v_1^4\omega_3 +$$
$$310\omega_1^3\omega_2^2 v_1^2\omega_3 - 8\omega_1^2 cs^4\omega_2^2 + 8\omega_1 cs^4\omega_2^3 - 44\omega_1^2 cs^2\omega_2^2\omega_3 + 8\omega_1\omega_2^2\omega_3 - 20\omega_1^3 cs^2\omega_3 + 42\omega_3^2\omega_2^2 v_1^2\omega_3 - 48\omega_2^3 cs^2\omega_2^2 v_1^2 - 60\omega_3^3 v_1^2\omega_3 -$$
$$22\omega_1^3 cs^2\omega_2^2\omega_3 + 8\omega_1^3 cs^4\omega_2 + 264\omega_1^2 cs^2\omega_2 v_1^2\omega_3 + 528\omega_2^3 v_1^4\omega_3 - 3\omega_1^3\omega_2^2\omega_3 + 252\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 - 3\omega_1^3 cs^4\omega_2^2\omega_3 + 8\omega_1^2\omega_2\omega_3$$

$C_{22} = 4\omega_1^3\omega_3^2 - 20\omega_1^3 cs^2\omega_2\omega_2^2\omega_3 + 36\omega_1^3 cs^4\omega_2^2 + 72\omega_1^3 cs^4\omega_3^2 + 4\omega_1^3 cs^2\omega_2\omega_3 + 24\omega_1 cs^4\omega_2^3\omega_3 - 36 cs^4\omega_3^2\omega_3 + 24\omega_1^3 v_1^4\omega_3 - 48\omega_1^2\omega_2^2 v_1^2 v_2^2\omega_3 -$
$24\omega_1^3\omega_2^2 v_1^2\omega_3 - 8\omega_1\omega_3^2 v_2^2\omega_3 - 2\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3 + 40\omega_1^2 cs^2\omega_2\omega_3 + 24\omega_1\omega_2^2 v_1^2\omega_3 + 24\omega_2^3 v_1^2\omega_3 + 8\omega_1 cs^2\omega_2^2 v_2^2\omega_3 - \omega_1^2\omega_3^2\omega_3 - 84\omega_1^3 cs^4\omega_2\omega_3 +$
$12\omega_1^3 cs^2\omega_2^2 + 4\omega_1^2\omega_2^2 v_2^2\omega_3 - 4\omega_1^3\omega_2\omega_3 - 22\omega_1 cs^2\omega_3^2\omega_3 - 12\omega_1^3 cs^4\omega_2\omega_3 - 72\omega_1\omega_2^2 v_1^4\omega_3 - 8\omega_3^3\omega_3 - 324\omega_1^3 cs^2\omega_2 v_1^2\omega_3 + 20 cs^2\omega_2^3\omega_3 +$
$96\omega_1\omega_3^2 v_1^2 v_2^2\omega_3 - 8\omega_1 cs^2\omega_2^3\omega_3 + 216\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 - 60\omega_1\omega_3^2 v_1^2\omega_3 - 48\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 - \omega_1^3\omega_2^2 v_2^2\omega_3 - 36\omega_1^3 cs^4\omega_2\omega_3^2 - 216\omega_1 cs^2\omega_3^2 v_1^2\omega_3 -$
$4\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3 + 8\omega_3^3 v_2^2\omega_3 - 8\omega_1 cs^2\omega_2^2\omega_3 - 4\omega_1^2\omega_3^2\omega_3 - 4\omega_1^3 cs^2\omega_2 v_2^2\omega_3 - 20 cs^2\omega_3^3 v_2^2\omega_3 + 56\omega_1^3 cs^2\omega_2\omega_3 + 42\omega_1 cs^4\omega_2^3\omega_3 - 36\omega_3^3\omega_2 v_1^4\omega_3 -$
$24\omega_1^2\omega_2^2 v_1^2\omega_3 - 24\omega_1^3\omega_2^2 v_1^2 v_2^2\omega_3 + 48\omega_3^3 v_1^4\omega_3 + 24\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 + 72\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 - 4\omega_1^3\omega_2\omega_3 + 4\omega_1^3 cs^2\omega_2^2\omega_3 + \omega_1^3\omega_2^2 v_2^2\omega_3 - 54\omega_1^2 cs^4\omega_3^2\omega_3 -$
$5\omega_1^3 cs^2\omega_2^2\omega_3 + 22\omega_1 cs^2\omega_3^2 v_2^2\omega_3 - 12\omega_1^3 cs^2\omega_2^2 v_2^2 + 4\omega_3^3\omega_2 v_2^2\omega_3 - 36\omega_1^3 cs^4\omega_2^2 + 12\omega_1^3 cs^2\omega_2^2 v_2^2 - 8\omega_1\omega_2^2 v_2^2\omega_3 - 2\omega_1^2 cs^2\omega_3^2 v_2^2\omega_3 - 12\omega_1^2 cs^2\omega_2^2 +$
$16\omega_1^3 cs^2 v_2^2\omega_3 - 52\omega_1^2 cs^4\omega_2^3 + 54\omega_1^3 cs^4\omega_2^2\omega_3 + 5\omega_1^3 cs^2\omega_3^2\omega_3 + 8\omega_1\omega_2^2\omega_3 - 72\omega_3^3 v_1^2 v_2^2\omega_3 - 48\omega_3^3 v_1^2\omega_3 - 24\omega_1^3\omega_2 v_1^4\omega_3 + 42\omega_1^3 cs^4\omega_2^2\omega_3^2 +$
$24\omega_1^3 v_1^2 v_2^2\omega_3 + 18\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 + 24\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 + 24\omega_1^2\omega_2^3 v_1^2\omega_3 - 12\omega_1^2 cs^4\omega_2^3\omega_3 + 2\omega_3^3 cs^2\omega_2^2 v_2^2\omega_3 - 18\omega_1^3 cs^2\omega_3^2 v_2^2\omega_3 + 18\omega_1^2 cs^2\omega_2^2\omega_3 +$
$6\omega_1^3 cs^4\omega_2^2\omega_3 + 108\omega_1 cs^2\omega_3^2 v_1^2\omega_3 - 4\omega_1^2 cs^2\omega_2 v_2^2\omega_3 + 72\omega_1^2\omega_2^2 v_1^4\omega_3 + \omega_1^3\omega_2^2\omega_3 + 84\omega_1^3\omega_2 v_1^2\omega_3 + 8\omega_1 cs^2\omega_3^2 v_2^2\omega_3 - 18\omega_1^3 cs^2\omega_2^2\omega_3 -$
$6\omega_1^3 cs^4\omega_2^2\omega_3 + 216\omega_1^3 cs^2 v_1^2\omega_3 - 72\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 + 48\omega_1\omega_2^2 v_1^2\omega_3 - 4\omega_1^3 v_2^2\omega_3 - 36\omega_1\omega_2^3 v_1^4\omega_3 + 4\omega_1^2\omega_2 v_2^2\omega_3 - 34\omega_1^3 cs^2\omega_2^2\omega_3 + 8\omega_1\omega_3^2\omega_3$

$C_{23} = -108\omega_1^3 cs^2\omega_2\omega_3 + 132\omega_1^2\omega_2^2 v_1^2\omega_3 - 12\omega_1\omega_3^2 - 54\omega_1 cs^2\omega_2^2\omega_3 - 24\omega_3^2 v_2^2\omega_3 - 51\omega_1^2\omega_2^2\omega_3 - 66\omega_1\omega_3^2 v_1^2\omega_3 + 5\omega_3^3\omega_2^2 v_2^2\omega_3 - 12\omega_3^2\omega_3 -$
$9\omega_1^2\omega_2^2 v_2^2 + 27\omega_1^3 cs^2\omega_2^2 - 6\omega_1\omega_2 v_2^2 - 12 cs^2\omega_3^2\omega_3 + 5\omega_1^3\omega_2^2\omega_3 + 48\omega_1^3\omega_2\omega_3 - 9\omega_1^2\omega_2^2 v_2^2\omega_3 - 18\omega_1^3 cs^2\omega_2 + 27\omega_1 cs^2\omega_3^2\omega_3 + 84\omega_3^3 v_1^2\omega_3 +$
$27\omega_1\omega_3^2 v_2^2\omega_3 - 18\omega_1^2 cs^2\omega_2\omega_3 - 6\omega_1^2\omega_2^2 v_2^2 + 36\omega_1 cs^2\omega_3^2 - 36\omega_1^3\omega_3 + 6\omega_1^2\omega_2 v_2^2\omega_3 - 18\omega_1^2 cs^2\omega_2^2 + 81\omega_1^2 cs^2\omega_2^2\omega_3 + 3\omega_1\omega_3^2\omega_3 - 120\omega_1\omega_2^2 v_1^2\omega_3 +$
$12\omega_1^3 v_2^2\omega_3 - 9\omega_1^3\omega_2^2 - 27\omega_1^2 cs^2\omega_3^2 - 66\omega_1^3\omega_2 v_1^2\omega_3 - 5\omega_1^3\omega_2\omega_3 - 12\omega_1^2\omega_2 v_1^2\omega_3 + 6\omega_1^2\omega_2^2 + 6\omega_1\omega_3^2 v_2^2\omega_3 - 15\omega_1^2 cs^2\omega_3^2\omega_3 + 42\omega_1\omega_2^2\omega_3 +$
$84\omega_1^3 cs^2\omega_3 + 9\omega_1^2\omega_2^2 v_2^2 + 48\omega_1^3 v_1^2\omega_3 + 15\omega_1^3 cs^2\omega_2^2\omega_3 + 9\omega_1^2\omega_2^2 - 18\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_1^3\omega_2 + 12\omega_1\omega_3^2 v_2^2 - 5\omega_1^2\omega_3^2 v_2^2\omega_3 + 6\omega_1^2\omega_2\omega_3$

$C_{24} = 48\omega_4^2\omega_1 cs^2\omega_3^2\omega_3 + 24\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 - 144\omega_4^2\omega_1^2\omega_3^2 v_1^2 v_2^2\omega_3 + 54\omega_4^3\omega_3 v_1^4\omega_3 - 117\omega_4\omega_4^2\omega_1^3 v_1^4\omega_3 + 72\omega_4^2\omega_4^3 v_1^3 + 48\omega_4^3\omega_1^3 cs^2\omega_2 v_2^2\omega_3 +$
$432\omega_4^2 cs^2\omega_3^2 v_1^2\omega_3 - 28\omega_4^2\omega_1^3 cs^4\omega_2\omega_3 + 8\omega_4^2\omega_1\omega_3^2 + 48\omega_4^2\omega_1^3 v_1^4\omega_3 + 80\omega_4^2 cs^4\omega_3^2\omega_3 - 180\omega_4\omega_1^2\omega_3^3 v_1^4\omega_3 + 32\omega_4^2\omega_1^3 cs^4\omega_3^2 + 336\omega_4^2\omega_1 cs^2\omega_2^2 v_1^2\omega_3 +$
$48\omega_4^2\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3 + 16\omega_4^2\omega_1 cs^4\omega_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 + 24\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3 - 297\omega_4\omega_4^3 cs^2\omega_3^2 v_1^2\omega_3 + 216\omega_4^2\omega_1^2\omega_3^2 v_1^4\omega_3 - 8\omega_4^2\omega_3^3\omega_2\omega_3^2 -$
$64\omega_4^2\omega_1^3 cs^2\omega_2\omega_2\omega_3 - 492\omega_4^2\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 - 288\omega_4^2\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 - 48\omega_4^2\omega_1\omega_3^2 v_2^2\omega_3 + 96\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3 - 2\omega_4^2\omega_1^2\omega_3^3\omega_3^2 - 86\omega_4^2\omega_1^3\omega_3^2 v_1^2\omega_3 -$
$72\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 + 60\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3 - 24\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3 + 576\omega_4^2\omega_1\omega_3^2 v_1^2 v_2^2\omega_3 + 16\omega_4^2\omega_1 cs^4\omega_3^2\omega_3 - 297\omega_2^2\omega_4^3 cs^2\omega_2^3 v_1^2\omega_3 - 36\omega_4^2\omega_1^3\omega_2^2 v_1^4 -$
$16\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 + 24\omega_4^2\omega_1^3\omega_2^2 v_1^4\omega_3 + 162\omega_1^3 cs^2\omega_3^2 v_1^2\omega_3 - 48\omega_4^2\omega_2^3 v_1^2\omega_3 - 492\omega_4^2\omega_1^3 cs^2\omega_2 v_1^2\omega_3 - 108\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3 + 240\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3 +$
$72\omega_4^2\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 - 172\omega_4^2\omega_1 cs^4\omega_3^2\omega_3 - 117\omega_4^2\omega_1^3\omega_3^2 v_1^4\omega_3 - 16\omega_4^2\omega_3^2\omega_3 + 24\omega_4^2 cs^2\omega_2^2 v_2^2\omega_3 + 36\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 - 72\omega_4^2\omega_1^3 cs^2\omega_2 v_1^2\omega_3 -$
$108\omega_4\omega_1^2 cs^2\omega_3^2 v_1^2\omega_3 + 8\omega_4^2 cs^2\omega_2^2\omega_3 + 324\omega_4\omega_1^3 cs^2\omega_2^3 v_1^2\omega_3 + 40\omega_4^2\omega_1^2\omega_3^3 v_1^2\omega_3 - 32\omega_4^2\omega_1 cs^2\omega_2^2\omega_3^2 + 144\omega_4^2\omega_1\omega_3^2 v_1^2 v_2^2\omega_3 - 108\omega_4^2\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 -$
$108\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 + 48\omega_4^2\omega_1 cs^2\omega_2^2 v_2^2\omega_3 + 72\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3 - 56\omega_4^2\omega_1 cs^4\omega_3^2\omega_3 + 288\omega_4^2\omega_1^2\omega_3^3 v_1^4\omega_3 - 6\omega_4^2\omega_1^3 cs^2\omega_3^2\omega_3 - 108\omega_4^2\omega_3^3 v_1^4\omega_3 -$
$288\omega_4^2\omega_1^2 v_1^2 v_2^2\omega_3 + 54\omega_4^2\omega_1^3\omega_2^3 v_1^4 + 96\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3 + 36\omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 + 24\omega_4^2 cs^2\omega_2^2 v_2^2\omega_3 + 36\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3 - 16\omega_4^2\omega_1 cs^2\omega_3^2\omega_3 -$
$8\omega_4^2\omega_1^2\omega_2^2\omega_3 + 72\omega_4^2\omega_1 cs^4\omega_2^2\omega_3 - 12\omega_4^2\omega_1^3 cs^2\omega_2 v_2^2\omega_3 + 96\omega_4^2\omega_1\omega_2^2 v_1^4\omega_3 + 108\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3 + 48\omega_4^2\omega_3^2 v_2^2\omega_3 + 16\omega_4^2\omega_1 cs^4\omega_2\omega_3 +$
$288\omega_4^2\omega_3^3 cs^2\omega_2^2 v_1^2\omega_3 + 18\omega_4\omega_1^3 cs^4\omega_2^2\omega_3^2 + 144\omega_4^2\omega_1^3 v_1^2 v_2^2\omega_3 - 18\omega_4^2\omega_1^3 cs^2\omega_2^2\omega_3 + 20\omega_4^2\omega_1^2 cs^4\omega_2^2\omega_3^2 - 216\omega_4^2\omega_1^2 v_1^2\omega_3 - 540\omega_4\omega_1^2 cs^2\omega_3^3 v_1^2\omega_3 -$
$108\omega_4^2\omega_1^3 cs^2\omega_2^2 v_1^2 + 38\omega_4^2\omega_1^3\omega_2^2 v_1^4\omega_3 - 144\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3 + 24\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 - 8\omega_4^2\omega_1^2\omega_2\omega_3 - 60\omega_4^2\omega_1^2\omega_2^2 v_1^4\omega_3 - 432\omega_4^2\omega_3^3 v_1^2 v_2^2\omega_3 +$
$108\omega_4\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 - 96\omega_4^2\omega_1 cs^2\omega_3^2 v_2^2\omega_3 - 24\omega_4^2\omega_1^3\omega_3^2 v_1^2\omega_3 - 36\omega_4^2\omega_1^3 cs^4\omega_2^2\omega_3 - 36\omega_4^2\omega_1 cs^2\omega_2^2\omega_3 - 48\omega_4^2\omega_1\omega_2^2 v_2^2\omega_3 + 174\omega_4^2\omega_1^2 cs^2\omega_3^2 v_1^2\omega_3 +$
$192\omega_4^2\omega_3^3 v_1^4\omega_3 + 24\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3 - 96\omega_4^2\omega_1 cs^2\omega_2 v_2^2\omega_3 + 24\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 - 54\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3 + 72\omega_4^2\omega_1 cs^2\omega_2^2\omega_3 + 72\omega_4^2\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3 +$
$117\omega_4^2\omega_1^3\omega_3^2 v_1^2\omega_3 - 852\omega_4^2\omega_1 cs^2\omega_2^3 v_1^2\omega_3 - 36\omega_4^2\omega_1 cs^4\omega_2^2\omega_3 + 144\omega_4^2\omega_3^3\omega_2 v_1^2 v_2^2\omega_3 - 40\omega_4^2\omega_1^2 cs^2\omega_2^2\omega_3 - 6\omega_4^2\omega_1^3 cs^4\omega_3^2\omega_3 + 6\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 -$
$12\omega_4^2\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 + 180\omega_4\omega_1\omega_3^3 v_1^2\omega_3 - 96\omega_4^2\omega_1^3 v_1^2\omega_3 - 40\omega_4^2\omega_1^3 cs^2\omega_2^2 + 16\omega_4^2\omega_1\omega_2\omega_3^2 - 24\omega_4^2\omega_1\omega_3^3 v_1^4\omega_3 - 54\omega_4^2\omega_1^3\omega_3^2 v_1^4 - 216\omega_4^2\omega_1^2 cs^2\omega_3^2 v_1^2 +$
$36\omega_4\omega_1^3\omega_2^2 v_1^4\omega_3 + 18\omega_4^2\omega_1^3 cs^4\omega_3^2\omega_3 - 12\omega_4^2\omega_1 cs^2\omega_2^2\omega_3^2 + 2\omega_4^2\omega_1^3\omega_2^2\omega_3 - 18\omega_4\omega_1^3 cs^2\omega_3^2\omega_3 - 288\omega_4\omega_1^2\omega_3^3 v_1^2\omega_3 - 72\omega_4^2\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 +$
$108\omega_4^2\omega_3^3 v_1^2\omega_3 + 24\omega_4^2\omega_1\omega_2 v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2 v_1^4\omega_3 - 288\omega_4^2\omega_1\omega_3^3 v_1^4\omega_3 - 36\omega_4\omega_1^2\omega_2^2 v_1^4\omega_3 + 162\omega_4^2\omega_1^3 cs^2\omega_2^3 v_1^2 + 264\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 -$
$108\omega_4^2\omega_1^3\omega_3^2 v_1^2\omega_3 + 12\omega_4^2\omega_1^2 cs^2\omega_3^2 v_2^2\omega_3 - 144\omega_4^2\omega_1\omega_2 v_1^2\omega_3 - 72\omega_4^2\omega_1^3\omega_2^2 v_1^4 + 36\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 + 86\omega_4^2\omega_1^2 cs^4\omega_3^2\omega_3 + 72\omega_4^2\omega_1 cs^2\omega_3^3 v_1^2\omega_3 -$
$144\omega_4^2\omega_1\omega_2^2 v_1^4\omega_3 + 16\omega_4^2\omega_1\omega_3^2\omega_3^2 + 204\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 + 264\omega_4^2\omega_1^2 cs^2\omega_2 v_1^2\omega_3 - 108\omega_4^2\omega_1 cs^2\omega_3^2 v_1^2\omega_3 - 324\omega_1^2 cs^2\omega_3^2 v_1^2\omega_3 + 36\omega_4^2\omega_1^3\omega_2^2 v_1^2 +$
$36\omega_4^2\omega_1^3 cs^2\omega_2^2\omega_3 - 2\omega_4^2\omega_1^3 cs^4\omega_2^2\omega_3 + 117\omega_4^2\omega_1^3\omega_3^2 v_1^2\omega_3 - 12\omega_4^2\omega_1 cs^2\omega_3^2 v_2^2\omega_3 - 72\omega_4^2\omega_1 cs^4\omega_3^2\omega_3 + 468\omega_4^2\omega_1^2 cs^2\omega_3^2 v_1^2\omega_3 - 24\omega_4^2\omega_1^3 v_2^2\omega_3 +$
$144\omega_4^2\omega_1^2\omega_2 v_1^2 v_2^2\omega_3 + 168\omega_4^2\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 + 8\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3 + 40\omega_4^2\omega_1^2 cs^4\omega_2^2\omega_3 + 648\omega_4^2\omega_1 cs^2\omega_3^2 v_1^2\omega_3 - 72\omega_4\omega_1\omega_3^3 v_1^4\omega_3 + 108\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3$

$C_{25} = -58\omega_4^2\omega_1 cs^2\omega_3^2\omega_3 - 24\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 - 36\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3 - 18\omega_4^2\omega_1^3 cs^2\omega_2^2 + 16\omega_4^2 cs^2\omega_3^2 v_1^2\omega_3 - 102\omega_4^2\omega_1^3 cs^4\omega_2\omega_3 + 4\omega_2^2\omega_1^3\omega_3^2 -$
$27\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 + 72\omega_4^2\omega_1^3 cs^4\omega_2^2 - 28\omega_4^2\omega_1 cs^2\omega_2^2 v_1^2\omega_3 - 72\omega_4^2\omega_1 cs^4\omega_2^2\omega_3 - 72\omega_4^2\omega_1^2 cs^4\omega_2^2 - 9\omega_4\omega_1^3 cs^2\omega_3^2 v_1^2\omega_3 - 4\omega_2^2\omega_1^3\omega_2\omega_3 + 12\omega_4^2\omega_1^3 cs^2\omega_2^2 +$
$4\omega_4^2\omega_1^2 cs^2\omega_2\omega_3 + 16\omega_4^2\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 - 30\omega_4^2\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 - 42\omega_4^2\omega_1\omega_3^2 v_2^2\omega_3 - 30\omega_4^2\omega_1^3 v_1^2 v_2^2\omega_3 - 84\omega_4^2\omega_1 cs^4\omega_3^2\omega_3 - 9\omega_4^2\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 +$
$4\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 + 18\omega_1^3 cs^2\omega_3^2 v_1^2\omega_3 - 4\omega_4^2\omega_3^2 v_1^2\omega_3 + 36\omega_4^2\omega_1 cs^2\omega_2^2\omega_3 - 20\omega_4^2\omega_1^3 cs^2\omega_2 v_1^2\omega_3 - 8\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3 + 3\omega_4^2\omega_1^3 cs^2\omega_3^2 v_1^2\omega_3 +$
$78\omega_4^2\omega_1 cs^4\omega_3^2\omega_3 + 4\omega_4^2\omega_3^2\omega_3^2 - 216\omega_4^2 cs^2\omega_3^2 v_2^2\omega_3 + 74\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 - 4\omega_4^2\omega_1^3 cs^2\omega_2 v_1^2\omega_3 + 20\omega_4^2 cs^2\omega_3^2\omega_3 + 24\omega_4^2\omega_1^3 v_2^4\omega_3 + 28\omega_4^2\omega_1 cs^2\omega_2^2\omega_3 -$
$48\omega_4^2\omega_1\omega_2^2 v_1^2 v_2^2\omega_3 + 32\omega_4^2\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 - 27\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 + 60\omega_4^2\omega_1^2\omega_2^2 v_1^2 v_2^2\omega_3 + 4\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3 + 28\omega_4^2\omega_1 cs^2\omega_3^2\omega_3 + 8\omega_4^2\omega_1^2\omega_2^2\omega_3 -$
$324\omega_4^2\omega_3^3 cs^2\omega_2 v_2^2\omega_3 + 24\omega_4^2\omega_3^3 v_2^2\omega_3 - 12\omega_4^2\omega_1 cs^4\omega_2\omega_3 - 27\omega_4\omega_1^3 cs^4\omega_2^2\omega_3 + 24\omega_4^2\omega_1^3 v_1^2 v_2^2\omega_3 - 36\omega_4^2\omega_3 cs^4\omega_2^2 + 9\omega_4^2\omega_1^3 cs^2\omega_2^2\omega_3 +$
$24\omega_4^2\omega_1 cs^4\omega_2^2\omega_3^2 + 72\omega_4^2\omega_1\omega_3^3 v_2^4\omega_3 - 12\omega_4^2\omega_1^3 cs^2\omega_2^2 v_1^2 + 4\omega_4^2\omega_1\omega_2 v_1^2\omega_3 + 54\omega_4^2 cs^4\omega_3^2\omega_3 - 4\omega_4^2\omega_1\omega_2\omega_3 + 36\omega_4^2\omega_2^2 v_1^2 v_2^2\omega_3 + 49\omega_4^2\omega_1^2 cs^2\omega_2^2\omega_3 +$
$12\omega_4^2\omega_1^2 cs^2\omega_2^2 v_2^2 - 32\omega_4^2\omega_1^2 v_1^2\omega_3 + 216\omega_4^2\omega_3^4 cs^4\omega_3^2 + 66\omega_4^2\omega_1^3 cs^2\omega_2 v_1^2\omega_3 + 36\omega_4^2 cs^2\omega_3^2\omega_3 - 36\omega_4^2\omega_3^3 v_2^4\omega_3 + 54\omega_4^2\omega_1 cs^4\omega_3^2 -$
$36\omega_4\omega_1^2 cs^2\omega_3^2\omega_3^2 + 4\omega_4^2\omega_1 cs^2\omega_3^2 v_1^2\omega_3 + 108\omega_4^2\omega_1^2 cs^4\omega_3^2\omega_3 - 25\omega_4^2\omega_1^3 cs^2\omega_2^2\omega_3 - 32\omega_4^2\omega_1^3 cs^2\omega_2^2\omega_3 + 15\omega_4^2\omega_1^3 cs^4\omega_3^2\omega_3 + 27\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 +$
$138\omega_4^2\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 - 4\omega_4^2\omega_1^3 v_1^2\omega_3 - 52\omega_4^2\omega_1^3 cs^2\omega_3^2 - 4\omega_4^2\omega_1\omega_2^2\omega_3 + 24\omega_4^2\omega_1 cs^2\omega_2^2 - 24\omega_4^2\omega_1^2 cs^2\omega_2^2 v_1^2 - 27\omega_4\omega_1^3 cs^4\omega_3^2\omega_3 - 16\omega_4^2\omega_1^2 cs^2\omega_2^2\omega_3 +$
$9\omega_4\omega_1^3 cs^2\omega_3^2\omega_3^2 + 12\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3 + 27\omega_4^2\omega_1^3\omega_2^2 v_2^4\omega_3 - 18\omega_1^3 cs^2\omega_3^2\omega_3^2 + 18\omega_4\omega_1^3 cs^2\omega_3^2 v_1^2 - 60\omega_4^2\omega_3^3 v_1^4\omega_3 + 16\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 -$
$138\omega_4^2\omega_1^2 cs^2\omega_3^3 v_2^2\omega_3 + 4\omega_4^2\omega_1\omega_2^2 v_1^2\omega_3 - 119\omega_4^2\omega_1^3 cs^4\omega_3^2\omega_3 - 28\omega_4^2\omega_1 cs^2\omega_3^2 v_1^2\omega_3 - 108\omega_1^2 cs^4\omega_3^2\omega_3 - 4\omega_4^2\omega_1\omega_3^3\omega_3 + 4\omega_2^2\omega_1^3\omega_2 v_1^2\omega_3 -$
$4\omega_4^2\omega_1^2 cs^2\omega_2 v_1^2\omega_3 - 36\omega_1^2 cs^2\omega_3^2 v_1^2\omega_3 - 36\omega_4^2\omega_1^2 cs^2\omega_2^2\omega_3 + 35\omega_4^2\omega_1^3 cs^4\omega_2^2\omega_3 + 324\omega_4^2\omega_1 cs^2\omega_3^3 v_2^2\omega_3 + 108\omega_4^2\omega_1^2 cs^4\omega_3^2\omega_3 + 36\omega_4^2\omega_1^2 cs^2\omega_2 v_1^2\omega_3 -$
$48\omega_4^2\omega_1^3 v_2^2\omega_3 - 12\omega_4^2\omega_1^2\omega_2 v_1^2 v_2^2\omega_3 + 8\omega_4^2\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 + 96\omega_4^2\omega_1 cs^4\omega_2^2\omega_3 - 3\omega_4^2\omega_1^3 cs^2\omega_3^2\omega_3 + 36\omega_4\omega_1^2 cs^2\omega_3^2 v_1^2\omega_3$

$C_{26} = 8\omega_4\omega_1 cs^4\omega_3^2\omega_3 - 4\omega_4\omega_1^2\omega_2\omega_3 - 8\omega_4\omega_1^3 cs^2\omega_2\omega_3 + 24\omega_4\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3 + 12\omega_4\omega_1\omega_2^2 v_2^4\omega_3 + 180\omega_4\omega_1^2\omega_2^2 v_1^2 v_2^2\omega_3 + 32\omega_4\omega_1^2 cs^2\omega_2\omega_3^2 -$

$$18\omega_1\omega_3^3 v_2^2\omega_3^2 - 54\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3^2 - 24\omega_4\omega_1\omega_3^3 v_2^2\omega_3^2 - \omega_4\omega_1^3\omega_2^2 v_1^2\omega_3^2 - 174\omega_4\omega_1^3 cs^2\omega_2 v_2^2\omega_3^2 - 4\omega_4\omega_1\omega_2^3\omega_3^2 - 20\omega_4\omega_1^3 cs^2\omega_3^2 - 9\omega_4\omega_1^2\omega_2^3 v_2^4\omega_3^2 +$$
$$18\omega_1^3\omega_2^3 v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2^3 v_2^2\omega_3 + 24\omega_4^3\omega_1^3 cs^2\omega_2 v_1^2\omega_3 - 18\omega_1^2\omega_3^2 v_2^4\omega_3^2 - 28\omega_4\omega_1 cs^4\omega_2^2\omega_3^2 - 12\omega_4\omega_1^3 v_1^2\omega_3^2 - 18\omega_4\omega_1 cs^2\omega_2^3\omega_3^2 - 36\omega_4\omega_3^3\omega_1\omega_2 v_2^4\omega_3^2 -$$
$$42\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3^2 - 12\omega_4\omega_1 cs^2\omega_2^2 v_2^2\omega_3^2 + 18\omega_1^2\omega_2^2 v_2^2\omega_3^2 - 144\omega_4\omega_1\omega_2^2 v_1^2 v_2^2\omega_3^2 - 14\omega_4\omega_1^3 cs^4\omega_2\omega_3^2 + 54\omega_1^3 cs^2\omega_2 v_1^2\omega_3^2 - 72\omega_1 cs^2\omega_2^3\omega_3^2 -$$
$$96\omega_4 cs^2\omega_2^3 v_2^2\omega_3^2 + 132\omega_4\omega_1^2 cs^2\omega_2 v_1^2\omega_3 - 48\omega_4\omega_2^3 v_2^4\omega_3^2 - 8\omega_4\omega_1 cs^2\omega_2^3\omega_3 - 6\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 - 12\omega_4\omega_1^3\omega_2 v_2^4\omega_3 - 90\omega_4\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 +$$
$$66\omega_4\omega_1^2 cs^2\omega_2^2 v_1^2\omega_3 + 8\omega_4\omega_1^3 cs^4\omega_2\omega_3 - 36\omega_4\omega_1^2\omega_2^3 v_2^4\omega_3 - 28\omega_4\omega_1^2 cs^4\omega_2\omega_3 - 90\omega_4\omega_1\omega_2^3 v_1^2 v_2^2\omega_3 + 54\omega_4\omega_1^3 cs^2\omega_2 v_1^2\omega_3 - 18\omega_1^3\omega_2^2 v_2^2\omega_3 +$$
$$12\omega_4\omega_1^3\omega_2 v_2^4\omega_3 - 9\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 - 6\omega_4\omega_1^3 cs^2\omega_2 v_1^2\omega_3 + 18\omega_4\omega_1^3\omega_2^2 v_2^2 + 18\omega_1^2\omega_2^3 v_2^2\omega_3 + 12\omega_4\omega_1\omega_2^3 v_1^2\omega_3 + 18\omega_4\omega_1^3\omega_2^3 v_2^2 - \omega_4\omega_1^3\omega_2^3 v_1^4\omega_3^2 -$$
$$48\omega_4\omega_1^3 v_2^2\omega_3^2 - 6\omega_4\omega_1\omega_2^3 v_2^2\omega_3 + 32\omega_4\omega_1 cs^2\omega_2^2\omega_3^2 - 36\omega_4\omega_1^3 cs^2\omega_2 v_2^2\omega_3 - 24\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3^2 + 76\omega_4\omega_1 cs^4\omega_2^3\omega_3^2 + 18\omega_4\omega_1^3 cs^2\omega_2\omega_3^2 -$$
$$108\omega_4 cs^2\omega_2^3 v_2^2\omega_3^2 + 54\omega_4\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3^2 + 72\omega_1 cs^4\omega_2^3\omega_3^2 - 4\omega_4\omega_1\omega_2^3\omega_3^2 - 84\omega_4\omega_1 cs^2\omega_2^2 v_1^2\omega_3^2 + 9\omega_4\omega_1^2\omega_2^3 v_2^2\omega_3^2 - 48\omega_4\omega_1^2 cs^2\omega_2 v_1^2\omega_3^2 -$$
$$56\omega_4\omega_1^2 cs^2\omega_2^2\omega_3 - 3\omega_4\omega_1^3 cs^4\omega_2^3\omega_3^2 + 16\omega_4\omega_1^3 cs^4\omega_2^2\omega_3^2 - 18\omega_1^3\omega_2^2 v_2^4\omega_3 + 4\omega_4\omega_2^3\omega_3^2 - 126\omega_4\omega_1^2 cs^2\omega_2 v_1^2\omega_3^2 + 36\omega_4\omega_1^3\omega_2 v_2^4\omega_3 - 18\omega_4\omega_1^3\omega_2^2 v_2^4 +$$
$$150\omega_4\omega_1 cs^2\omega_2^3 v_2^2\omega_3^2 - 68\omega_4 cs^4\omega_2^3\omega_3^2 + 18\omega_1^3 cs^4\omega_2^3\omega_3^2 + 18\omega_1^2\omega_2^3 v_2^2\omega_3^2 + 54\omega_1 cs^2\omega_2^3 v_2^2\omega_3 - 18\omega_4\omega_1^2\omega_2^2 v_2^4\omega_3 + 6\omega_4\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 + 66\omega_4\omega_1^3\omega_2 v_2^2\omega_3^2 -$$
$$36\omega_4\omega_1^2\omega_2 v_1^2 v_2^2\omega_3 - 54\omega_4\omega_1^3 cs^2\omega_2^2 v_2^2 - 18\omega_1^2\omega_2^2 v_2^4\omega_3 - 36\omega_4\omega_1^2 cs^4\omega_2^3\omega_3 - 2\omega_4\omega_1^3 cs^2\omega_2^2\omega_3 - 54\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3 + 90\omega_4\omega_1^3 cs^2\omega_2^2\omega_3 -$$
$$12\omega_4\omega_1^3 v_1^2\omega_3 + 108\omega_4\omega_2^3 v_1^2 v_2^2\omega_3 + 72\omega_1^2 cs^2\omega_2^3\omega_3 - 36\omega_4\omega_1^3 cs^4\omega_2\omega_3 + 2\omega_4\omega_1^2 cs^2\omega_2^3\omega_3^2 + 132\omega_4\omega_1^3 cs^2 v_2^2\omega_3 + 36\omega_4\omega_1\omega_2 v_2^2\omega_3 + 54\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2 +$$
$$72\omega_4\omega_1^3 v_1^2 v_2^2\omega_3 - 18\omega_4\omega_1^2\omega_2^3 v_2^2 + 18\omega_1\omega_3^2 v_2^4\omega_3^2 - 18\omega_4\omega_1^3 cs^2\omega_2^3\omega_3 + 28\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 + 60\omega_4\omega_1 cs^2\omega_2^3 v_1^2\omega_3 + 54\omega_4\omega_1\omega_3^3 v_2^4\omega_3^2 + 12\omega_4\omega_1^2\omega_2 v_1^2\omega_3^2 -$$
$$30\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2\omega_3 - 4\omega_4\omega_1^3\omega_2\omega_3^2 + \omega_4\omega_1^3\omega_2^2 v_1^4\omega_3^2 - 54\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 + 4\omega_4\omega_1^3\omega_2^3 + 56\omega_4\omega_1^2 cs^4\omega_2^2\omega_3 + \omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 - 12\omega_4\omega_1^2 cs^2\omega_2 v_2\omega_3^2 +$$
$$6\omega_4\omega_1\omega_2^3 v_2^2\omega_3 + 48\omega_4\omega_1 cs^2\omega_2^3 v_1^2\omega_3 + 24\omega_4\omega_1^3 v_2^4\omega_3^2 - 18\omega_1^3 cs^2\omega_2^3\omega_3^2 + 28\omega_4 cs^2\omega_2^3\omega_3^2 + 54\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 - 90\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2\omega_3 + 30\omega_4\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 +$$
$$12\omega_4\omega_1^3\omega_2 v_1^2\omega_3 + 54\omega_1^2 cs^2\omega_2^3 v_2^2\omega_3 + 216\omega_1 cs^2\omega_2^3 v_1^2\omega_3 + 36\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 + 2\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 - 72\omega_1^2 cs^4\omega_2^3\omega_3 + 12\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 - 90\omega_4\omega_1^3 cs^2\omega_2 v_1^2\omega_3 +$$
$$12\omega_4\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_4\omega_1^2\omega_2^2 v_2^4\omega_3 - 216\omega_1^2 cs^2\omega_2^3 v_1^2\omega_3 + 12\omega_4\omega_1\omega_2^3 v_1^2\omega_3 + 12\omega_4\omega_1^3 cs^2 v_1^2\omega_3 + 36\omega_4\omega_1^3 cs^2\omega_2^3\omega_3 - 14\omega_4\omega_1^3 cs^4\omega_2^2\omega_3 + 8\omega_4\omega_1^2\omega_2^3\omega_3 +$$
$$36\omega_4\omega_1^2\omega_2^3 v_2^2\omega_3 + 18\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 - 36\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 + 18\omega_1^3\omega_2^3 v_2^4\omega_3 + 9\omega_4\omega_1^3\omega_2^2 v_2^4\omega_3 - 6\omega_4\omega_1^2 cs^2\omega_2^3 v_1^2\omega_3 - 18\omega_1^3\omega_2^3 v_2^2\omega_3 - 18\omega_4\omega_1 cs^2\omega_2^3 v_2^2\omega_3$$

$C_{27} = -108\omega_1^3 cs^2\omega_2\omega_3 + 18\omega_1^2\omega_2^2 v_1^2\omega_3 + 6\omega_1\omega_2^3 - 114\omega_3^3 v_2^2\omega_3 + 12\omega_1^2\omega_2^2\omega_3 - 6\omega_1^3\omega_2 v_1^2 - 9\omega_1\omega_2^3 v_1^2\omega_3 + 50\omega_3^2\omega_2^2 v_2^2\omega_3 + 42\omega_2^3\omega_3 - 66 cs^2\omega_2^3\omega_3 +$
$23\omega_1^2\omega_2^3\omega_3 + 48\omega_1^3\omega_2\omega_3 - 66\omega_1^2\omega_2^2 v_2^2\omega_3 - 18\omega_1^3 cs^2\omega_2 + 108\omega_1 cs^2\omega_2^3\omega_3 + 12\omega_1^2\omega_2^2 v_1^2 + 12\omega_2^3 v_1^2\omega_3 + 141\omega_1\omega_2^3 v_2^2\omega_3 - 18\omega_1^2 cs^2\omega_2\omega_3 - 18\omega_1 cs^2\omega_2^3 -$
$36\omega_1^3\omega_3 + 6\omega_1^2\omega_2 v_2^2\omega_3 + 36\omega_1^2 cs^2\omega_2^2 - 60\omega_1\omega_3^3\omega_3 - 12\omega_1\omega_2^2 v_1^2\omega_3 + 48\omega_1^3 v_2^2\omega_3 - 9\omega_1^2\omega_2 v_1^2\omega_3 - 23\omega_1^3\omega_2^2\omega_3 - 12\omega_1^2\omega_2 v_1^2\omega_3 - 12\omega_1^2\omega_2^2 + 60\omega_1\omega_2^3 v_2^2\omega_3 -$
$42\omega_1^2 cs^2\omega_2^2\omega_3 - 12\omega_1\omega_2^2\omega_3 + 84\omega_1^3 cs^2\omega_3 - 6\omega_1\omega_2^3 v_1^2 + 12\omega_1^3 v_1^2\omega_3 + 42\omega_1^2 cs^2\omega_2^2\omega_3 - 75\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_1^3\omega_2 - 50\omega_1^2\omega_2^2 v_2^2\omega_3 + 6\omega_1^3\omega_2\omega_3$

$C_{28} = -368\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 + 6\omega_4^2\omega_1^3 cs^2\omega_2^3 v_2^2\omega_3^2 + 104\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3^2 - 132\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3^2 + 16\omega_4^2\omega_1^3 cs^2\omega_2 v_2^2\omega_3^2 - 18\omega_4^2\omega_1^3 cs^2\omega_3^2 -$
$276\omega_4^2\omega_1^3 cs^4\omega_2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 - 78\omega_4^2\omega_1^2\omega_3^3 v_2^2\omega_3^2 - 288\omega_4^2 cs^4\omega_2^3\omega_3^2 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2 + 40\omega_4^2\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3^2 - 144\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 -$
$108\omega_4^2\omega_1^2 cs^4\omega_2\omega_3^2 - 20\omega_4^2\omega_1^3\omega_2\omega_3^2 - 88\omega_4^2\omega_1^2 cs^2\omega_2\omega_3^2 - 256\omega_4^2\omega_1\omega_2^3 v_2^2\omega_3^2 - 14\omega_4^2\omega_1^2\omega_3^3\omega_3^2 - 6\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 - 168\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 - 16\omega_4^2\omega_1^3 cs^2\omega_2\omega_3^2 -$
$24\omega_4^2\omega_1\omega_2^3 v_2^4\omega_3^2 + 588\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 - 16\omega_4^2\omega_3^3\omega_3^2 - 784\omega_4^2 cs^2\omega_2^3 v_2^2\omega_3^2 + 208\omega_4^2\omega_1^3 cs^2\omega_2\omega_3^2 + 208\omega_4^2 cs^2\omega_2^3\omega_3^2 + 48\omega_4^2\omega_1^3 v_2^4\omega_3^2 - 6\omega_4^2\omega_1^2\omega_3^3 v_1^4\omega_3^2 +$
$56\omega_4^2\omega_1 cs^2\omega_2^2\omega_3^2 - 56\omega_4^2\omega_1 cs^2\omega_2^2 v_2^2\omega_3^2 + 72\omega_4^2\omega_1^3 cs^4\omega_2\omega_3^2 - 9\omega_4\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3^2 - 92\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3^2 + 120\omega_4^2\omega_1\omega_2 v_2^4\omega_3^2 - 412\omega_4^2\omega_1^2 cs^2\omega_2^2 v_2^2\omega_3^2 +$
$56\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 - 9\omega_4^2\omega_1^3 cs^2\omega_2^3 v_2^2\omega_3 - 8\omega_4^2\omega_1^2\omega_2^3\omega_3 - 712\omega_4^2\omega_1^3 cs^2\omega_2 v_2^2\omega_3 + 18\omega_1^3 cs^2\omega_2^3 v_2^2\omega_3 + 160\omega_4^2\omega_2^3 v_2^2\omega_3 + 48\omega_4^2\omega_1^3 cs^4\omega_2\omega_3 -$
$27\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 + 9\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 + 12\omega_4^2\omega_1^2 cs^4\omega_2^3\omega_3 + 228\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3 + 6\omega_4^2\omega_1^3\omega_2^2 v_1^4\omega_3 + 54\omega_1^3 cs^4\omega_2^3\omega_3 + 16\omega_4^2\omega_1\omega_2\omega_3^2 -$
$56\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 - 108\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3 + 184\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 - 36\omega_4^2\omega_1^2 cs^2\omega_2^3 v_2^2 + 32\omega_4^2\omega_1\omega_2^3 v_2^2\omega_3^2 - 18\omega_4^2\omega_1^2 cs^2\omega_2^3 v_1^2\omega_3^2 + 320\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3^2 -$
$36\omega_4^2 cs^2\omega_2^3 v_2^2\omega_3^2 + 448\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 + 152\omega_4^2\omega_1^3 cs^2\omega_2 v_2^2 + 36\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 - 96\omega_4^2\omega_1^3\omega_2^2 v_2^4\omega_3^2 + 54\omega_4^2\omega_1^3 cs^4\omega_2^3 - 36\omega_4\omega_1^2 cs^2\omega_2^3\omega_3^2 +$
$72\omega_4^2\omega_1^3 cs^2\omega_2^3 v_2^2\omega_3 + 216\omega_4^2\omega_1 cs^4\omega_2^3\omega_3 - 118\omega_4^2\omega_1^3 cs^2\omega_2^2\omega_3^2 - 40\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 + 18\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3 + 92\omega_4^2\omega_1^3\omega_2^3 v_2^2\omega_3 + 394\omega_4^2\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 -$
$104\omega_4^2\omega_1^3 cs^2\omega_2^2 - 8\omega_4^2\omega_1\omega_2^3\omega_3 + 36\omega_4\omega_1^3 cs^2\omega_2^3 v_2^2\omega_3 + 36\omega_4^2\omega_1^2 cs^2\omega_2^3 - 27\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3 + 52\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 + 14\omega_4\omega_1^3\omega_2^2\omega_3 + 9\omega_4\omega_1^3 cs^2\omega_2^3\omega_3 -$
$36\omega_4^2\omega_1^3 cs^2\omega_2^3 v_2^2\omega_3 - 136\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3 + 78\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3 - 18\omega_1^3 cs^2\omega_2^3\omega_3 - 144\omega_4^2\omega_2^3 v_2^4\omega_3 - 460\omega_4^2\omega_1^2 cs^2\omega_2^3 v_2^2\omega_3 + 36\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 -$
$342\omega_4^2\omega_1^2 cs^4\omega_2^3\omega_3^2 - 108\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 + 28\omega_4^2\omega_1\omega_2^3\omega_3 - 72\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 + 144\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3 + 1232\omega_4^2\omega_1 cs^2\omega_2^3 v_2^2\omega_3 + 108\omega_4\omega_1^2 cs^4\omega_2^3\omega_3 +$
$18\omega_4^2\omega_1^3 cs^2\omega_2^2 v_2^2 - 56\omega_4^2\omega_1^3 v_2^2\omega_3^2 + 18\omega_4^2\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3^2 + 6\omega_4^2\omega_1^2\omega_3^3 v_1^2\omega_3^2 + 120\omega_4^2\omega_1^3 cs^4\omega_2^2\omega_3 - 6\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3$

$C_{29} = 6\omega_4 cs^2\omega_2\omega_3 - 8\omega_4\omega_1\omega_3 + 6\omega_4\omega_1\omega_2 v_2^2\omega_3 - 9\omega_1\omega_2 v_2^2\omega_3 + 18\omega_4\omega_1 v_1^2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 2\omega_4\omega_1 v_2^2\omega_3 +$
$9\omega_1\omega_1\omega_2 - 18\omega_4\omega_1 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 - 9\omega_4\omega_1\omega_2 v_2^2 + 4\omega_4\omega_2 v_2^2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3$

$C_{30} = 94\omega_4\omega_1 cs^4\omega_2^3\omega_3 + 36\omega_1 cs^4\omega_2^3\omega_3 + 14\omega_4\omega_1\omega_2^3\omega_3 + 27\omega_1^3 cs^2\omega_2^3 v_2^2\omega_3 - 20\omega_4\omega_1^2 cs^2\omega_2^2 + 42\omega_4^3 cs^2\omega_2\omega_3 - 312\omega_4 cs^2\omega_2^3 v_2^2\omega_3 -$
$\omega_4\omega_1^2\omega_3^3 v_1^4\omega_3 + 32\omega_4\omega_1 cs^2\omega_2^2\omega_3 - 60\omega_4\omega_1^3 v_2^2\omega_3 - 18\omega_4\omega_1^3 cs^4\omega_2 + 8\omega_4\omega_1^2 cs^4\omega_2\omega_3 + 18\omega_4\omega_1^2 cs^2\omega_2^3 - 81\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 + 7\omega_4\omega_1^2\omega_2^3\omega_3 +$
$192\omega_4\omega_1^2\omega_2 v_2^2\omega_3 + 9\omega_4\omega_1^3 cs^4\omega_2^2 - 264\omega_4\omega_2^3 v_2^4\omega_3 + 24\omega_4\omega_1 cs^2\omega_2^3 v_2^2 - 54\omega_4\omega_1 cs^2\omega_2^3\omega_3 + 84\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 - 240\omega_4\omega_1^3\omega_2 v_2^4\omega_3 + 8\omega_4\omega_1 cs^4\omega_2^3 -$
$60\omega_4\omega_1 cs^2\omega_2^2 v_2^2\omega_3 - 36\omega_1 cs^2\omega_2^3\omega_3 - 32\omega_4\omega_1^3 cs^4\omega_2\omega_3 - 138\omega_4\omega_1^2\omega_2^3 v_2^2\omega_3 - 20\omega_4\omega_1^3 cs^2\omega_2\omega_3 - 4\omega_4\omega_1\omega_2^3\omega_3 - 28\omega_4\omega_1 cs^4\omega_2^3\omega_3 -$
$16\omega_4\omega_1^2 cs^2\omega_2\omega_3 - 222\omega_4\omega_1\omega_3^3 v_2^2\omega_3 - \omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 + 8\omega_4\omega_1^3 cs^4\omega_2 - 288\omega_4\omega_1^3 cs^2\omega_2 v_2^2\omega_3 + 8\omega_4\omega_1^2\omega_2\omega_3 - 90\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2\omega_3 +$
$24\omega_4\omega_1^3 cs^2\omega_2 v_2^2 - 24\omega_4\omega_1^2\omega_2^3 v_2^4\omega_3 - 6\omega_4\omega_1^3 cs^2\omega_2^2\omega_3 - 18\omega_4\omega_1 cs^4\omega_2^3 - 3\omega_4\omega_1^3 cs^2\omega_2^3 v_1^2\omega_3 - 96\omega_4\omega_1^2\omega_2 v_2^2\omega_3 + 138\omega_4\omega_1^3\omega_2 v_2^4\omega_3 +$
$144\omega_4\omega_2^3 v_2^2\omega_3 - 36\omega_1 cs^4\omega_2^3\omega_3 - 9\omega_4\omega_1^3 cs^2\omega_2^2 - 54\omega_4\omega_1^3 cs^2\omega_2^2 v_2^2 - 29\omega_4\omega_1^2 cs^4\omega_2^3\omega_3 - 4\omega_4\omega_1^2\omega_2^3\omega_3 + 153\omega_4\omega_1^3 cs^2\omega_2^2 v_2^2\omega_3 + 17\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 +$
$20\omega_4\omega_1^2 cs^4\omega_2^2 - 54\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2 + 4\omega_4\omega_1^3\omega_2\omega_3 + 120\omega_4\omega_1^2 cs^2\omega_2 v_2^2\omega_3 + \omega_4\omega_1^2\omega_2^3 v_1^2\omega_3 + 40\omega_4 cs^2\omega_2^3\omega_3 + 96\omega_4\omega_1^3 v_2^4\omega_3 - 9\omega_1^3 cs^2\omega_2^3\omega_3 +$
$18\omega_4\omega_1^3 cs^2\omega_2^2 + 27\omega_4\omega_1^3 cs^2\omega_2^3 v_2^2 - 7\omega_4\omega_1^2\omega_2^3\omega_3 + 10\omega_4\omega_1^2 cs^4\omega_2^3\omega_3 + 408\omega_4\omega_1\omega_2^3 v_2^4\omega_3 - 8\omega_4\omega_1^3 cs^2\omega_2 + \omega_4\omega_1^3\omega_2^2 v_1^4\omega_3 - 153\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2\omega_3 -$
$10\omega_4\omega_1^3\omega_2\omega_3 - 108\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2\omega_3 + 36\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 + 24\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 + 12\omega_4\omega_1\omega_2^3 v_2^2\omega_3 + 144\omega_4\omega_1^3 cs^2 v_2^2\omega_3 + 108\omega_1 cs^2\omega_2^3 v_2^2\omega_3 +$
$3\omega_4\omega_1^3 cs^2\omega_2^3 v_1^2\omega_3 + 138\omega_4\omega_1^3\omega_2 v_2^2\omega_3 - 168\omega_4\omega_1^2\omega_2^2 v_2^4\omega_3 - 8\omega_4\omega_1 cs^2\omega_2^3 - 24\omega_4\omega_1^3 cs^2\omega_2^2\omega_3 + 16\omega_4\omega_1^3 cs^4\omega_2^3 + 81\omega_4\omega_1^2\omega_2^3 v_2^2\omega_3 -$
$3\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 - 8\omega_4\omega_1\omega_2^3\omega_3 + 60\omega_4\omega_1^2 cs^2\omega_2^3 v_2^2 + 9\omega_1^3 cs^4\omega_2^3\omega_3 + 432\omega_4\omega_1 cs^2\omega_2^3 v_2^2\omega_3 - 68\omega_4 cs^4\omega_2^3\omega_3$

$C_{31} = 4 cs^4\omega_2 + 12\omega_2 v_2^4 + 3\omega_1 cs^2\omega_2 + 9\omega_1\omega_2 v_2^2 + 2\omega_1 cs^4 + 6\omega_1 v_2^4 - 36\omega_1 cs^2\omega_2 v_2^2 - 4 cs^2\omega_2 - 3\omega_1 cs^4\omega_2 - 9\omega_1\omega_2 v_2^4 - 2\omega_1 cs^2 - 6\omega_1 v_2^2 +$
$24\omega_1 cs^2 v_2^2 + 48 cs^2\omega_2 v_2^2 - 12\omega_2 v_2^2$

$C_{32} = -9\omega_4^2\omega_1^3 v_2^2 - 54\omega_4^2\omega_1^2 cs^2 v_2^2 - 8\omega_4^2\omega_1^2 cs^2\omega_3^2 - 36\omega_4^2\omega_1 v_2^4\omega_3 + 12\omega_4^2\omega_1 cs^4\omega_3 + 36\omega_4\omega_1 cs^2 v_2^2\omega_3 - 3\omega_4^2\omega_1^3 cs^4\omega_3^2 - 18\omega_4\omega_1\omega_3^3 v_2^2\omega_3 -$
$15\omega_4^2\omega_1^3 v_2^2\omega_3 - 3\omega_4\omega_1^3 cs^2\omega_2^3 - 36\omega_4^2\omega_1 v_2^2\omega_3 - 12\omega_4\omega_1 cs^2 cs^4\omega_3^2 + 12\omega_4^2 v_2^2\omega_3 + 9\omega_1^3 v_2^2\omega_3 + 3\omega_4^2\omega_1^3 v_2^4\omega_3 + 18\omega_4^2\omega_1^2 v_2^2 + 18\omega_1^2 v_2^2\omega_3^2 +$
$36\omega_4\omega_1 cs^2 v_2^2\omega_3 - 12\omega_4\omega_1 cs^2\omega_3^2 - 48\omega_4^2\omega_1 cs^4\omega_3^2 + 15\omega_4\omega_1^3 v_2^2\omega_3 + 3\omega_4^2\omega_1^3 cs^4\omega_3 - 36\omega_4^2\omega_1 cs^2 v_2^2\omega_3 + 36\omega_4\omega_1^2\omega_2^2\omega_3 + 12\omega_4^2\omega_1^2 cs^2\omega_3 +$
$72\omega_4^2\omega_1 cs^2 v_2^2\omega_3 - 18\omega_4^2\omega_1 v_2^4 + 15\omega_4\omega_1^3 v_2^2\omega_3 + 3\omega_4\omega_1^3 cs^4\omega_3 + 36\omega_4^2\omega_1 v_2^4\omega_3 + 12\omega_4\omega_1 cs^2\omega_3^2 + 6\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3 + 27\omega_1^3 cs^2 v_2^2\omega_3 +$
$24\omega_4^2\omega_1 cs^4\omega_3^2 - 36\omega_4\omega_1^3 cs^2 v_2^2\omega_3 + 36\omega_4\omega_1^2 v_2^2\omega_3 - 12\omega_4\omega_1 cs^2\omega_3 - 108\omega_4\omega_1^2 cs^2 v_2^2\omega_3 + \omega_4^2\omega_1^3 cs^2\omega_3^2 + 18\omega_4\omega_1^3 v_2^2\omega_3 + 27\omega_4^2\omega_1^3 cs^2 v_2^2 +$
$72\omega_4^2\omega_1 cs^2 v_2^2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3^2 + 24\omega_4^2 cs^4\omega_3^2 - 15\omega_4\omega_1^3 v_2^2\omega_3 - 3\omega_4^2\omega_1 cs^2\omega_3 - 54\omega_1^2 cs^2 v_2^2\omega_3 + 9\omega_4^2\omega_1 v_2^4 + 54\omega_4\omega_1^3 cs^2 v_2^2\omega_3 - 36\omega_4\omega_1^2 v_2^2\omega_3 -$

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$$12\omega_4^2\omega_1^2cs^4\omega_3 - 12\omega_4^2\omega_1^4v_2^4\omega_3^2 - 36\omega_4^2\omega_1^3cs^2v_2^2\omega_3 - 9\omega_1^3v_2^2\omega_3^2 - 3\omega_4^2\omega_1^3v_2^2\omega_3^2 - 12\omega_4^2\omega_1^2cs^2v_2^2\omega_3^2 + 12\omega_4\omega_1cs^4\omega_3^2 - 18\omega_1^2v_2^4\omega_3^2$$

$C_{33} = 4\omega_1^3\omega_3^2 + 36\omega_1^2cs^4\omega_2^3 + 72\omega_1^3cs^4\omega_2^3 + 4\omega_1^3cs^2\omega_2\omega_3 + 24\omega_1cs^4\omega_2\omega_3 - 36cs^4\omega_2^3\omega_3^2 + 8\omega_3^3\omega_3^2v_3^2 + 24\omega_1^3v_1^4\omega_3^2 - 24\omega_1^2\omega_2^3v_1^2\omega_3^2v_3^2 - 24\omega_1^3\omega_2^2v_1^2\omega_3^2 + 8\omega_1cs^2\omega_2^3\omega_3v_3^2 - 20cs^2\omega_3^3\omega_3^2v_3^2 + 40\omega_1^2cs^2\omega_2\omega_3^2 + 96\omega_1\omega_3^2v_1^2\omega_3^2v_3^2 + 24\omega_2^3v_1^2\omega_3^2 - 18\omega_1^2cs^2\omega_3^2\omega_3v_3^2 - \omega_1^2\omega_2^3\omega_3^2 - 84\omega_1^3cs^4\omega_2\omega_3^2 + 12\omega_1^3cs^2\omega_2^2 - \omega_1^3\omega_2^2\omega_3v_3^2 - 4\omega_1^3\omega_2\omega_3^2 - 48\omega_1^3\omega_2v_1^2\omega_3^2v_3^2 - 22\omega_1cs^2\omega_3^2\omega_3^2 - 12\omega_1^3cs^4\omega_2\omega_3 - 72\omega_1\omega_2^2v_1^4\omega_3^2 - 8\omega_3^3\omega_3^2 - 324\omega_1^3cs^2\omega_2v_1^2\omega_3^2 + 18\omega_1^3cs^2\omega_2^2\omega_3v_3^2 + 8\omega_1cs^2\omega_2^3\omega_3v_3^2 + 20cs^2\omega_2^3\omega_3^2 + 24\omega_1\omega_2^2v_1^2\omega_3^2v_3^2 - 8\omega_1cs^2\omega_2^3\omega_3 + 216\omega_1^2cs^2\omega_2^2v_1^2\omega_3^2 - 60\omega_1\omega_3^2v_1^4\omega_3^2 + 4\omega_1^2\omega_2^2\omega_3^2v_3^2 - 36\omega_1^2cs^4\omega_2\omega_3^2 - 216\omega_1cs^2\omega_2^2v_1^2\omega_3^2 - 8\omega_1cs^2\omega_2^2\omega_3^2 - 4\omega_1^2\omega_2^2\omega_3^2 - 20\omega_1^3cs^2\omega_2\omega_3^2v_3^2 + 56\omega_1^3cs^2\omega_2\omega_3^2 - 2\omega_1^2cs^2\omega_2^2\omega_3^2v_3^2 + 42\omega_1cs^4\omega_2^3\omega_3^2 - 8\omega_1\omega_2^3\omega_3^2v_3^2 - 36\omega_1^3\omega_2v_1^4\omega_3^2 - 48\omega_1^2\omega_2^2v_1^2\omega_3^2v_3^2 - 24\omega_1^2\omega_2v_1^2\omega_3^2 + 48\omega_2^3v_1^4\omega_3^2 - 4\omega_1^3\omega_2^3v_3^2 - 4\omega_1^3cs^2\omega_2\omega_3\omega_3v_3^2 + 72\omega_1^3cs^2\omega_2^2v_1^2\omega_3^2 - 4\omega_1^2\omega_2\omega_3^2 + 4\omega_1^2cs^2\omega_2^2\omega_3\omega_3 - 54\omega_1cs^4\omega_2^3\omega_3^2 - 5\omega_1^3cs^2\omega_2^2\omega_3^2 + 4\omega_1^2\omega_2\omega_3^3v_3^2 - 36\omega_1^3cs^4\omega_2\omega_3 + 2\omega_1^3cs^2\omega_2^2\omega_3v_3^2 - 12\omega_1^2cs^2\omega_2^2 + 24\omega_1^3\omega_2^2v_1^2\omega_3^2v_3^2 - 52\omega_1^3cs^2\omega_2^3 + 54\omega_1^3cs^4\omega_2^2\omega_3 + 5\omega_1^2cs^2\omega_2^2\omega_3^2 + 8\omega_1\omega_2^3\omega_3^2 - 48\omega_1^3v_1^2\omega_3^2 - 24\omega_1^2\omega_2v_1^2\omega_3^2 - 4\omega_1^2cs^2\omega_2\omega_3^2v_3^2 + 42\omega_1cs^4\omega_2^4\omega_3^2 + 12\omega_1^2cs^2\omega_2^3v_3^2 - 72\omega_2^3v_1^2\omega_3^2v_3^2 + 24\omega_1^2\omega_2^3v_1^2\omega_3^2 - 12\omega_1^2cs^4\omega_2\omega_3 - 2\omega_1^2cs^2\omega_2^2\omega_3^2v_3^2 - 8\omega_1\omega_2^3\omega_3^2v_3^2 + 16\omega_1^3cs^2\omega_2^3\omega_3^2 + 24\omega_1^3v_1^2\omega_3^2v_3^2 + 18\omega_1^2cs^2\omega_2^3\omega_3 + 6\omega_1^3cs^4\omega_2^2\omega_3^2 + 108\omega_1cs^2\omega_2^3v_1^2\omega_3^2 + 72\omega_1^2\omega_2^2v_1^2\omega_3^2 + \omega_1^3\omega_2^2\omega_3^2 + 84\omega_1^3\omega_2v_1^2\omega_3^2 + \omega_1^2\omega_2^3\omega_3v_3^2 - 18\omega_1^3cs^2\omega_2\omega_3 - 6\omega_1^2cs^4\omega_2^3\omega_3^2 + 216\omega_1^3cs^2v_1^2\omega_3^2 - 72\omega_1^2cs^2\omega_2^2v_1^2\omega_3^2 + 24\omega_1^2\omega_2v_1^2\omega_3^2v_3^2 + 48\omega_1\omega_2^2v_1^2\omega_3^2 - 12\omega_1^3cs^2\omega_2^2v_3^2 - 36\omega_1\omega_3^2v_1^4\omega_3^2 + 4\omega_1^3\omega_2\omega_3^2v_3^2 - 34\omega_1^2cs^2\omega_2^2\omega_3^2 + 8\omega_1\omega_2^3\omega_3^2 + 22\omega_1cs^2\omega_2^3\omega_3v_3^2$

$C_{34} = -108\omega_1^3cs^2\omega_2\omega_3 - 5\omega_1^2\omega_2^3\omega_3v_3^2 - 6\omega_1^2\omega_2^3v_3^2 + 132\omega_1^2\omega_2^3v_1^2\omega_3 - 12\omega_1\omega_2^3 - 18\omega_1^3\omega_2\omega_3v_3^2 - 54\omega_1cs^2\omega_2^3\omega_3 - 51\omega_1^2\omega_2^3\omega_3 - 66\omega_1\omega_2^3v_1^2\omega_3 + 6\omega_1\omega_2^3v_3^2 - 12\omega_2^3\omega_3 + 27\omega_1^3cs^2\omega_2^2 - 12cs^2\omega_2^3v_3^2 + 5\omega_1^2\omega_2^3v_3^2 + 48\omega_1^3\omega_2\omega_3 - 18\omega_1^3cs^2\omega_2 + 27\omega_1cs^2\omega_3^3v_3 + 84\omega_2^3v_1^2\omega_3 - 9\omega_1^2\omega_2^3v_3^2 - 6\omega_1^3\omega_2v_3^2 + 12\omega_1^3\omega_2v_3^2 - 18\omega_1^2cs^2\omega_2\omega_3 + 36\omega_1cs^2\omega_3^2 - 36\omega_1^3\omega_3 + 6\omega_1^2\omega_2\omega_3^2 - 18\omega_1^2cs^2\omega_2^2 + 81\omega_1^2cs^2\omega_2^2\omega_3 + 3\omega_1\omega_2^3\omega_3 - 120\omega_1^2\omega_2v_1^2\omega_3 + 27\omega_1\omega_2^3\omega_3v_3^2 - 9\omega_1^3\omega_2^2 + 12\omega_1\omega_2^3v_3^2 - 27\omega_1^2cs^2\omega_2^2 - 66\omega_1\omega_2v_1^2\omega_3 - 5\omega_1^3\omega_2\omega_3^2 - 9\omega_1^2\omega_2\omega_3v_3^2 + 9\omega_1^3\omega_2^2v_3^2 - 12\omega_2v_1^2\omega_3 + 6\omega_1^2\omega_2^2 - 15\omega_1^2cs^2\omega_2^3\omega_3 + 42\omega_1\omega_2^2\omega_3 + 84\omega_1^3cs^2\omega_3 + 48\omega_1^3v_1^2\omega_3 + 5\omega_1^3\omega_2^2v_3^2 + 15\omega_1^3cs^2\omega_2^2\omega_3 + 9\omega_1^2\omega_2^2 + 6\omega_1^3\omega_2 - 24\omega_2^3\omega_3v_3^2 + 6\omega_1^2\omega_2\omega_3$

$C_{35} = 48\omega_4^2\omega_1cs^2\omega_2^2\omega_3^2 + 24\omega_4^2\omega_1^2cs^2\omega_2^2\omega_3^2v_3^2 - 6\omega_4^2\omega_1^3\omega_2^2\omega_3^2v_3^2 - 288\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3^2v_3^2 + 54\omega_1^3\omega_2^2v_1^4\omega_3^2 - 117\omega_4\omega_1^3\omega_2^3v_1^4\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2^3v_1^2 + 432\omega_4^2cs^2\omega_2^3v_1^2\omega_3^2 - 28\omega_4^2\omega_1^3cs^4\omega_2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 + 48\omega_4^2\omega_1^3v_1^4\omega_3^2 - 12\omega_4^2\omega_1^3cs^2\omega_2\omega_3^2v_3^2 + 80\omega_4^2cs^4\omega_3^3\omega_3^2 + 48\omega_4^2\omega_2^3\omega_3^2v_3^2 - 180\omega_4\omega_1^2\omega_2^3v_1^4\omega_3^2 + 32\omega_4^2\omega_1^3cs^4v_3^2 + 336\omega_4\omega_1cs^2\omega_2^2v_1^2\omega_3^2 + 16\omega_4^2\omega_1cs^4\omega_2^2\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2v_1^2\omega_3^2 + 24\omega_4^2\omega_1\omega_3^2v_1\omega_3^2 - 297\omega_4\omega_1^3cs^2\omega_2^2v_1^2\omega_3^2 + 216\omega_4^2\omega_1^2\omega_3^2v_1^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_3^2 + 24\omega_4^2cs^4\omega_2^3\omega_3^2v_3^2 + 64\omega_4^2\omega_1^2cs^2\omega_2\omega_3^2 - 492\omega_4^2\omega_1cs^2\omega_2^2v_1^2\omega_3^2 + 96\omega_4^2\omega_1^2\omega_2v_1^4\omega_3^2 - 2\omega_4^2\omega_1^3\omega_2\omega_3^2 - 86\omega_4^2\omega_3^3\omega_2^2v_1^2\omega_3^2 + 48\omega_4^2\omega_1cs^2\omega_2^2\omega_3^2v_3^2 - 72\omega_4\omega_1cs^2\omega_2^3\omega_3^2 + 60\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3 - 24\omega_4^2\omega_1^3\omega_2v_1^4\omega_3^2 + 144\omega_4^2\omega_1\omega_2^2v_1^2\omega_3^2v_3^2 + 16\omega_4^2\omega_1cs^4\omega_2^3\omega_3^2 - 297\omega_4^2\omega_1^3cs^2\omega_3^2v_1^2\omega_3 - 36\omega_4^2\omega_1^3\omega_2^2v_1^4 - 16\omega_4^2\omega_1^3cs^2\omega_2\omega_3 + 24\omega_4^2\omega_1^3\omega_3^2v_1^4\omega_3^2 + 162\omega_1^3cs^2\omega_2^3v_1^2\omega_3^2 - 48\omega_4^2\omega_2^3v_1^2\omega_3^2 - 492\omega_4^2\omega_1^3cs^2\omega_2v_1^2\omega_3^2 - 72\omega_4^2\omega_1^3cs^2\omega_2^3\omega_3v_3^2 - 108\omega_4^2\omega_1^3\omega_2v_1^4\omega_3^2 + 240\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3^2 - 288\omega_4^2\omega_1^3\omega_2v_1^2\omega_3^2v_3^2 + 72\omega_4^2\omega_1^3cs^2\omega_3^3v_1^2\omega_3^2 - 172\omega_4^2\omega_1cs^4\omega_3^3\omega_3^2 - 48\omega_4^2\omega_1\omega_3^2\omega_2^2v_3^2 - 117\omega_4^2\omega_1^3\omega_2^3v_1^4\omega_3^2 - 16\omega_4^2\omega_2^3\omega_3^2 + 36\omega_4^2\omega_1^3cs^2\omega_2\omega_3^2 - 72\omega_4^2\omega_1^3cs^2\omega_2v_1^2\omega_3 - 108\omega_4\omega_1^2cs^2\omega_2^2v_1^2\omega_3^2 + 8\omega_4^2cs^2\omega_2^3\omega_3^2 + 72\omega_4^2\omega_1^2cs^2\omega_3^3\omega_3v_3^2 + 324\omega_4\omega_1^3cs^2\omega_3^2v_1^2\omega_3 + 40\omega_4^2\omega_1^2\omega_3^3v_1^4\omega_3 + 576\omega_4^2\omega_1\omega_3^2v_1^2\omega_3^2v_3^2 - 32\omega_4^2\omega_1cs^2\omega_2^2\omega_3 - 108\omega_4^2\omega_1cs^2\omega_2^2v_1^2\omega_3 - 108\omega_4^2\omega_1^3\omega_2v_1^2\omega_3 + 72\omega_4\omega_1\omega_3^2v_1^2\omega_3^2 - 96\omega_4^2\omega_1cs^2\omega_2^3\omega_3v_3^2 - 56\omega_4^2\omega_1cs^4\omega_2\omega_3^2 + 288\omega_4^2\omega_1\omega_3^3v_1^4\omega_3^2 + 24\omega_4^2\omega_1^2\omega_2^2\omega_3^2v_3^2 - 108\omega_4^2\omega_1^3v_1^4\omega_3^2 - 144\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3^2v_3^2 + 54\omega_4^2\omega_1^3\omega_2^3v_1^4 + 96\omega_4\omega_1\omega_2^3v_1^2\omega_3^2 + 36\omega_4\omega_1^3\omega_2^3v_1^2\omega_3 + 36\omega_4\omega_1^2\omega_2^3v_1^2\omega_3^2 - 16\omega_4^2\omega_1cs^2\omega_3^3v_3^2 - 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 + 72\omega_4\omega_1cs^4\omega_2^3\omega_3^2 + 96\omega_4\omega_1\omega_3^2v_1^4\omega_3^2 + 108\omega_4\omega_1^3\omega_3^2v_1^4\omega_3 + 16\omega_4^2\omega_1cs^4\omega_2^3\omega_3^2 + 288\omega_4^2\omega_1^3cs^2\omega_2^2v_1^2\omega_3 + 18\omega_4\omega_1cs^4\omega_2^3\omega_3 - 18\omega_4^2\omega_1^3cs^2\omega_2\omega_3 + 20\omega_4^2\omega_1cs^4\omega_2^2\omega_3 - 12\omega_4^2\omega_1cs^2\omega_2^3\omega_3^2v_3^2 - 216\omega_4^2\omega_1^2\omega_2^3v_1^2\omega_3 - 540\omega_4^2cs^2\omega_3^3v_1^2\omega_3 - 108\omega_4^2\omega_1cs^2\omega_2^2v_1^2 + 38\omega_4^2\omega_1^3\omega_2^2v_3^4\omega_3^2 - 144\omega_4^2\omega_1\omega_2v_1^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_2v_1^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_3^2 - 60\omega_4^2\omega_2v_1^4\omega_3^2 + 108\omega_4^2\omega_1cs^2\omega_3^2v_1^2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_2^2v_1^2\omega_3^2 - 36\omega_4^2\omega_1cs^4\omega_2\omega_3^2 - 36\omega_4^2\omega_1cs^2\omega_2^3\omega_3^2 - 24\omega_4^2\omega_1^3\omega_3v_3^2 + 174\omega_4^2\omega_1cs^2\omega_3^3v_1^2\omega_3^2 + 144\omega_4^2\omega_1^2\omega_2v_1^2\omega_3^2v_3^2 + 192\omega_4^2\omega_2^3v_1^4\omega_3^2 + 24\omega_4^2\omega_1^2\omega_2\omega_3^2v_3^2 - 54\omega_4^2\omega_1^3\omega_3^2v_1^2\omega_3^2 + 72\omega_4\omega_1cs^2\omega_2^3\omega_3^2 + 117\omega_4\omega_1^3\omega_2^3v_1^2\omega_3^2 - 852\omega_4^2\omega_1cs^2\omega_2^3v_1^2\omega_3^2 - 36\omega_4^2\omega_1cs^4\omega_2^3\omega_3 - 40\omega_4^2\omega_1^2cs^2\omega_2^2\omega_3 - 6\omega_4^2\omega_1^3cs^4\omega_2^3\omega_3^2 + 12\omega_4^2\omega_1^3cs^2\omega_3^3\omega_3^2v_3^2 + 180\omega_4\omega_1^3\omega_2^3v_1^2\omega_3 - 96\omega_4^2\omega_1^3v_1^2\omega_3^2 - 40\omega_4^2\omega_1^3cs^2\omega_3^2 + 16\omega_4^2\omega_1\omega_2^2\omega_3^2 - 24\omega_4\omega_1\omega_3^2v_1^4\omega_3^2 - 54\omega_4^2\omega_1^3\omega_3^3v_1^2 - 216\omega_4^2\omega_1cs^2\omega_2^3v_1^2 + 36\omega_4\omega_1^3\omega_2^2v_1^4\omega_3^2 + 18\omega_4^2\omega_1cs^4\omega_2^2\omega_3 - 12\omega_4^2\omega_1^2cs^2\omega_2^2\omega_3^2 + 2\omega_4^2\omega_1^3\omega_2^2\omega_3^2 - 18\omega_4\omega_1^3cs^2\omega_3^2\omega_3^2 - 288\omega_4^2\omega_1^2\omega_2^3v_1^2\omega_3^2 + 108\omega_1^2\omega_2^3v_1^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_2\omega_3^2v_3^2 - 36\omega_4\omega_1^3\omega_2^2v_1^4\omega_3 - 96\omega_4^2\omega_1cs^2\omega_2\omega_3^2v_3^2 - 288\omega_4^2\omega_1\omega_3^3v_1^4\omega_3^2 - 36\omega_4\omega_1^2\omega_2^2v_1^4\omega_3^2 + 162\omega_4^2\omega_1cs^2\omega_3^3v_1^2 + 264\omega_4^2\omega_1cs^2\omega_2^3v_1^2\omega_3^2 - 108\omega_4\omega_1\omega_3^3v_1^4\omega_3^2 - 12\omega_4^2\omega_1cs^2\omega_2^2\omega_3^2v_3^2 - 144\omega_4^2\omega_1\omega_2v_1^2\omega_3^2 - 72\omega_4^2\omega_1^2v_1^4v_1^4 + 144\omega_4^2\omega_1^3\omega_2^2v_1^2\omega_3^2v_3^2 + 6\omega_4^2\omega_1^2\omega_3^3\omega_3^2 + 36\omega_4^2\omega_1^2cs^4\omega_2^3v_3 + 86\omega_4^2cs^4\omega_2^3\omega_3^2 + 72\omega_4^2\omega_1cs^2\omega_3^3v_1^2\omega_3 - 144\omega_4^2\omega_1^2\omega_2^2v_1^4\omega_3^2 + 16\omega_4^2\omega_1\omega_3^3\omega_3^2 + 204\omega_4^2\omega_1^3\omega_2v_1^2\omega_3^2 + 48\omega_4^2\omega_1^2cs^2\omega_2^2\omega_3v_3^2 + 264\omega_4^2\omega_1cs^2\omega_2v_1^2\omega_3^2 - 108\omega_4\omega_1^3cs^2\omega_2^2v_1^2\omega_3 - 324\omega_1cs^2\omega_3^3v_1^2\omega_3^2 + 36\omega_4^2\omega_2v_1^2 + 36\omega_4^2\omega_1^2\omega_2^2\omega_3 - 2\omega_4^2\omega_1^3cs^4\omega_2^2\omega_3^2 + 117\omega_4^2\omega_1^3\omega_2^3v_1^2\omega_3 - 72\omega_4\omega_1cs^4\omega_2^2\omega_3^2 + 468\omega_4^2\omega_1cs^2\omega_2^3v_1^2\omega_3 + 144\omega_4^2\omega_1v_1^2\omega_3^2v_3^2 - 48\omega_4\omega_1\omega_2^2\omega_3^2v_3^2 + 24\omega_4^2\omega_1^3cs^2\omega_3^2v_3^2 + 48\omega_4^2\omega_1^3cs^2\omega_2\omega_3\omega_3v_3^2 + 168\omega_4^2\omega_1^3cs^2\omega_2^2v_1^2\omega_3 + 8\omega_4^2\omega_1^2\omega_3^3v_1^2\omega_3 + 40\omega_4^2\omega_1cs^4\omega_2^2\omega_3 - 432\omega_4^2\omega_2^3v_1^2\omega_3^2v_3^2 + 648\omega_4\omega_1^2cs^2\omega_3^3v_1^2\omega_3^2 - 72\omega_4\omega_1\omega_3^3v_1^4\omega_3^2 + 108\omega_4^2\omega_1^3\omega_2v_1^4\omega_3$

$C_{36} = 4\omega_1^3v_2^2 + 6\omega_1^2\omega_2^2v_3^2 + 6\omega_1\omega_2^3 - 12\omega_1\omega_2^2 + 36\omega_1^3cs^2 + 4\omega_1^3v_1^2 + 2\omega_2^3v_3^2 - 3\omega_1^3\omega_2v_2^2 + 36\omega_1cs^2\omega_2^2 + 2\omega_2^3v_2^2 - 18\omega_1^3cs^2\omega_2 - 3\omega_1^3\omega_2v_3^2 - 4\omega_3^3v_1^2 + 4\omega_1^3v_3^2 + 6\omega_1^2\omega_2^2v_2^2 - 18\omega_1cs^2\omega_3^2 + 12\omega_1\omega_2^2v_1^2 - 6\omega_1^2\omega_2v_2^2 + 36\omega_1^2cs^2\omega_2^2 - 3\omega_1\omega_2^2v_3^2 - 12\omega_1^2\omega_2v_1^2 + 24\omega_1^2\omega_2 - 12\omega_1^2\omega_2 - 12\omega_1^3 + 6\omega_1^3\omega_2 - 6\omega_1^2\omega_2v_3^2 - 3\omega_1\omega_2v_2^2 - 72\omega_1^2cs^2\omega_2$

$C_{37} = -3\omega_1^2\omega_2^3\omega_3v_3^2 + 4\omega_4\omega_1^3\omega_3^2v_3^2 - 2\omega_4\omega_1\omega_3^3\omega_3 + 20\omega_4\omega_1^2\omega_2\omega_3^2 - 3\omega_4\omega_1^2\omega_2^3\omega_3v_3^2 - 12\omega_4\omega_1^3cs^2\omega_2\omega_3 - 36\omega_4\omega_1^2cs^2\omega_2\omega_3^2 - 3\omega_1\omega_2^3v_2^2\omega_3^2 - 3\omega_4\omega_1\omega_2^3v_2^2\omega_3^2 - 2\omega_4\omega_1^3\omega_2\omega_3v_3^2 - 4\omega_4\omega_1\omega_2\omega_3^2 + 28\omega_4\omega_1^3cs^2\omega_3^2 + 18\omega_4\omega_1^2cs^2\omega_3^2 + 3\omega_1^3\omega_2^2v_2^2\omega_3 + 3\omega_4\omega_1^3\omega_2^2v_2^2\omega_3 - 6\omega_4\omega_1^3\omega_2^2\omega_3 - 6\omega_4\omega_1^2\omega_2^3 + 12\omega_4\omega_1^3v_1^2\omega_3 - 6\omega_1^2\omega_2^3\omega_3 - 18\omega_4\omega_1cs^2\omega_2^3\omega_3 + 6\omega_4\omega_1^2\omega_2^2v_2^2\omega_3 + 3\omega_1^2\omega_2^3\omega_3 - 3\omega_4\omega_1^3\omega_2v_3^2 - 3\omega_1^3\omega_2^3\omega_3v_3^2 - 18\omega_1cs^2\omega_3^3\omega_3^2 + 6\omega_1^2\omega_2^3\omega_3 + 6\omega_4\omega_1cs^2\omega_2^3\omega_3 + \omega_4\omega_1^2\omega_2^3v_2^2\omega_3 + 3\omega_1^2\omega_2^3\omega_3v_3^2 - 3\omega_1^3\omega_2^3v_2^2\omega_3 + 6\omega_4\omega_1^2\omega_2^3\omega_3v_3^2 + 6\omega_4\omega_1^3\omega_2 - 3\omega_4\omega_1^3\omega_2^2v_2^2 + 4\omega_4\omega_1^3v_2^2\omega_3 - 6\omega_1^2\omega_2^2\omega_3^2 + \omega_4\omega_1\omega_2^3v_2^2\omega_3 - 12\omega_4\omega_1cs^2\omega_2^2\omega_3 - 3\omega_4\omega_1\omega_3^3v_2^2\omega_3 - 18\omega_4\omega_1^3cs^2\omega_2\omega_3 + 6\omega_4\omega_1\omega_2^3\omega_3^2 - 3\omega_1\omega_3^3v_3^2\omega_3 + 6\omega_4\omega_1^2cs^2\omega_2^2\omega_3 - 4\omega_4\omega_2^3\omega_3^2 + 4\omega_4\omega_1^2\omega_3^3v_3^2 + 3\omega_1^3\omega_2^3v_2^2 - 18\omega_1^2cs^2\omega_2^2\omega_3^2 + \omega_4\omega_1\omega_2^3\omega_3v_3^2 - 4\omega_4\omega_1^3\omega_2v_2^2\omega_3^2 - 3\omega_4\omega_1^3\omega_2v_2^2\omega_3^2 - 2\omega_4\omega_1^2\omega_2^3\omega_3 - 12\omega_4\omega_1^2v_1^2\omega_3 + 18\omega_1^2cs^2\omega_3^3\omega_3^2 - 4\omega_4\omega_1\omega_2^2\omega_3 - 6\omega_1^3\omega_2^2\omega_3v_3^2 + 3\omega_4\omega_1^2\omega_2v_3^2 - 36\omega_4\omega_1^2v_1^2\omega_2\omega_3 + 6\omega_4\omega_1^3\omega_2\omega_3 + \omega_4\omega_1^2\omega_2^2\omega_3v_3^2 - 18\omega_4\omega_1^2\omega_3^2 - 4\omega_4\omega_1\omega_2^2\omega_3v_3^2 - 12\omega_4\omega_1^3\omega_3^2 + 6\omega_4\omega_1\omega_2^3\omega_3 + 20\omega_4cs^2\omega_3^3\omega_3^2 + 4\omega_4\omega_1^3\omega_2\omega_3 + 3\omega_4\omega_1\omega_2^3\omega_3v_3^2 - 18\omega_4\omega_1cs^2\omega_2\omega_3^2 + 6\omega_1^3\omega_2^3\omega_3v_3^2 + 3\omega_1^3cs^2\omega_2\omega_3v_3^2 + 3\omega_1^2\omega_2^3\omega_3v_3^2 + 18\omega_1^3cs^2\omega_2^3\omega_3 + 4\omega_4\omega_1^2v_2^2\omega_3 - 2\omega_4\omega_1\omega_2v_2^2\omega_3 + 36\omega_4\omega_1\omega_3^2v_1^2\omega_3 + 18\omega_4\omega_1^3cs^2\omega_2\omega_3 - 12\omega_4\omega_1^2\omega_2^2\omega_3 - 3\omega_4\omega_1^2\omega_2^2v_3^2 + 36\omega_4\omega_1^2cs^2\omega_2^2\omega_3 - 4\omega_4\omega_1^2\omega_2v_2^2\omega_3 - 3\omega_4\omega_1^2\omega_2\omega_3^3v_3^2 + 18\omega_1^2cs^2\omega_2^3\omega_3 - 3\omega_1^2\omega_2^3v_2^2\omega_3 + 6\omega_1\omega_3^3\omega_3^2$

$C_{38} = -63\omega_4\omega_1^3\omega_2^3\omega_3^2 + 180\omega_4^2\omega_1cs^2\omega_3^3\omega_3^2 + 216\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3^2 + 20\omega_4^2\omega_1\omega_3^3\omega_3v_3^2 + 48\omega_4^2\omega_1^3\omega_2^3\omega_3 - 36\omega_4\omega_1^2\omega_2^3\omega_3\omega_3v_3^2 - 72\omega_4^2\omega_1^2\omega_3^3v_1^2 + 324\omega_4\omega_1^3cs^2\omega_2^2 - 144\omega_4\omega_1^3\omega_3^3 - 96\omega_4^2\omega_3^3\omega_3^2v_3^2 - 36\omega_4\omega_1^3\omega_2^2v_1^2\omega_3 + 12\omega_4\omega_1\omega_3^3v_1^2\omega_3 + 144\omega_4^2\omega_1^3\omega_2\omega_2^2 - 216\omega_4^2\omega_1^3cs^2\omega_3^2 - 144\omega_4^2\omega_1cs^2\omega_2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_3 - 108\omega_4^2\omega_1^3\omega_3^2\omega_3^2 + 20\omega_4^2\omega_1^3v_1^2\omega_2\omega_3v_3^2 + 108\omega_4\omega_1\omega_2cs^2\omega_3^3\omega_3^2 + 12\omega_4^2\omega_1^2v_2^2v_1^2\omega_3 - 36\omega_4\omega_1^3\omega_2^2\omega_3v_3^2 - 144\omega_4^2\omega_1^3cs^2\omega_3\omega_3 + 144\omega_4^2\omega_1^3\omega_2^3v_3^2 + 48\omega_4^2\omega_3^3v_1^2\omega_3 + 72\omega_4^2\omega_1^2cs^2\omega_2v_1^2\omega_3 + 108\omega_4^2\omega_1\omega_2\omega_3^3\omega_3v_3^2 + 24\omega_4^2\omega_2^3\omega_3 - 360\omega_4^2\omega_1^3cs^2\omega_2\omega_3 - 72\omega_4^2\omega_1^2\omega_2^3\omega_3v_3^2 - 120\omega_4^2cs^2\omega_2^3\omega_3 - 63\omega_4^2\omega_1^3\omega_2\omega_3\omega_3v_3^2 + 48\omega_4^2\omega_1^3\omega_2\omega_3 - 72\omega_4^2\omega_1cs^2\omega_2^3\omega_3 + 36\omega_4\omega_1^2\omega_2^3\omega_3v_3^2 + 72\omega_4^2\omega_1^3\omega_2^3\omega_3 + 36\omega_4^2\omega_1^3\omega_2^2v_1^2\omega_3 - 108\omega_4^2\omega_1^2\omega_2^3\omega_3 -$

$$
36\omega_4\omega_1\omega_3^3 v_1^2\omega_3^2 - 36\omega_4^2\omega_1^2\omega_2\omega_3^2 v_3^2 - 36\omega_4\omega_1\omega_3^3 v_1^2\omega_3^2 + 36\omega_4\omega_1^2\omega_2^3 v_1^2\omega_3 + 36\omega_4\omega_1^2\omega_2^3 v_1^2\omega_3 - 36\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 + 108\omega_4\omega_1^3\omega_2^3\omega_3 + 72\omega_4\omega_1\omega_2^3\omega_3 v_3^2 -
$$
$$
108\omega_4^2\omega_1^2\omega_2^2\omega_3 + 72\omega_4^2\omega_2^3 v_2^2\omega_3^2 - 36\omega_4\omega_1\omega_2^3\omega_3^2 + 63\omega_4\omega_1^3\omega_2^2\omega_3^2 v_3^2 - 189\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 - 36\omega_4^2\omega_1^2\omega_2^3 v_1^2\omega_3 - 60\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^2 - 48\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3 -
$$
$$
54\omega_1^3\omega_2^3\omega_3^2 v_3^2 - 24\omega_4^3\omega_1^3\omega_2 v_1^2\omega_3 + 72\omega_4^3\omega_1^3\omega_2^2 + 12\omega_4^2\omega_1\omega_2^3\omega_3 + 96\omega_4^2\omega_1^2\omega_2\omega_3^2 - 60\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 + 48\omega_4^2\omega_1^3\omega_3^2 v_3^2 - 216\omega_4^2\omega_1^2 cs^2\omega_2^3 -
$$
$$
36\omega_4^2\omega_1^3\omega_2^2\omega_3^2 - 24\omega_4\omega_1\omega_3^3\omega_3 v_3^2 - 108\omega_4^3\omega_1\omega_2 v_2^2\omega_3^2 + 24\omega_4^2\omega_1\omega_2\omega_3^3 v_3^2 + 54\omega_1^3\omega_3^3 v_1^2\omega_3^2 - 432\omega_4\omega_1^2 cs^2\omega_2^3\omega_3^2 + 60\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 - 108\omega_4^3\omega_1^2\omega_2^3\omega_3 -
$$
$$
144\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 + 180\omega_4\omega_1^2\omega_2^3 v_1^2\omega_3 + 48\omega_4^2\omega_1^3 v_1^2\omega_3 + 144\omega_4\omega_1^2\omega_2^3\omega_3^2 - 324\omega_4\omega_1\omega_3^3 cs^2\omega_2^3\omega_3 + 336\omega_4^2\omega_1^3 cs^2\omega_2^2 + 24\omega_4^2\omega_1\omega_2^3\omega_3 + 54\omega_4^3\omega_1^3\omega_3^3 v_1^2 -
$$
$$
108\omega_4^2\omega_1^3\omega_2^3 - 432\omega_4\omega_1^2 cs^2\omega_2^3 + 180\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 - 20\omega_4\omega_1^3\omega_2^3\omega_3^2 - 144\omega_4\omega_1^2\omega_2^3\omega_3 + 189\omega_4\omega_1^3 cs^2\omega_2^3\omega_3^2 + 36\omega_4\omega_1^2\omega_3^3 v_1^2\omega_3 - 108\omega_1^2\omega_2^3 v_1^2\omega_3^2 -
$$
$$
72\omega_4^2\omega_1^3\omega_2\omega_3^2 v_3^2 - 216\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3^2 + 36\omega_4^2\omega_1^3\omega_2\omega_3 v_3^2 - 108\omega_4\omega_1\omega_3^3 v_1^2\omega_3 + 432\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 - 48\omega_4\omega_1\omega_2^2 v_1^2\omega_3^2 - 20\omega_4^2\omega_1\omega_3^3\omega_3 v_3^2 +
$$
$$
324\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 + 108\omega_1^2\omega_2\omega_3^3 v_3^2 - 36\omega_4\omega_1\omega_2^3\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_2\omega_3 v_3^2 - 36\omega_4^3\omega_1^3\omega_2 v_1^2 + 144\omega_4^2\omega_1^3\omega_2^3 + 324\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 +
$$
$$
63\omega_4^2\omega_1^3\omega_3^3\omega_3 + 216\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 - 180\omega_4\omega_1^2\omega_2^3\omega_3^2 - 72\omega_4\omega_1^2\omega_2^3\omega_3^2 + 24\omega_4\omega_1\omega_2^3\omega_3^2 v_3^2 + 144\omega_4^3\omega_1^3 v_2^2\omega_3^2 + 216\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 + 54\omega_4^3\omega_1^3\omega_2^3 v_3^2
$$

$C_{39} = -63\omega_4\omega_1^3\omega_3^3\omega_3^2 + 180\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 - 36\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3^2 + 48\omega_4^2\omega_1^2\omega_2\omega_3 - 72\omega_4^2\omega_1^2\omega_2 v_1^2 + 324\omega_4^2\omega_1^3 cs^2\omega_2^3 - 144\omega_2^2\omega_1^3\omega_2^3 + 72\omega_4^2\omega_2^3\omega_3^2 v_3^2 +$
$72\omega_4^2\omega_1^3 v_2^2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_2^3 v_2^2\omega_3^2 - 36\omega_4\omega_1^3\omega_2 v_1^2\omega_3^2 + 12\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 + 144\omega_4\omega_1^3\omega_2\omega_3^2 - 216\omega_4\omega_1^3 cs^2\omega_2^2 - 144\omega_4^2\omega_1^2 cs^2\omega_2\omega_3 +$
$36\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^3 v_2^2 - 72\omega_4\omega_1^3\omega_2^3\omega_3 + 108\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3^2 + 20\omega_4^2\omega_1^3\omega_2^3\omega_3 + 108\omega_4\omega_1 cs^2\omega_2^3\omega_3^2 + 12\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3 + 36\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 -$
$144\omega_4^3\omega_1^3 cs^2\omega_2\omega_3 + 48\omega_4^2\omega_2^3 v_1^2\omega_3 + 72\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3 - 108\omega_4\omega_1\omega_3^3 v_3^2 + 24\omega_4^2\omega_3^3\omega_3 - 360\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 - 120\omega_4^2 cs^2\omega_2^3\omega_3^2 + 48\omega_4^2\omega_1^3\omega_2\omega_3 -$
$72\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 - 24\omega_4\omega_1\omega_3^3 v_2^2\omega_3 - 36\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 + 72\omega_4\omega_1^3\omega_2\omega_3^2 + 36\omega_4^2\omega_3^3 v_1^2\omega_3 - 108\omega_4^2\omega_1^2\omega_3^3\omega_3 - 36\omega_4\omega_1\omega_3^3 v_1^2\omega_3 + 216\omega_4^2\omega_1^2\omega_2\omega_3^3 v_3^2 +$
$20\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 - 36\omega_4\omega_1\omega_3^3 v_1^2\omega_3 + 36\omega_4\omega_1^3\omega_2 v_1^2\omega_3 + 36\omega_4^2\omega_1^2 v_2^2 v_1^2\omega_3 - 36\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 + 108\omega_4\omega_1^3\omega_2^3\omega_3 - 108\omega_4^2\omega_1^2\omega_2^2\omega_3 -$
$60\omega_4^2\omega_1^2\omega_2^3 v_2^2\omega_3 - 96\omega_4^2\omega_3^3 v_2^2\omega_3^2 - 36\omega_4\omega_1\omega_3^3\omega_3^2 - 180\omega_4\omega_1^2\omega_2^3\omega_3^2 - 189\omega_2^2\omega_1^3 cs^2\omega_2^3\omega_3 - 36\omega_4\omega_1^3 cs^2\omega_2^3 v_1^2\omega_3 - 48\omega_4^2\omega_2 v_1^2\omega_3^2 + 108\omega_1^2\omega_2^3 v_2^2\omega_3^2 -$
$24\omega_4^3\omega_1^3\omega_2 v_1^2\omega_3 + 72\omega_4^3\omega_1^3\omega_2^2 + 12\omega_4\omega_1\omega_3^3 v_3^2 + 96\omega_4^2\omega_1^2\omega_2\omega_3^2 - 60\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 + 24\omega_4^2\omega_1\omega_2^2 v_2^2\omega_3 + 144\omega_4^2\omega_1^3\omega_3^2 v_3^2 - 216\omega_4\omega_1^3 cs^2\omega_2^2\omega_3^2 +$
$54\omega_4^2\omega_1^3\omega_3^3 v_2^2 - 72\omega_4^3\omega_1\omega_2 v_2^2\omega_3^2 - 216\omega_4^2\omega_1^2\omega_2\omega_3^2 v_3^2 + 54\omega_1^3\omega_3^3 v_1^2\omega_3^2 - 432\omega_4\omega_1^2 cs^2\omega_2^3\omega_3^2 - 63\omega_4^2\omega_1^3\omega_3^3 v_2^2\omega_3 + 60\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 - 108\omega_4^3\omega_1^2\omega_2^3\omega_3 -$
$144\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 - 20\omega_4^2\omega_1^3\omega_2^3 v_2^2\omega_3 + 180\omega_4\omega_1^2\omega_2^3 v_1^2\omega_3 + 48\omega_4^2\omega_1^3 v_1^2\omega_3 + 144\omega_4^2\omega_1^2\omega_2^3\omega_3 - 324\omega_4\omega_1^3 cs^2\omega_2^3\omega_3 + 336\omega_4^2\omega_1^3 cs^2\omega_2^2 + 24\omega_4\omega_1\omega_2^3\omega_3 +$
$54\omega_4^3\omega_1^3\omega_3^3 v_1^2 - 108\omega_4^2\omega_1^3\omega_2^3 - 432\omega_4\omega_1^2 cs^2\omega_2^3 + 180\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 + 144\omega_4^2\omega_1^3\omega_2^3 v_2^2\omega_3 - 20\omega_4^3\omega_1^3\omega_2^3\omega_3 - 144\omega_4\omega_1^2\omega_2^3\omega_3 + 189\omega_4\omega_1^3 cs^2\omega_2^3\omega_3^2 -$
$36\omega_4\omega_1^3\omega_2^2 v_2^2 + 36\omega_4\omega_1^2\omega_2^3 v_1^2\omega_3^2 - 108\omega_1^2\omega_2^3 v_1^2\omega_3^2 - 108\omega_4^3\omega_2\omega_3^3 v_3^2 + 24\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3^2 - 24\omega_4^3\omega_1^3\omega_2 v_2^2\omega_3^2 - 108\omega_4\omega_1^3\omega_3^3 v_1^2\omega_3 -$
$432\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 - 48\omega_4^3\omega_1\omega_2 v_1^2\omega_3 + 324\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 - 54\omega_1^3\omega_3^3 v_2^2\omega_3^2 - 36\omega_4^2\omega_1\omega_3^3\omega_3^2 - 36\omega_4^3\omega_1^3\omega_2 v_1^2\omega_3^2 - 36\omega_4^3\omega_1^3\omega_2 v_1^2 + 144\omega_4^2\omega_1^3\omega_2^3 +$
$324\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 + 63\omega_4^2\omega_1^3\omega_2^3\omega_3 + 216\omega_4\omega_1^3 cs^2\omega_2^3\omega_3 - 72\omega_4\omega_1^2\omega_2^3\omega_3^2 + 63\omega_4\omega_1^3\omega_2^3 v_2^2\omega_3^2 + 48\omega_4^2\omega_1^3 v_2^2\omega_3^2 - 36\omega_4\omega_1^2\omega_2^3 v_2^2\omega_3^2 + 216\omega_4\omega_1^2 cs^2\omega_2^3\omega_3$

$C_{40} =$
$64\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 + 32\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 v_3^2 - 192\omega_4^2\omega_1^2\omega_2^2\omega_2\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3^2 + 27\omega_4\omega_1^3 cs^2\omega_2^3\omega_3^2 v_3^2 - 54\omega_4^2\omega_1^3 cs^2\omega_2^2 - 168\omega_4^3\omega_1 cs^4\omega_2\omega_3^2 + 8\omega_4^3\omega_1^3\omega_3^2 -$
$24\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3^2 v_3^2 - 40\omega_4^3\omega_1^3 cs^2\omega_2\omega_3^2 v_3^2 - 54\omega_1^3 cs^2\omega_2^3\omega_3^2 v_3^2 + 144\omega_4^3 cs^4\omega_3^2 - 8\omega_4^3\omega_2^3\omega_3^2 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2 - 216\omega_4^2\omega_1 cs^4\omega_2^2\omega_3^2 - 252\omega_4^2\omega_1^2 cs^4\omega_3^2 -$
$8\omega_4^3\omega_1\omega_2\omega_3^2 + 24\omega_4^2\omega_1 cs^2\omega_2^2 + 32\omega_4^2 cs^2\omega_2^3\omega_3^2 v_3^2 + 80\omega_4^2\omega_1^2 cs^2\omega_2\omega_3^2 + 96\omega_4^2\omega_1\omega_2^3 v_2^2\omega_3^2 - 56\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 v_3^2 - 168\omega_4^2\omega_1 cs^4\omega_2^3\omega_3 + 8\omega_4^3\omega_1 cs^2\omega_2\omega_3^2 -$
$24\omega_4^2\omega_1 cs^4\omega_2^3\omega_3 + 8\omega_4^3\omega_1\omega_2^3\omega_3^2 v_3^2 + 8\omega_4^3\omega_2^3\omega_3^2 + 432\omega_4^2 cs^2\omega_2^3\omega_3 v_3^2 + 112\omega_4^2\omega_1^3 cs^2\omega_2\omega_3^2 - 104\omega_4^2 cs^2\omega_2^3\omega_3^2 + 108\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 v_3^2 + 48\omega_4^2\omega_1^3 v_1^4\omega_3^2 +$
$128\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 - 432\omega_4^2\omega_1 cs^2\omega_2^2 v_2^2\omega_3^2 - 56\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 v_3^2 + 48\omega_4^3\omega_1^2 v_2^2\omega_3^2 - 72\omega_4^2\omega_1 cs^4\omega_2\omega_3^2 - 16\omega_4^3\omega_1^2\omega_2^2\omega_3^2 - 72\omega_4^3\omega_1^2\omega_2 v_2^2\omega_3^2 +$
$864\omega_4^2\omega_1 cs^2\omega_2^3 v_2^2\omega_3^2 + 56\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 + 16\omega_4^2\omega_1^2\omega_2^3\omega_3^2 + 72\omega_4^3\omega_2^3 v_2^2\omega_3^2 - 432\omega_4^2\omega_1^3 cs^2\omega_2 v_2^2\omega_3^2 - 96\omega_4^2\omega_3^3 v_2^2\omega_3^2 - 24\omega_4^2 cs^4\omega_2\omega_3^2 +$
$81\omega_4\omega_1^3 cs^4\omega_3^2\omega_3^2 - 72\omega_4^2\omega_1 cs^4\omega_2^2 + 27\omega_4\omega_1^3 cs^2\omega_2^3\omega_3 + 192\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 + 8\omega_4^2\omega_1 cs^2\omega_2^3\omega_2^3 v_3^2 + 120\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3^2 v_3^2 - 36\omega_4^2\omega_1\omega_3^3 v_3^4\omega_3^2 -$
$27\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 v_3^2 - 162\omega_1^3 cs^4\omega_2^3\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2\omega_3^2 + 54\omega_4\omega_1^3 cs^2\omega_2^3 v_3^2 + 10\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 + 96\omega_4^2\omega_1\omega_2^3 v_2^2\omega_3^2 - 8\omega_4^3\omega_1^3\omega_3^2 v_3^2 + 432\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3^2 -$
$432\omega_4^2\omega_1^2 cs^2\omega_2\omega_3 v_2^2\omega_3^2 + 96\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 + 8\omega_4^2\omega_1^2\omega_2\omega_3^3 v_3^2 - 108\omega_1^2 cs^2\omega_2^3\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2^2 v_2^4\omega_3^2 + 162\omega_4^2\omega_1^3 cs^4\omega_3^2 + 108\omega_4\omega_1^2 cs^2\omega_2^3\omega_3^2 +$
$324\omega_4^2\omega_1^2 cs^4\omega_3\omega_3 - 10\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_2^2 - 64\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 - 10\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 v_3^2 - 104\omega_4^2\omega_1^3 cs^4\omega_3^2 - 8\omega_4^2\omega_1\omega_2^3\omega_3^2 - 96\omega_4^2\omega_1\omega_2 v_2^2\omega_3^2 v_3^2 +$
$84\omega_4^2\omega_1 cs^2\omega_2^2 - 81\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 - 176\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 - 27\omega_4\omega_1^3 cs^2\omega_2^3\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2\omega_3^2 v_3^2 + 96\omega_4^2\omega_1^2 v_2^2\omega_3^2 v_3^2 - 60\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 v_3^2 + 54\omega_1^3 cs^2\omega_2^3\omega_3^2 +$
$108\omega_1^2 cs^2\omega_2^3\omega_3^2 v_3^2 - 24\omega_4^2\omega_1 cs^2\omega_2^3 v_3^2 - 8\omega_4^2\omega_1^2 cs^2\omega_2\omega_3\omega_3^2 v_3^2 - 108\omega_4\omega_1 cs^2\omega_2^3\omega_3^2 v_3^2 - 60\omega_4^2\omega_1\omega_2 v_2^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_2^3 v_2^4\omega_3^2 + 10\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 v_3^2 -$
$30\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 + 324\omega_4^2 cs^4\omega_2^3\omega_3^2 - 8\omega_4^2\omega_1\omega_2^3\omega_3^2 + 64\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 v_3^2 - 108\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 + 30\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3^2 - 432\omega_4\omega_1 cs^2\omega_2^3 v_2^2\omega_3^2 -$
$324\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 + 8\omega_4^2\omega_1\omega_2^3\omega_3 v_3^2 - 96\omega_4^2\omega_1^3 v_2^2\omega_3^2 + 32\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 v_3^2 - 8\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 v_3^2 + 192\omega_4^2\omega_1^2 cs^4\omega_2\omega_3 - 84\omega_4^2\omega_1^2 cs^2\omega_2^3 v_3^2$

$C_{41} = -6\omega_4 cs^2\omega_2\omega_3 - 2\omega_4\omega_1\omega_3 - 2\omega_4\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1 cs^2\omega_3 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 -$
$27\omega_4\omega_1 cs^2\omega_2 + 9\omega_1\omega_2\omega_3 v_3^2 + 27\omega_1 cs^2\omega_2\omega_3$

$C_{42} = -24\omega_1^3 cs^2\omega_2\omega_3 + 4\omega_1^2\omega_2^3 v_3^2 + 2\omega_1\omega_2^3 - 3\omega_1^3\omega_2\omega_3 v_3^2 - 24\omega_1 cs^2\omega_2^2\omega_3 + 10\omega_2^3 v_2^2\omega_3 - 20\omega_1^2\omega_2^3\omega_3 - 4\omega_1\omega_2^2\omega_3 v_3^2 - 10\omega_2^3\omega_3 + 26 cs^2\omega_2^3\omega_3 +$
$10\omega_1^3\omega_2\omega_3 + 26\omega_1^2\omega_2^2 v_2^2\omega_3 - 6\omega_1^3 cs^2\omega_2 - 24\omega_1 cs^2\omega_2^2\omega_3 - 2\omega_1^3\omega_2 v_3^2 + 4\omega_1^3\omega_3 v_3^2 - 13\omega_1\omega_2^3\omega_2\omega_3 - 30\omega_1^2 cs^2\omega_2\omega_3 - 6\omega_1 cs^2\omega_2^2 - 12\omega_1^3\omega_3 -$
$4\omega_1^2\omega_2\omega_3 v_3^2 - 22\omega_1^2\omega_2 v_2^2\omega_3 + 12\omega_1^2 cs^2\omega_2^2 + 48\omega_1^2 cs^2\omega_2^2\omega_3 + 10\omega_1\omega_2^3\omega_3 + 16\omega_1^3 v_2^2\omega_3 - 3\omega_1\omega_2^3\omega_3 v_3^2 - 2\omega_1\omega_2^3 v_3^2 + 6\omega_1^2\omega_2^3\omega_3 v_3^2 - 4\omega_1^2\omega_2^2 -$
$4\omega_1\omega_2^2 v_2^2\omega_3 + 8\omega_1\omega_2^3\omega_3 + 28\omega_1^3 cs^2\omega_3 - 13\omega_1^3\omega_2 v_2^2\omega_3 + 2\omega_1^3\omega_2 + 4\omega_3^3\omega_3 v_3^2 + 14\omega_1^2\omega_2\omega_3$

$C_{43} = -36\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 + 648\omega_4\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2 v_3^2 - 180\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3^2 v_3^2 - 36\omega_4\omega_1^2\omega_5\omega_2^3 v_2^4\omega_3^2 - 24\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3 + 112\omega_4^2\omega_1^2 cs^4\omega_5\omega_2^3\omega_3 +$
$8\omega_4^3\omega_5\omega_2^3\omega_3^2 - 12\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3^2 v_3^2 + 36\omega_4\omega_1^3\omega_5\omega_2^2 v_2^2\omega_3 + 360\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3^2 v_3^2 - 108\omega_4\omega_1 cs^2\omega_5\omega_2^3 v_2^2\omega_3^2 - 108\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3^2 - 8\omega_4^3\omega_1\omega_5\omega_2^3\omega_3^2 -$
$72\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3 + 48\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2 v_2^3 + 12\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^4\omega_3 + 144\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3^2 + 264\omega_4^2\omega_1^3 cs^4\omega_5 v_2^2\omega_3^2 + 144\omega_4^2\omega_1^3\omega_5 v_2^2\omega_3^2 v_3^2 -$
$72\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^4 - 72\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3 v_2^2\omega_3 + 64\omega_4^2\omega_1\omega_5\omega_2^3\omega_3^2 - 168\omega_4^2\omega_1 cs^2\omega_5\omega_2^3\omega_3^2 + 72\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2 + 8\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 -$
$18\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3^2 - 108\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3 v_2^2\omega_3 - 8\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 + 108\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3 v_2^2\omega_3 - 108\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3 v_2^2 - 27\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3 v_1^2\omega_3 -$
$36\omega_4\omega_1\omega_5\omega_2^3 v_2^2\omega_3^2 - 4\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_2^2 - 180\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3^2 v_3^2 + 9\omega_4\omega_1^3\omega_5\omega_2^3 v_1^4\omega_3^2 - 468\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3 v_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2^3\omega_3^2 v_3^2 -$
$180\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_2\omega_3 v_3^2 - 36\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4 - 28\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 - 12\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3 + 2\omega_4^2\omega_1^3\omega_5\omega_2^3 v_1^2\omega_3 - 88\omega_4^2 cs^2\omega_5\omega_2^3\omega_3^2 + 16\omega_4^2\omega_1^3 cs^4\omega_5\omega_2\omega_3 -$
$9\omega_4\omega_1^3\omega_5\omega_2^3 v_1^4\omega_3 + 216\omega_4^2\omega_5\omega_2^3 v_2^2\omega_3^2 v_3^2 - 48\omega_4\omega_1\omega_5\omega_2^3 v_2^2\omega_3^2 - 96\omega_4^2\omega_5\omega_2^3 v_2^4\omega_3^2 - 56\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 - 288\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 - 28\omega_4^2\omega_1^3 cs^4\omega_5\omega_2\omega_3 +$
$336\omega_4^2\omega_1 cs^2\omega_5\omega_2^3\omega_3 v_3^2 + 288\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2^2 v_2^4\omega_3^2 - 8\omega_4^2\omega_1\omega_5\omega_2^3\omega_3^2 + 72\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3\omega_3 + 324\omega_1^2 cs^2\omega_5\omega_2^3 v_2^2\omega_3^2 -$
$2\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^2 v_1^2\omega_3 - 216\omega_4^2\omega_1^2 cs^4\omega_5\omega_2^3\omega_3 + 108\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3 v_2^2\omega_3 - 108\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3 v_2^2\omega_3 + 24\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 v_3^2 - 648\omega_4\omega_1 cs^2\omega_5\omega_2^3\omega_3^2 v_3^2 -$
$36\omega_4\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 - 36\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 + 48\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3^2 - 348\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3 v_2^2 - 288\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3^2 v_3^2 - 216\omega_4\omega_1 cs^2\omega_5\omega_2^3\omega_3^2 v_3^2 -$
$72\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3 + 108\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3^2 + 160\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3^2 + 54\omega_4\omega_1\omega_5\omega_2^3\omega_3^2 v_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3^2 - 8\omega_4^2\omega_1^3\omega_5\omega_2\omega_2^3 -$
$18\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3 - 24\omega_4^2\omega_1 cs^2\omega_5\omega_2^3 v_2^2\omega_3 + 56\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 + 54\omega_4^2\omega_1\omega_5\omega_2^3 v_1^4 - 288\omega_4\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 + 162\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3 v_2^2 -$
$54\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^4\omega_3 + 24\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3 v_3^2 - 36\omega_4\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3 + 132\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_2^2\omega_3 v_3^2 - 216\omega_4^2 cs^2\omega_5\omega_2^3 v_2^2\omega_2^2 + 36\omega_4\omega_1\omega_5\omega_2^3 v_2^4\omega_3^2 +$
$72\omega_4^2\omega_1^3 cs^4\omega_5\omega_2^3\omega_3 - 9\omega_4\omega_1^3\omega_5\omega_2^3 v_1^2\omega_3 - 112\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3 - 24\omega_4^2\omega_5\omega_2^3\omega_3^2 v_3^2 + 12\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3 - 72\omega_4^2\omega_1^2\omega_5\omega_2 v_2^2\omega_3^2 v_3^2 -$

$$72\omega_4\omega_1^3cs^4\omega_5\omega_2^3\omega_3^2 - 56\omega_4^2\omega_1^2cs^4\omega_5\omega_2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_5\omega_3^2 + 16\omega_4^2\omega_1^2\omega_5\omega_2^2\omega_3^2 + 36\omega_4^2\omega_1cs^2\omega_5\omega_2^2\omega_3^2 - 2\omega_4^2\omega_1^2\omega_5\omega_2v_1^4\omega_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2\omega_3^2v_3^2 +$$
$$264\omega_4^2\omega_1^2cs^2\omega_5\omega_2\omega_3v_3^2 + 162\omega_4^2\omega_1^3cs^2\omega_5\omega_2\omega_3v_3^2 + 27\omega_4\omega_1^3cs^2\omega_5\omega_2^3v_1^2\omega_3^2 + 9\omega_4^2\omega_1^3\omega_5\omega_3^2v_1^2\omega_3 + 36\omega_4\omega_1^2\omega_5\omega_2^3v_2^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2v_2^2\omega_3 +$$
$$36\omega_4^2\omega_1^2\omega_5\omega_3^2v_2^4\omega_3 - 216\omega_4^2\omega_1^2cs^2\omega_5\omega_3\omega_2^2v_2^2 + 4\omega_4^2\omega_1^2cs^2\omega_5\omega_2\omega_3^2 - 54\omega_4^2\omega_1^3\omega_5\omega_3^2v_2^2 + 60\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2v_2^2\omega_3^2 - 60\omega_4^2\omega_1^2cs^2\omega_5\omega_3^2v_2^2\omega_3^2 -$$
$$24\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^2 - 48\omega_4^2\omega_1^2\omega_5\omega_2\omega_2^2\omega_3^2v_3^2 + 108\omega_1^2\omega_5\omega_3^2v_2^4\omega_3^2 - 36\omega_4\omega_1^3\omega_5\omega_2^2v_2^4\omega_3 + 24\omega_4^2\omega_1^2\omega_5\omega_2v_2^4\omega_3^2 - 120\omega_4^2\omega_1cs^2\omega_5\omega_2^3\omega_3^2v_3^2 + 4\omega_4^2\omega_1^3cs^4\omega_5\omega_2\omega_3^2 -$$
$$96\omega_4^2\omega_1^2cs^2\omega_5\omega_2\omega_3^2v_3^2 - 16\omega_4^2\omega_1^3cs^2\omega_5\omega_2\omega_3 + 180\omega_4^2\omega_1cs^2\omega_5\omega_3^2v_2^2\omega_3 - 72\omega_4\omega_1^3cs^4\omega_2^3\omega_3^2 - 144\omega_4\omega_4^2\omega_1^2\omega_5\omega_3^2v_2^2\omega_3 - 162\omega_4\omega_1^3cs^2\omega_5\omega_2^3\omega_3^2v_3^2 -$$
$$12\omega_4^2\omega_1^2\omega_5\omega_2v_2^2\omega_3^2 + 32\omega_4^2\omega_1^3cs^4\omega_5\omega_3 + 18\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2v_2^4\omega_3 + 152\omega_4^2cs^4\omega_5\omega_3\omega_2^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_3\omega_3^2v_3^2 - 288\omega_4\omega_1^2cs^2\omega_5\omega_3\omega_3^2 + 36\omega_4\omega_1^3cs^2\omega_5\omega_2\omega_3^2 +$$
$$300\omega_4^2\omega_1cs^2\omega_5\omega_3^2v_2^2\omega_3 - 84\omega_4^2\omega_1^2\omega_5\omega_2v_2^2\omega_3^2 + 36\omega_4\omega_1^2\omega_5\omega_3^2v_2^4\omega_3 + 72\omega_4^2\omega_1^2\omega_5\omega_3^2v_2^2 - 6\omega_4^2\omega_1^2cs^2\omega_5\omega_2\omega_3^2v_3^2 - 96\omega_4\omega_1^3\omega_5v_2^2\omega_3^2 +$$
$$6\omega_4^2\omega_1^3cs^2\omega_5\omega_2\omega_3^2v_3^2 - 54\omega_4\omega_1^3\omega_5\omega_3^2v_2^2\omega_3^2 + 64\omega_4^2\omega_1cs^2\omega_5\omega_2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_2v_2^2\omega_3 + 54\omega_1^3\omega_5\omega_2^3v_2^2\omega_3^2 - 18\omega_4^2\omega_1\omega_5\omega_2^3v_2^4\omega_3^2 + 132\omega_4^2\omega_1^3\omega_5\omega_2\omega_2v_2^2\omega_3^2 -$$
$$72\omega_4^2\omega_1^2cs^2\omega_5\omega_2v_2^2\omega_3 + 180\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2v_2^2\omega_3 + 216\omega_4^2\omega_1^2cs^2\omega_5\omega_2^3\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2^2v_2^4\omega_3^2 - 108\omega_4\omega_1^2cs^2\omega_5\omega_2^2v_2^2\omega_3^2 + 108\omega_4\omega_4^3cs^2\omega_5\omega_2v_2^2\omega_3^2 +$$
$$54\omega_4\omega_1^3\omega_5\omega_2^3v_2^2\omega_3^2 - 72\omega_4\omega_1^3cs^4\omega_5\omega_2\omega_3^2 - 24\omega_4^2\omega_1^2cs^2\omega_5\omega_2v_2^2\omega_3^2 + 288\omega_4^2\omega_1^2cs^4\omega_3^2\omega_3^2 - 6\omega_4^2\omega_1^2cs^2\omega_5\omega_2v_1^2\omega_3^2 - 162\omega_1^3cs^2\omega_5\omega_2^3v_2^2\omega_3^2 +$$
$$48\omega_4^2\omega_1^2cs^2\omega_5\omega_2\omega_3v_3^2 + 6\omega_4^2\omega_1^3cs^2\omega_5\omega_2v_1^2\omega_3^2 + 24\omega_4\omega_5\omega_2^3v_2^2\omega_3^2 + 108\omega_4^2\omega_1\omega_5\omega_2^3v_2^4\omega_3^2 - 160\omega_4^2\omega_1cs^2\omega_5\omega_2^3\omega_3^2 + 240\omega_4^2cs^2\omega_5\omega_3^2\omega_3^2v_3^2 +$$
$$288\omega_4\omega_1cs^2\omega_5\omega_2^3\omega_3^2 - 6\omega_4^2\omega_1^3cs^4\omega_5\omega_3^2\omega_3^2 + 72\omega_4^2\omega_1\omega_5\omega_2^2v_2^2\omega_3^2 + 2\omega_4^2\omega_1^3\omega_5\omega_2v_1^4\omega_3^2 - 40\omega_4^2\omega_1^3cs^2\omega_5\omega_3^2 - 72\omega_4^2\omega_1^2cs^2\omega_5\omega_2\omega_3^2 + 36\omega_4\omega_1^3\omega_5\omega_2v_2^2$$

$C_{44} = 6\omega_4\omega_3^2 - 2\omega_4^2\omega_1\omega_3v_3^2 + 6\omega_4\omega_1\omega_3 + 18\omega_4^2cs^2\omega_3 + 12\omega_4^2 - 18\omega_4\omega_1cs^2\omega_3 - 6v_2^2\omega_3^2 + 6\omega_3^2v_3^2 + 6\omega_4\omega_1cs^2\omega_3^2 - 6\omega_4\omega_1v_3^2\omega_3^2 - 12\omega_4\omega_3 -$
$2\omega_4\omega_1\omega_3^2 + 2\omega_4\omega_1\omega_3^2v_3^2 - 6\omega_4\omega_3^2v_3^2 - 6\omega_4^2v_3^2 + 18\omega_4\omega_1cs^2 - 6\omega_4^2v_3^2 + 3\omega_1v_3^2\omega_3^2 + 12\omega_4v_3^2\omega_3 - 18\omega_4cs^2\omega_3^2 + 6\omega_4^2\omega_3v_3^2 - 6\omega_4^2\omega_1 -$
$6\omega_4^2\omega_1cs^2\omega_3 + 3\omega_4^2\omega_1v_3^2 + 2\omega_4\omega_1\omega_3 - 36\omega_4^2cs^2 + 3\omega_4^2\omega_1v_3^2 + 36\omega_4cs^2\omega_3 - 6\omega_4^2v_3^2 - 3\omega_1\omega_3^2v_3^2$

$C_{45} = 6\omega_4cs^2\omega_2\omega_3 - 8\omega_4\omega_1\omega_3 + 6\omega_4\omega_1\omega_2v_3^2\omega_3 - 18\omega_4\omega_2\omega_3v_3^2 - 9\omega_1\omega_2v_3^2\omega_3 + 12\omega_4\omega_1cs^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 2\omega_4\omega_1v_3^2\omega_3 +$
$9\omega_4\omega_1\omega_2 + 18\omega_4\omega_1\omega_3v_3^2 - 6\omega_4\omega_1\omega_2\omega_3 - 27\omega_4\omega_1cs^2\omega_2 - 9\omega_4\omega_1\omega_2v_2^2 + 4\omega_4\omega_2v_3^2\omega_3 - 27\omega_1cs^2\omega_2\omega_3 + 18\omega_4\omega_1cs^2\omega_2\omega_3$

$C_{46} = -58\omega_4^2\omega_1cs^2\omega_3^2\omega_3^2 - 27\omega_4^2\omega_1^3\omega_2^2\omega_3^2v_3^2 + 60\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3^2v_3^2 - 18\omega_4^2\omega_1^3cs^2\omega_2^2 + 16\omega_4^2cs^2\omega_2^2v_1^2\omega_3^2 - 102\omega_4^2\omega_1^3cs^4\omega_2\omega_3^2 + 4\omega_4^2\omega_1^3\omega_3^2 -$
$27\omega_4^2\omega_1^2\omega_3^2v_3^4 - 324\omega_4^2\omega_1^3cs^2\omega_2\omega_3v_3^2 + 24\omega_4^2\omega_3^2\omega_3^2v_3^2 - 36\omega_4\omega_1^3\omega_2\omega_3v_3^4 + 72\omega_4^2\omega_1^3cs^4\omega_3^2 - 28\omega_4^2\omega_1cs^2\omega_2^2v_1^2\omega_3^2 - 72\omega_4^2\omega_1cs^4\omega_2^2\omega_3^2 -$
$72\omega_4^2\omega_1^2cs^4\omega_3^2 + 36\omega_4\omega_1\omega_2^2\omega_3^2v_3^2 - 9\omega_4\omega_1^3cs^2\omega_2^3v_1^2\omega_3^2 - 4\omega_4^2\omega_1^3\omega_2\omega_3^2 + 12\omega_4^2\omega_1^3cs^2\omega_2^2 - 216\omega_4^2\omega_1cs^2\omega_2^3\omega_3^2v_3^2 + 4\omega_4^2\omega_1^2cs^2\omega_2\omega_3^2 + 16\omega_4^2\omega_1^2cs^2\omega_2^2v_1^2\omega_3^2 -$
$48\omega_4^2\omega_1\omega_2v_1^2\omega_3^2v_3^2 - 84\omega_4^2\omega_1cs^4\omega_3^2\omega_3^2 - 9\omega_4^2\omega_1^3\omega_2\omega_3^2v_1^2\omega_3 + 4\omega_4^3\omega_1cs^2\omega_2v_1^2\omega_3 + 18\omega_1^3cs^2\omega_2^2v_1^2\omega_3^2 - 4\omega_4^2\omega_3^2v_1^2\omega_3 - 20\omega_4^3\omega_1cs^2\omega_2v_1^2\omega_3^2 -$
$8\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3^2 - 30\omega_4\omega_1^3\omega_2v_1^2\omega_3^2v_3^2 + 3\omega_4^2\omega_1^3cs^2\omega_3^2v_1^2\omega_3^2 + 78\omega_4\omega_1cs^4\omega_3^2\omega_3^2 - 42\omega_4^2\omega_1\omega_3\omega_2^2\omega_3^2 + 4\omega_4^2\omega_2^3\omega_3^2 + 74\omega_4\omega_1^3cs^4\omega_2\omega_3^2 -$
$4\omega_4^2\omega_1^3cs^2\omega_2v_1^2\omega_3 + 24\omega_4^2\omega_1^3\omega_2^3v_3^4 + 20\omega_4^2cs^2\omega_2^3\omega_3^2 - 30\omega_4\omega_1\omega_3^2v_1^2\omega_3^2v_3^2 + 28\omega_4^2\omega_1cs^2\omega_2^2\omega_3^2 + 32\omega_4^2\omega_1cs^2\omega_2^2v_1^2\omega_3 - 24\omega_4^2\omega_1^2\omega_2^2\omega_3^2v_3^2 +$
$4\omega_4^2\omega_1\omega_3^2v_1^2\omega_3^2 + 28\omega_4^2\omega_1cs^2\omega_3^2\omega_3^2 + 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 - 12\omega_4^2\omega_1^3cs^4\omega_2\omega_3^2 - 27\omega_4\omega_1^3cs^4\omega_3^2\omega_3^2 - 36\omega_4^2\omega_1^3cs^4\omega_2^2 + 9\omega_4^2\omega_1^3cs^2\omega_2^2\omega_3^2 + 24\omega_4^2\omega_1^2cs^4\omega_2^2\omega_3^2 +$
$324\omega_4^2\omega_1cs^2\omega_3^2\omega_3^2v_3^2 - 12\omega_4^2\omega_1^3cs^2\omega_2^2v_1^2 + 4\omega_4^2\omega_1^2\omega_2v_1^2\omega_3^2 + 54\omega_1^3cs^4\omega_2^2\omega_3^2 - 4\omega_4^2\omega_1^2\omega_2\omega_3^2 + 72\omega_4^2\omega_1\omega_3^2\omega_3^2v_3^4 + 49\omega_4^2\omega_1^2cs^2\omega_2^3\omega_3^2 - 48\omega_4\omega_1^3\omega_3^2\omega_3^2v_3^2 -$
$32\omega_4^2\omega_1cs^2\omega_2^3v_1^2\omega_3 - 12\omega_4^2\omega_1^2\omega_2v_1^2\omega_3^2v_3^2 + 12\omega_4^2\omega_1^2\omega_2\omega_3^2v_3^2 + 36\omega_1^2cs^2\omega_3^2\omega_3^2 + 54\omega_4^2\omega_1^3cs^4\omega_2^2 - 36\omega_4\omega_1cs^2\omega_3^2\omega_3^2 + 4\omega_4^2\omega_1cs^2\omega_2^2v_1^2\omega_3^2 +$
$108\omega_4^2\omega_1^2cs^4\omega_3^2\omega_3 - 25\omega_4^2\omega_1cs^2\omega_2^2\omega_3^2 - 32\omega_4^2\omega_1^2cs^2\omega_2^2\omega_3 + 15\omega_4^2\omega_1^3cs^4\omega_3^2\omega_3^2 - 138\omega_4^2\omega_1^2cs^2\omega_2^3\omega_3^2v_3^2 - 4\omega_4^2\omega_3^3v_1^2\omega_3^2 - 52\omega_4^2\omega_1^3cs^2\omega_3^2 -$
$36\omega_4^2\omega_1^2\omega_2^2\omega_3^2v_3^4 - 4\omega_4^2\omega_1\omega_2^2\omega_3^2 + 24\omega_4^2\omega_1^2cs^2\omega_3^2 - 24\omega_4^2\omega_1cs^2\omega_2^3v_1^2 - 27\omega_4^2\omega_1^3cs^4\omega_3^2\omega_3 - 16\omega_4^2\omega_1cs^2\omega_2^2\omega_3^2 + 9\omega_4\omega_1^3cs^2\omega_3^2\omega_3^2 - 60\omega_4^2\omega_2\omega_3^2\omega_3^2v_3^4 +$
$66\omega_4^2\omega_1^3\omega_2\omega_3^2v_3^2 - 18\omega_1^3cs^2\omega_2^3\omega_3^2 + 18\omega_4^2\omega_1^3cs^2\omega_2^3v_1^2 + 27\omega_4^2\omega_1^3\omega_2^3\omega_3v_3^4 + 16\omega_4^2\omega_1^3cs^2v_1^2\omega_3^2 + 138\omega_4^2\omega_1^3cs^2\omega_2^3\omega_3^2v_3 + 4\omega_4^2\omega_1\omega_2v_1^2\omega_3^2 +$
$27\omega_4^2\omega_1^3\omega_2^3v_3^2 - 119\omega_4^2\omega_1^2cs^4\omega_3^2\omega_3^2 - 28\omega_4^2\omega_1cs^2\omega_2^3v_1^2\omega_3 - 108\omega_1^2cs^4\omega_3^2\omega_3^2 - 4\omega_4^2\omega_3^3v_1^4\omega_3^2 + 4\omega_4^2\omega_1\omega_2v_1^2\omega_3^2 - 4\omega_4^2\omega_1^3cs^2\omega_2v_1^2\omega_3^2 -$
$36\omega_1^2cs^2\omega_3^2v_1^2\omega_3^2 - 36\omega_4^2\omega_1^2cs^2\omega_3^2\omega_3^2 + 35\omega_4^2\omega_1^3cs^4\omega_2^2\omega_3^2 + 108\omega_4\omega_1^2cs^4\omega_3^2\omega_3^2 + 36\omega_4^2\omega_1cs^2\omega_3^2v_1^2\omega_3 + 24\omega_4^2\omega_3^3v_1^2\omega_3^2v_3^2 + 12\omega_4^2\omega_1\omega_2^3\omega_3^2v_3^2 +$
$216\omega_4^2\omega_1^3cs^2\omega_3^2v_3^2 + 8\omega_4^2\omega_1^3cs^2\omega_2^2v_1^2\omega_3^2 + 96\omega_4^2\omega_1cs^4\omega_2^2\omega_3 - 3\omega_4^2\omega_1^3cs^2\omega_2^2\omega_3^2 + 36\omega_4^2\omega_2v_1^2\omega_3^2v_3^2 + 36\omega_4^2\omega_1cs^2\omega_2^3v_1^2\omega_3^2$

$C_{47} = 36\omega_4\omega_1^3\omega_2^2\omega_3v_3^4 - 18\omega_1^2\omega_2^3\omega_3v_3^2 + 18\omega_4\omega_1^2\omega_2^3v_3^4 - 18\omega_4\omega_1cs^2\omega_2^3\omega_3v_3^2 - 48\omega_4\omega_1^3\omega_2^3v_3^2 + 8\omega_4\omega_1cs^4\omega_2^3\omega_3 - 4\omega_4\omega_1^2\omega_2\omega_3^2 + 36\omega_4\omega_1^2\omega_2^3\omega_3v_3^2 -$
$8\omega_4\omega_1^3cs^2\omega_2\omega_3 - 18\omega_1^3\omega_2^3\omega_3v_3^2 + 12\omega_4\omega_1\omega_2^2v_3^4 + 32\omega_4\omega_1^2cs^2\omega_2\omega_3^2 - 108\omega_4cs^2\omega_2^2\omega_3^2v_3^2 - \omega_4\omega_1^3v_1^2\omega_3^2 + 12\omega_4^3\omega_2\omega_2\omega_3v_3^2 - 4\omega_4\omega_1\omega_2^2\omega_3^2 -$
$20\omega_4\omega_1^3cs^2\omega_3^2 - 90\omega_4\omega_1^3cs^2\omega_2v_1^2\omega_3^2v_3^2 + 24\omega_4\omega_1cs^2\omega_2v_1^2\omega_3 + 54\omega_1^2cs^2\omega_3^3\omega_3v_3^2 - 36\omega_4\omega_1^3\omega_2v_3^4 - 28\omega_4\omega_1cs^4\omega_2^2\omega_3 - 12\omega_4\omega_1^3v_1^2\omega_3^2 -$
$18\omega_4\omega_1cs^2\omega_2^3\omega_3^2 - 18\omega_1^2\omega_2^3\omega_3v_3^4 - 9\omega_4\omega_1^3\omega_2^2\omega_3v_3^2 - 90\omega_4cs^2\omega_2^3\omega_3v_3^2 + 18\omega_4\omega_1^3\omega_2v_3^2 - 18\omega_1^3\omega_2^3\omega_3v_3^2 - 90\omega_4\omega_1\omega_2^3v_3^2\omega_3v_3^2 - 14\omega_4\omega_1cs^4\omega_2\omega_3^2 -$
$9\omega_4\omega_1^2\omega_2^3\omega_3v_3^4 + 54\omega_1^3cs^2\omega_2^3v_1^2\omega_3^2 - 72\omega_1cs^2\omega_3^3\omega_3 - 96\omega_4cs^2\omega_3v_1^2\omega_3^2 + 132\omega_4\omega_1^2cs^2\omega_2^2v_1^2\omega_3^2 + 6\omega_4\omega_1\omega_3^3\omega_3v_3^4 - 8\omega_4\omega_1cs^2\omega_2^3\omega_3 + 12\omega_4\omega_1^2\omega_2\omega_2^3v_3^4 -$
$54\omega_1^3cs^2\omega_2^3\omega_3v_3^2 + 66\omega_4\omega_1^2cs^2\omega_2^3v_1^2\omega_3 + 8\omega_4\omega_1^3cs^4\omega_2\omega_3 - 144\omega_4\omega_1\omega_2^3v_1^2\omega_3^2v_3^2 - 28\omega_4\omega_1cs^4\omega_2\omega_3 + 54\omega_4\omega_1^3cs^2\omega_3^3v_1^2\omega_3 + 18\omega_4^2\omega_2^3\omega_3^2v_3^2 -$
$12\omega_4\omega_1cs^2\omega_2^3\omega_3^2v_3^2 + 90\omega_4\omega_1^3cs^2\omega_2^3\omega_3v_3^2 - 42\omega_4\omega_1^2\omega_2^3\omega_3^2v_3^2 - 6\omega_4\omega_1^3cs^2\omega_2v_1^2\omega_3^2 + 12\omega_4\omega_1\omega_2^3v_1^2\omega_3^2 - 48\omega_4\omega_2^3\omega_3^2v_3^2 + 180\omega_4\omega_1^2\omega_2^3v_1^2\omega_3^2v_3^2 -$
$\omega_4\omega_1^3\omega_2^3v_1^4\omega_3^2 + 24\omega_4\omega_1^2cs^2\omega_2^3\omega_3v_3^2 + 32\omega_4\omega_1cs^2\omega_2^2\omega_3 + 6\omega_4\omega_1^2\omega_2^3\omega_3v_3^4 - 24\omega_4\omega_1^2\omega_2^2v_1^2\omega_3^2 - 174\omega_4\omega_1^3cs^2\omega_2\omega_3v_3^2 - 24\omega_4\omega_1\omega_2^3\omega_3^2v_3^2 +$
$76\omega_4\omega_1cs^4\omega_2^3\omega_3 + 18\omega_4\omega_1^3cs^2\omega_2\omega_3 - 54\omega_1^2cs^2\omega_2^3\omega_3v_3^2 + 72\omega_1cs^4\omega_2^3\omega_3 - 4\omega_4\omega_1\omega_2\omega_3^2 - 18\omega_1\omega_2^3\omega_3v_3^2 - 84\omega_4\omega_1cs^2\omega_2^2v_1^2\omega_3^2 - 48\omega_4\omega_1^2cs^2\omega_2v_1^2\omega_3 +$
$54\omega_4\omega_1^2cs^2\omega_2v_3\omega_3v_3^2 - 56\omega_4\omega_1^2cs^2\omega_2^2\omega_3 - 3\omega_4\omega_1^3cs^4\omega_2^3\omega_3 + 16\omega_4\omega_1cs^4\omega_3^2\omega_3 - 18\omega_1^2\omega_2^3\omega_3v_3^4 + 4\omega_4\omega_3^3\omega_3^2 - 126\omega_4\omega_1^2cs^2\omega_2^2v_1^2\omega_3 - 18\omega_4\omega_1^2\omega_2^3\omega_3v_3^4 +$
$12\omega_4\omega_1^3\omega_2^3v_3^2 - 68\omega_4cs^4\omega_2^3\omega_3 + 18\omega_1^3cs^4\omega_2^3\omega_3 - 6\omega_4\omega_1\omega_2^3\omega_3^2 + 6\omega_4\omega_1^2cs^2\omega_2v_1^2\omega_3^2 - 36\omega_4\omega_1cs^2\omega_2\omega_3v_3^2 - 36\omega_4\omega_1cs^2\omega_2^2\omega_3 - 2\omega_4\omega_1cs^2\omega_2^2\omega_3^2 +$
$54\omega_1^3cs^2\omega_2^2\omega_3v_3^2 + 54\omega_4\omega_1\omega_2^3v_3^4 - 12\omega_4\omega_1\omega_2^3v_1^2\omega_3^2 + 72\omega_1^2cs^2\omega_2^3\omega_3^2 - 36\omega_4\omega_1^3cs^4\omega_2\omega_3 + 2\omega_4\omega_1^2cs^2\omega_2^3\omega_3^2 + 18\omega_1\omega_2^3\omega_3v_3^4 - 12\omega_4\omega_1^2cs^2\omega_2^2\omega_3^2v_3^2 -$
$18\omega_4\omega_1^3cs^2\omega_2^3\omega_3 + 28\omega_4\omega_1cs^4\omega_2^3\omega_3 + 60\omega_4\omega_1cs^2\omega_3^2v_1^2\omega_3 + 30\omega_4\omega_1^3cs^2\omega_2^2\omega_3v_3^2 + 12\omega_4\omega_1\omega_2v_1^2\omega_3^2 - 4\omega_4\omega_1\omega_2\omega_3^2 - 6\omega_4\omega_1\omega_2^3\omega_3v_3^2 + \omega_4\omega_1^3\omega_2v_1^4\omega_3^2 +$
$132\omega_4\omega_1^3cs^2\omega_3^2v_3^2 + 36\omega_4\omega_1\omega_2^3\omega_3^2v_3^2 + 4\omega_4\omega_1^3\omega_3^2 + 56\omega_4\omega_1cs^4\omega_2^3\omega_3 + \omega_4\omega_1^2\omega_3^2v_1^2\omega_3 + 48\omega_4\omega_1cs^2\omega_2^3v_1^2\omega_3 + 54\omega_4\omega_1^2cs^2\omega_2^3\omega_3^2v_3 - 18\omega_1^3cs^2\omega_2^3\omega_3 +$
$28\omega_4cs^2\omega_2^3\omega_3^2 + 108\omega_4\omega_2^3v_1^2\omega_3^2v_3^2 - 54\omega_1^2cs^2\omega_2^3\omega_3^2v_3^2 - 12\omega_4\omega_1^3\omega_2\omega_3v_3^4 - 30\omega_4\omega_1^2cs^2\omega_2^3\omega_3^2v_3^2 - 36\omega_4\omega_1^3\omega_2^2\omega_3v_3^2 + 12\omega_4\omega_1^2\omega_2v_1^4\omega_3^2 +$
$216\omega_1cs^2\omega_2^3v_1^2\omega_3^2 + 24\omega_4\omega_1^3\omega_2^3\omega_3^2 - 18\omega_4\omega_1^2\omega_2^3v_3^2 + 18\omega_1^2\omega_2^3\omega_3v_3^2 + 36\omega_4\omega_1^2cs^2\omega_2^3\omega_3^2 + 2\omega_4\omega_1cs^4\omega_2^3\omega_3^2 - 36\omega_4\omega_1^3\omega_2\omega_3v_3^4 + 72\omega_4\omega_1^3v_1^4\omega_3^2v_3^2 +$
$18\omega_1^3\omega_2^3\omega_3v_3^2 + 18\omega_1^3\omega_2^3\omega_3^2v_3^2 - 72\omega_1^2cs^4\omega_2^3\omega_3^2 + 150\omega_4\omega_1cs^2\omega_2^3\omega_3^2v_3^2 - 90\omega_4\omega_1^3cs^2\omega_2^2v_1^2\omega_3 + 9\omega_4\omega_1^3\omega_2^3\omega_3v_3^4 - 216\omega_1^2cs^2\omega_2^3v_1^2\omega_3 -$
$18\omega_4\omega_1^3\omega_2^2v_3^4 + 18\omega_1^3\omega_2^3\omega_3v_3^4 + 12\omega_4\omega_1\omega_2^3v_1^2\omega_3^2 + 12\omega_4\omega_1^3cs^2v_1^2\omega_3^2 + 36\omega_4\omega_1^3cs^2\omega_2^2\omega_3 - 14\omega_4\omega_1^2cs^4\omega_2^3\omega_3 + 9\omega_4\omega_1^2\omega_2^3\omega_3v_3^2 + 8\omega_4\omega_1^2\omega_2^3\omega_3^2 +$
$18\omega_4\omega_1^3cs^4\omega_2^3\omega_3 - 36\omega_4\omega_1^2cs^2\omega_2^2\omega_3^2 - 36\omega_4\omega_1^2\omega_2v_1^2\omega_3^2v_3^2 - 6\omega_4\omega_1cs^2\omega_2^3v_1^2\omega_3^2 + 66\omega_4\omega_1^3\omega_2\omega_2\omega_3^2 - 54\omega_4\omega_1cs^4\omega_2^2v_3^2 + 54\omega_1cs^2\omega_2^3\omega_3^2v_3^2$

$C_{48} = -108\omega_1^3cs^2\omega_2\omega_3 - 50\omega_1^2\omega_2^3\omega_3v_3^2 + 18\omega_1^2\omega_2^2v_1^2\omega_3 + 6\omega_1\omega_2^3 - 75\omega_1^3\omega_2\omega_3v_3^2 + 12\omega_1^2\omega_2^3\omega_3 - 6\omega_1^3\omega_2v_1^2 - 9\omega_1\omega_2^3v_1^2\omega_3 + 60\omega_1\omega_2^3\omega_3v_3^2 + 42\omega_2^3\omega_3 -$
$66cs^2\omega_2^3\omega_3 + 23\omega_1^2\omega_2^3\omega_3 + 48\omega_1^3\omega_2\omega_3v_3 - 18\omega_1^3cs^2\omega_2 + 108\omega_1cs^2\omega_2^3\omega_3 + 12\omega_1^2\omega_2^3v_1^2 + 12\omega_2^3v_1^2\omega_3 + 48\omega_1^3\omega_3v_3^2 - 18\omega_1^2cs^2\omega_2\omega_3 - 18\omega_1cs^2\omega_2^3 -$
$36\omega_1^3\omega_3 + 6\omega_1^2\omega_2\omega_3v_3^2 + 36\omega_1^2cs^2\omega_2^2 - 60\omega_1\omega_2\omega_3 - 12\omega_1\omega_2^2v_1^2\omega_3 + 141\omega_1\omega_2^3\omega_3v_3^2 - 9\omega_1^3\omega_2v_1^2\omega_3 - 23\omega_1^3\omega_2\omega_3 - 66\omega_1^2\omega_2^3\omega_3v_3^2 - 12\omega_1^2\omega_2v_1^2\omega_3 -$
$12\omega_1^2\omega_2^3 - 42\omega_2^2cs^2\omega_2\omega_3 - 12\omega_1\omega_2^3\omega_3 + 84\omega_1^3cs^2\omega_3 - 6\omega_1\omega_2^3v_1^2 + 12\omega_1^3v_1^2\omega_3 + 50\omega_1^3\omega_2\omega_3v_3^2 + 42\omega_1^3cs^2\omega_2^2\omega_3 + 6\omega_1^3\omega_2 - 114\omega_2^3\omega_3v_3^2 + 6\omega_1^2\omega_2\omega_3$

$C_{49} = 64\omega_4^2\omega_1cs^2\omega_3^2\omega_3^2 + 864\omega_4^2\omega_1^2cs^2\omega_2^2\omega_2\omega_3v_3^2 - 16\omega_4^2\omega_1^2\omega_2^2\omega_2\omega_3^2 - 8\omega_4^2\omega_1^3cs^2\omega_2v_2\omega_3\omega_3 - 54\omega_4^2\omega_1^2cs^2\omega_3^2 - 168\omega_4^2\omega_1^3cs^4\omega_2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 -$
$24\omega_4^2\omega_1\omega_2v_2^2\omega_3^2v_3^2 - 432\omega_4^2\omega_1^3cs^2\omega_2\omega_3\omega_3^2 + 144\omega_4^2cs^4\omega_3^2\omega_3^2 - 96\omega_4^2\omega_3^3\omega_3^2cs^2 - 36\omega_4^2\omega_1^3\omega_2\omega_3v_3^4 + 144\omega_4^2\omega_1cs^4\omega_3^2 + 64\omega_4^2\omega_1^2cs^2\omega_2^2v_2^2\omega_3 -$
$216\omega_4^2\omega_1cs^2\omega_2^2\omega_3 - 252\omega_4^2\omega_1cs^4\omega_2^2 - 8\omega_4^2\omega_1^3\omega_2\omega_3 + 24\omega_4^2\omega_1^3cs^2\omega_2^2 + 432\omega_4^2cs^2\omega_2^3\omega_3^2v_3^2 + 80\omega_4^2\omega_1^2cs^2\omega_2\omega_3 + 8\omega_4^2\omega_1\omega_3^2v_2^2\omega_3^2 -$

$$432\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2v_3^2 - 168\omega_4^2\omega_1 cs^4\omega_2^3\omega_3 + 8\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 - 24\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 + 96\omega_4^2\omega_1\omega_2^3\omega_3^2v_3^2 + 8\omega_4^2\omega_2^3\omega_3^2 + 32\omega_4^2 cs^2\omega_2^3v_2^2\omega_3^2 +$$
$$112\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 + 48\omega_4^2\omega_1^3\omega_2^2v_3^4 - 104\omega_4^2 cs^2\omega_2^3\omega_3^2 + 128\omega_4^2\omega_1 cs^2\omega_2^2\omega_3^2 - 56\omega_4^2\omega_1 cs^2\omega_2^2v_2^2\omega_3^2 + 48\omega_4^2\omega_1^3v_2^2\omega_3^2 - 72\omega_4^2\omega_1^2 cs^4\omega_2\omega_3^2 +$$
$$27\omega_4\omega_1^3 cs^2\omega_2^3v_2^2\omega_3^2 - 192\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 + 32\omega_4^2\omega_1^2 cs^2\omega_2^2\omega_3^2 + 56\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 - 27\omega_4\omega_1^3 cs^2\omega_2^3v_2^2\omega_3^2 + 16\omega_4^2\omega_1^2\omega_2^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_2\omega_3^2v_3^4 +$$
$$72\omega_4^2\omega_2^3v_2^2\omega_3^2v_3^2 - 40\omega_4^2\omega_1^3 cs^2\omega_2v_2^2\omega_3^2 - 54\omega_4^3 cs^2\omega_2^3v_2^2\omega_3^2 - 8\omega_4^2\omega_2^3v_2^2\omega_3^2 - 24\omega_4^2\omega_1^3 cs^4\omega_2\omega_3 + 81\omega_4^3\omega_1 cs^4\omega_2^3\omega_3^2 - 72\omega_4^2\omega_1^3 cs^4\omega_2^2 +$$
$$27\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3 + 192\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 - 432\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2v_3^2 + 120\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3^2v_3^2 - 162\omega_4^3 cs^4\omega_2^3\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2\omega_3^2 - 36\omega_4^2\omega_1\omega_2^3\omega_3^2v_3^4 -$$
$$56\omega_4^2\omega_1 cs^2\omega_2^3v_2^2\omega_3 + 10\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 - 84\omega_4^2\omega_1 cs^2\omega_2^3v_2^2 + 8\omega_4^2\omega_1\omega_2^3\omega_3^2 - 96\omega_4^2\omega_1^3\omega_2^3\omega_3^2 + 32\omega_4^2\omega_1^3 cs^2v_2^2\omega_3^2 + 108\omega_4^2\omega_1^2 cs^2\omega_2^3v_2^2\omega_3^2 -$$
$$8\omega_4^2\omega_1^2 cs^2\omega_2\omega_3^2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2v_2^2\omega_3^2 + 96\omega_4^2\omega_1^2\omega_2\omega_3^2\omega_3^2 - 108\omega_4^2 cs^2\omega_2^3\omega_3^2 + 162\omega_4^2\omega_1^3 cs^4\omega_2^3 + 108\omega_4\omega_1^2 cs^2\omega_2^3\omega_3^2 - 24\omega_4^2\omega_1^3 cs^2\omega_2^2v_2^2 +$$
$$108\omega_4^2\omega_1^2 cs^2\omega_2^3v_2^2\omega_3^2 + 324\omega_4^2\omega_1^2 cs^4\omega_2^3\omega_3^2 - 10\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3^2 - 64\omega_4^2\omega_1^2 cs^2\omega_2\omega_3^2 + 10\omega_4^2\omega_1^3 cs^2\omega_2^3v_2^2\omega_3^2 - 104\omega_4^2\omega_1^3 cs^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2\omega_3^2v_3^4 -$$
$$8\omega_4^2\omega_1\omega_2^3\omega_3^2 - 96\omega_4^2\omega_1\omega_2^3v_2^2\omega_3^2v_3^2 - 108\omega_4^2\omega_1^2 cs^2\omega_2^3v_2^2\omega_3^2 + 84\omega_4^2\omega_1^2 cs^2\omega_2^2 - 81\omega_4^3\omega_1^3 cs^4\omega_2^3\omega_3 - 176\omega_4^2\omega_1^2 cs^2\omega_2^2\omega_3^2 - 27\omega_4\omega_1^3 cs^2\omega_2^3\omega_3^2 +$$
$$24\omega_4^2\omega_2^3\omega_3^2v_3^4 + 96\omega_4^2\omega_1^3\omega_2\omega_3^2v_3^2 + 8\omega_4^2\omega_1^2\omega_2v_2^2\omega_3^2 - 60\omega_4^2\omega_1\omega_2^3v_2^2\omega_3^2v_3^2 + 54\omega_4^3 cs^2\omega_2^3\omega_3^2 - 432\omega_4^2\omega_1 cs^2\omega_2\omega_3^2v_3^2 - 60\omega_4^2\omega_1\omega_2^3v_2^2\omega_3^2v_3^2 -$$
$$10\omega_4^2\omega_1 cs^2\omega_2^3v_2^2\omega_3^2 - 30\omega_4^2\omega_1 cs^4\omega_2^3\omega_3^2 + 324\omega_4^2 cs^4\omega_2^3\omega_3^2 - 8\omega_4^2\omega_1\omega_2^3\omega_3^2 - 108\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 + 30\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3^2 + 8\omega_4^2\omega_1 cs^2\omega_2^3v_2^2\omega_3^2 -$$
$$324\omega_4^2\omega_1^2 cs^4\omega_2^3\omega_3 + 96\omega_4^2\omega_1\omega_2\omega_3^2v_3^4 + 54\omega_4^2\omega_1^3 cs^2\omega_2^3v_2^2 - 8\omega_4^2\omega_1^3v_2^2\omega_3^2 + 432\omega_4^2\omega_1^3 cs^2\omega_2^3v_3^2 + 192\omega_4^2\omega_1^2 cs^4\omega_2^3\omega_3$$

$C_{50} = -6\omega_4 cs^2\omega_2\omega_3 - 2\omega_4\omega_1\omega_3 + 9\omega_1\omega_2v_2^2\omega_3 + 6\omega_4\omega_1 cs^2\omega_3 - 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 2\omega_4\omega_1v_2^2\omega_3 + 9\omega_4\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 - 9\omega_4\omega_1\omega_2v_2^2 - 2\omega_4\omega_2v_2^2\omega_3 + 27\omega_1 cs^2\omega_2\omega_3$

$C_{51} = 108\omega_4\omega_1^3 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 - 216\omega_4\omega_1^2 cs^2\omega_5\omega_3^3\omega_2^3v_3^2 - 180\omega_4^2\omega_1\omega_5\omega_3^3v_2^2\omega_3^2v_3^2 + 112\omega_4^2\omega_1^2 cs^4\omega_5\omega_2^3\omega_3 + 8\omega_4^2\omega_5\omega_3^3\omega_3^2 -$
$348\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3^3v_3^2 + 24\omega_4^2\omega_1^2\omega_5\omega_2v_2^2\omega_3^2 + 360\omega_4^2\omega_1^2\omega_5\omega_2^2v_2^2\omega_3^2v_3^2 - 648\omega_4\omega_1 cs^2\omega_5\omega_3^3v_2^2\omega_3^2 - 8\omega_4^2\omega_1\omega_5\omega_2^2\omega_3^2 - 72\omega_4^2\omega_1^3 cs^2\omega_5\omega_3^3\omega_3 -$
$54\omega_4^2\omega_1^3\omega_5\omega_3^3v_3^4 + 132\omega_4^2\omega_1^2 cs^2\omega_5\omega_2v_2^2\omega_3^2 - 36\omega_4\omega_1^3\omega_5\omega_2^2\omega_3^2v_3^2 + 24\omega_4^2\omega_1^3 cs^2\omega_5v_2^2\omega_3^2 + 144\omega_4^2\omega_1^3\omega_5v_2^2\omega_3^2v_3^2 + 48\omega_4^2\omega_1^3 cs^2\omega_5\omega_2v_2^2\omega_3^2 +$
$64\omega_4^2\omega_1^2 cs^2\omega_5\omega_2\omega_3^2 - 24\omega_4^2\omega_1 cs^2\omega_5\omega_3^3\omega_3^2\omega_3^2 + 72\omega_4\omega_1^3 cs^2\omega_5\omega_2^3\omega_3^2 + 12\omega_4^2\omega_1\omega_5\omega_2^3\omega_3v_3^4 - 36\omega_4\omega_1^3\omega_5\omega_2^3\omega_3^2v_3^4 + 162\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3v_3^2 +$
$8\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 + 18\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2v_3^2 - 8\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 - 36\omega_4\omega_1^3\omega_5\omega_2^3\omega_3v_3v_3 + 54\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3v_3v_3^2 - 27\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3v_1^2\omega_3 -$
$4\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3^2 - 180\omega_4^2\omega_1^3\omega_5\omega_2v_2^2\omega_3^2v_3^2 + 9\omega_4\omega_1^3\omega_5\omega_2^3v_1^4\omega_3^2 + 36\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3v_3^2 - 72\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3v_3^2 - 48\omega_4^2\omega_1\omega_5\omega_3^3\omega_3^2v_3^2 +$
$180\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3v_3^2 - 28\omega_4^2\omega_1^2 cs^4\omega_5\omega_2^3\omega_3 + 2\omega_4^2\omega_1^2\omega_5\omega_2^3v_1^2\omega_3 - 88\omega_4^2 cs^2\omega_5\omega_2^3\omega_3^2 + 324\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 + 16\omega_4\omega_1^3 cs^4\omega_5\omega_2\omega_3 -$
$9\omega_4^2\omega_1^3\omega_5\omega_2^3v_3^4\omega_3 + 216\omega_4^2\omega_5\omega_2^3v_2^2\omega_3^2v_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2^3v_2^2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3v_3^4 - 56\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3^2 - 108\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3v_3^2 -$
$288\omega_4^2\omega_1 cs^4\omega_5\omega_3^3\omega_3^2 - 36\omega_4\omega_1\omega_5\omega_3^3\omega_3^3v_3^2 - 28\omega_4^2\omega_1 cs^4\omega_5\omega_2\omega_3^2 - 36\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2v_3^4 + 288\omega_4\omega_4^2\omega_1 cs^2\omega_5\omega_2^3\omega_3^2 +$
$24\omega_4^2\omega_1\omega_5\omega_2^3\omega_3v_3^4 + 36\omega_4\omega_1^3\omega_5\omega_3^3\omega_3v_3^4 - 12\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3v_3^2 - 8\omega_4^2\omega_1\omega_5\omega_2^3\omega_3^2 + 72\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3 - 2\omega_4^2\omega_1^3\omega_5\omega_2^3v_1^2\omega_3 + 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_3\omega_3v_3^2 -$
$216\omega_4^2\omega_1^2 cs^4\omega_5\omega_2^3\omega_3 - 96\omega_4^2\omega_5\omega_2^3\omega_3v_3^4 + 264\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3v_2^2\omega_3 + 162\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3v_2^2\omega_3 - 108\omega_4\omega_1 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 - 108\omega_1^2\omega_5\omega_2^3\omega_3^2v_3^2 -$
$12\omega_4^2\omega_1^3 cs^2\omega_5\omega_2v_2^2\omega_3^2 - 288\omega_4\omega_1\omega_5\omega_2^3v_2^2\omega_3^2v_3^2 + 648\omega_4\omega_1^2 cs^2\omega_5\omega_3^3v_2^2\omega_3^2 - 54\omega_4^3\omega_5\omega_2^3\omega_3v_3^4 - 72\omega_4^2\omega_1^3\omega_5\omega_2\omega_2\omega_3^2v_3^4 + 160\omega_4^2\omega_1 cs^4\omega_5\omega_2^3\omega_3 +$
$54\omega_4\omega_1^3\omega_5\omega_2^3\omega_3^2v_3^2 - 18\omega_4^2\omega_1^3\omega_5\omega_2\omega_2^3\omega_3^2 - 8\omega_4^2\omega_1\omega_5\omega_2\omega_3^2 - 168\omega_4^2\omega_1 cs^2\omega_5\omega_2^3v_2^2\omega_3^2 + 56\omega_4^2\omega_1 cs^4\omega_5\omega_2\omega_3^2 + 48\omega_4^2\omega_1^3\omega_5\omega_3^3v_3^4 -$
$288\omega_4\omega_1 cs^4\omega_5\omega_3^3\omega_3^2 - 36\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2v_3^4 + 264\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3v_3^2 + 144\omega_4\omega_1^2\omega_5\omega_2^3\omega_3^2v_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3v_3^4 + 48\omega_4^2\omega_1 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 +$
$240\omega_4^2 cs^2\omega_5\omega_2^3v_2^2\omega_3^2 + 72\omega_4^2\omega_1^3 cs^4\omega_5\omega_2^3\omega_3 - 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^4 - 9\omega_4\omega_1^3\omega_5\omega_2^3v_1^2\omega_3 - 112\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3 + 24\omega_4^2\omega_5\omega_2^3\omega_3v_3^2 -$
$162\omega_1^3 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_2v_2^2\omega_3^2v_3^2 - 72\omega_4\omega_1^3 cs^4\omega_5\omega_2^3\omega_3^2 - 56\omega_4^2\omega_1^2 cs^4\omega_5\omega_2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_5\omega_2^3 + 16\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^2 +$
$36\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2 - 2\omega_4^2\omega_1^3\omega_5\omega_2^3v_1^4\omega_3 + 36\omega_4\omega_1\omega_5\omega_2^3\omega_3^2 + 72\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3v_3^2 + 108\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3v_2^2\omega_3 + 36\omega_4^2\omega_1^3\omega_5\omega_2^3v_3^2 -$
$108\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3\omega_3v_3^2 + 27\omega_4\omega_1^3 cs^2\omega_5\omega_2^3v_1^2\omega_3^2 + 9\omega_4^2\omega_1^3\omega_5\omega_2^3v_1^2\omega_3 - 36\omega_4\omega_1^2\omega_5\omega_2^3\omega_3v_3^2 + 12\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3v_3^4 - 54\omega_4\omega_1^3\omega_5\omega_2^3\omega_3v_3^2 +$
$18\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3v_3^4 + 4\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2 + 6\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3v_2^2\omega_3^2 - 6\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3v_2^2\omega_3^2 - 96\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3v_3^2 - 84\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3^2v_3^2 -$
$144\omega_4\omega_1^2\omega_5\omega_2^3\omega_3^2v_3^4 + 72\omega_4^2\omega_1^2\omega_5\omega_3^3v_3^2 + 300\omega_4^2\omega_1 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 + 4\omega_4^2\omega_1^3 cs^4\omega_5\omega_2^3\omega_3^2 - 24\omega_4^2\omega_1^2 cs^2\omega_5\omega_2\omega_3^2v_3^2 - 16\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3 +$
$336\omega_4^2\omega_1 cs^2\omega_5\omega_2^3v_2^2\omega_3 - 72\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_2\omega_3^3v_3^4 + 108\omega_4\omega_1^3 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 + 108\omega_1^2\omega_5\omega_2^3\omega_3^2v_3^4 - 108\omega_4\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 +$
$32\omega_4^2\omega_1^3 cs^4\omega_5\omega_3^2 + 152\omega_4 cs^4\omega_5\omega_2^3\omega_3^2 + 54\omega_4^3\omega_5\omega_2^3\omega_3v_3^2 + 132\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^2 - 54\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^2 - 288\omega_4\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2 + 36\omega_4^2\omega_1^3 cs^2\omega_5\omega_2\omega_3 -$
$120\omega_4^2\omega_1 cs^2\omega_5\omega_2^3v_2^2\omega_3^2 - 48\omega_4^2\omega_1^2\omega_5\omega_2v_2^2\omega_3^2 + 36\omega_4\omega_1^3\omega_5\omega_2^3\omega_3^2v_3^4 - 216\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3v_3^2 - 60\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 - 24\omega_4^2\omega_1^3\omega_5v_2^2\omega_3^2 -$
$12\omega_4^2\omega_1\omega_5\omega_2^3\omega_3v_3^2 + 60\omega_4^2\omega_1 cs^2\omega_5\omega_2^3\omega_3^2v_3^2 + 36\omega_4\omega_1^2\omega_5\omega_2^3\omega_3^2v_3^2 + 64\omega_4\omega_1 cs^2\omega_5\omega_2^3\omega_3^2 - 18\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3v_3^4 + 24\omega_4^2\omega_1^3\omega_5\omega_2v_2^2\omega_3^2 -$
$468\omega_4^2 cs^2\omega_5\omega_2^3v_2^2\omega_3^2 - 180\omega_4\omega_1^3 cs^2\omega_5\omega_2^3v_2^2\omega_3 + 216\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3^2 - 72\omega_4^2\omega_1^3 cs^4\omega_5\omega_2^3\omega_3^2 - 96\omega_4^2\omega_1^2 cs^2\omega_5\omega_2v_2^2\omega_3^2 +$
$288\omega_4^2 cs^4\omega_5\omega_3^3\omega_3^2 - 6\omega_4^2\omega_5\omega_2^3v_1^2\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^2 + 6\omega_4^2\omega_1^3\omega_5\omega_2^3v_1^2\omega_3 - 24\omega_4^2\omega_5\omega_2v_2^2\omega_3^2 - 160\omega_4^2\omega_1 cs^2\omega_5\omega_2\omega_3^2 -$
$108\omega_4\omega_1^2 cs^2\omega_5\omega_2^3\omega_3v_3^2 + 108\omega_4\omega_1^2 cs^2\omega_5\omega_2^3\omega_3v_3^2 - 216\omega_4^2 cs^2\omega_5\omega_2^3\omega_3v_3^2 + 36\omega_4\omega_1^3\omega_5\omega_2\omega_3v_3^2 - 54\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^4 + 288\omega_4\omega_1 cs^2\omega_5\omega_2^3\omega_3^2 -$
$6\omega_4^2\omega_1^3 cs^4\omega_5\omega_2^3\omega_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2^3v_2^2\omega_3^2 - 36\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3v_3^2 + 2\omega_4^2\omega_1^3\omega_5\omega_2^3v_1^4\omega_3 - 40\omega_4^2\omega_1^3 cs^2\omega_5\omega_2^3 + 108\omega_4\omega_1\omega_5\omega_2^3\omega_3v_3^4 - 72\omega_4^2\omega_1^2 cs^2\omega_5\omega_2^3\omega_3$

$C_{52} = -24\omega_1^3 cs^2\omega_2\omega_3 + 2\omega_1\omega_2^3 - 13\omega_1^3\omega_2\omega_3v_3^2 - 24\omega_1 cs^2\omega_2^2\omega_3 + 4\omega_1^2v_2^2\omega_3 - 20\omega_1^2\omega_2^2\omega_3 - 4\omega_1\omega_2^2\omega_3v_3^2 - 10\omega_2^3\omega_3 - 2\omega_1^3\omega_2v_2^2 + 26 cs^2\omega_2^3\omega_3 +$
$10\omega_1^3\omega_2\omega_3 + 6\omega_1^2\omega_2^3v_2^2\omega_3 - 6\omega_1^3 cs^2\omega_2 - 24\omega_1 cs^2\omega_2^3\omega_3 + 16\omega_1^3\omega_3v_3^2 - 3\omega_1\omega_2^3v_2^2\omega_3 - 30\omega_1^2 cs^2\omega_2\omega_3 + 4\omega_1^2\omega_2^2v_2^2 - 6\omega_1 cs^2\omega_2^2 - 12\omega_1^3\omega_3 -$
$22\omega_1^2\omega_2\omega_3v_3^2 - 4\omega_1^2\omega_2v_2^2\omega_3 + 12\omega_1^2 cs^2\omega_2^2 + 48\omega_1^2 cs^2\omega_2^3\omega_3 + 10\omega_1\omega_2^3\omega_3 + 4\omega_1^3v_2^2\omega_3 - 13\omega_1\omega_2^3\omega_3v_3^2 + 26\omega_1^2\omega_2^3\omega_3v_3^2 - 4\omega_1^2\omega_2^2 - 4\omega_1\omega_2^2v_2^2\omega_3 +$
$8\omega_1\omega_2^3\omega_3 + 28\omega_1^3 cs^2\omega_3 - 3\omega_1^3\omega_2v_2^2\omega_3 + 2\omega_1^3\omega_2 + 10\omega_2^3\omega_3v_3^2 - 2\omega_1\omega_2^2v_2^2 + 14\omega_1^2\omega_2\omega_3$

$C_{53} = -9\omega_1^3 cs^2\omega_5\omega_2^3v_3^2 - 8\omega_4^2\omega_1^3 cs^4\omega_3^2 - 3\omega_4^2\omega_1^3\omega_5\omega_3^4v_3^4\omega_3 + 16\omega_4^2 cs^4\omega_5\omega_3^2 + 6\omega_4\omega_1^3 cs^2\omega_5\omega_3^3v_3^2 + 3\omega_4^2\omega_1^3\omega_5v_2^2 + 6\omega_4^2\omega_1^2\omega_5\omega_3^3v_2^2 + 6\omega_1^2\omega_5\omega_3^3v_3^4 -$
$6\omega_4\omega_1^2\omega_5\omega_3^3v_3^4 - 6\omega_4^2\omega_1^2\omega_5\omega_3v_3^2 - 6\omega_4\omega_1\omega_5v_2^2\omega_3^2 + 6\omega_2^3\omega_5v_2^2\omega_3^2 + 8\omega_4\omega_1 cs^2\omega_5\omega_3^2 + 8\omega_2^2\omega_1 cs^4\omega_5\omega_3 + 3\omega_4^2\omega_1^3\omega_5\omega_3\omega_3v_3^2 + 3\omega_4\omega_1^3\omega_5\omega_2^3v_3^4 +$
$3\omega_4^2\omega_1^3\omega_5v_2^2 + 6\omega_4^2\omega_1^2 cs^2\omega_5\omega_3v_3^2 + 6\omega_4^2\omega_1^2\omega_5v_3^2 - 3\omega_4^3\omega_5\omega_3v_3^4 - 8\omega_4^2\omega_1 cs^4\omega_5\omega_3^2 - 3\omega_1^3\omega_5v_2^4\omega_3 + 3\omega_4\omega_1^3\omega_5v_2^2\omega_3 - 32\omega_4^2\omega_1 cs^4\omega_3^2 -$
$6\omega_4^2\omega_1^3 cs^2\omega_5v_2^2\omega_3 - 9\omega_4^2 cs^2\omega_5v_2^2\omega_3 + 6\omega_4\omega_1^2 cs^2\omega_5v_2^2\omega_3 + 12\omega_4^2\omega_1 cs^2\omega_5\omega_3v_3^2 + 6\omega_4^2\omega_5v_2^4\omega_3 - 8\omega_4\omega_1 cs^2\omega_5\omega_3 - 8\omega_4\omega_1 cs^4\omega_5\omega_3^2 -$
$2\omega_4\omega_1^3 cs^4\omega_3^2 + 12\omega_4^2\omega_1 cs^2\omega_5v_2^2\omega_3 - 2\omega_4^2\omega_1^3 cs^2\omega_5\omega_3 - 3\omega_4^3\omega_5\omega_3v_3^4 - 3\omega_4\omega_1^3\omega_5\omega_3^2v_3^2 + 6\omega_4\omega_1^2\omega_5v_2^2\omega_3 - 3\omega_4^2\omega_1\omega_5v_3^2 - 18\omega_4^2\omega_1^2 cs^2\omega_5v_2^2 -$
$6\omega_4\omega_1^2\omega_5v_3^4 - 12\omega_4\omega_1 cs^2\omega_5v_2^2\omega_3^2 - 6\omega_4\omega_1\omega_5v_2^2\omega_3^2 + 3\omega_4^3\omega_5\omega_3v_3^2 - 6\omega_4^2\omega_1^2\omega_5\omega_3v_3^2 + 9\omega_4^2\omega_1\omega_5v_3^2 - 8\omega_4\omega_1 cs^2\omega_5\omega_3^2 - 8\omega_4^2\omega_1^2 cs^4\omega_5\omega_3 -$
$6\omega_4\omega_1^2 cs^2\omega_5v_2^2\omega_3 + 32\omega_4^2\omega_1 cs^4\omega_3^2 + 18\omega_4^2\omega_1^2 cs^2\omega_5v_2^2\omega_3 + 3\omega_4^2\omega_1^3\omega_5v_2^2\omega_3 + 6\omega_4^2\omega_1 cs^2\omega_5v_3^2\omega_3 - 6\omega_4\omega_1^2 cs^2\omega_5\omega_3^2 + 2\omega_4^2\omega_1 cs^4\omega_5\omega_3 +$
$2\omega_4\omega_1^3 cs^2\omega_5\omega_3^2 - 6\omega_4^2\omega_5v_2^2\omega_3 + 18\omega_4^2 cs^2\omega_5\omega_3v_3^2 + 8\omega_4^2\omega_1^2 cs^2\omega_5\omega_3 + 8\omega_4\omega_1^2 cs^4\omega_5\omega_3 - 3\omega_4^2\omega_1\omega_5v_3^2 - 6\omega_4^2\omega_1\omega_5v_2^4 - 18\omega_4^2\omega_1^2 cs^2\omega_5v_3^2 -$
$6\omega_4^2\omega_1\omega_5v_3^2 + 3\omega_1^3\omega_5v_2^2\omega_3^2 - 12\omega_4\omega_1 cs^2\omega_5\omega_3v_3^2 - 3\omega_4\omega_1^3\omega_5v_2^2\omega_3^2 + 6\omega_4\omega_1^2\omega_5\omega_3v_3^2 + 9\omega_4^2\omega_1^3 cs^2\omega_5v_2^2 + 6\omega_4^2\omega_1\omega_5\omega_3v_3^4$

$C_{54} = -368\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2 - 412\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2v_3^2 - 92\omega_4^2\omega_1^3\omega_2^3\omega_3^2v_3^2 - 9\omega_4\omega_1^3 cs^2\omega_2^3\omega_3^2v_3^2 - 18\omega_4^2\omega_1^3 cs^2\omega_2^2 - 276\omega_4^2\omega_1^3 cs^4\omega_2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 -$
$78\omega_4^2\omega_1^2\omega_2^3\omega_3^2v_3^4 - 712\omega_4^2\omega_1^3 cs^2\omega_2\omega_3^2v_3^2 + 18\omega_1^3 cs^2\omega_2^3\omega_3^2v_3^2 - 288\omega_4^2 cs^4\omega_2^3\omega_3^2 + 160\omega_4^2\omega_2^3\omega_3^2v_3^2 - 132\omega_4^2\omega_1^3\omega_2\omega_3^2v_3^4 + 144\omega_4^2\omega_1^3 cs^4\omega_2^2 -$
$144\omega_4^2\omega_1 cs^4\omega_3^2 - 108\omega_4^2\omega_1^2 cs^4\omega_2^2 - 24\omega_4\omega_1\omega_2\omega_3^2v_3^2 - 20\omega_4^2\omega_1^3\omega_2\omega_3^2 - 784\omega_4^2 cs^2\omega_2^3\omega_3^2v_3^2 - 88\omega_4^2\omega_1^2 cs^2\omega_2\omega_3^2 - 14\omega_4^2\omega_1^3\omega_2^3\omega_3^2 -$
$6\omega_4\omega_1^3\omega_2^2v_1^2\omega_3^2 - 56\omega_4^2\omega_1 cs^2\omega_2^3\omega_3^2v_3^2 - 168\omega_4^2\omega_1 cs^4\omega_2^3\omega_3 - 16\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 - 36\omega_4^2\omega_1^3 cs^2\omega_2^3\omega_3v_3^2 + 588\omega_4^2\omega_1 cs^4\omega_2^3\omega_3 - 256\omega_4^2\omega_1\omega_2^3\omega_3v_3^2 -$

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$16\omega_4^2\omega_2^3\omega_3^2 + 208\omega_4^2\omega_1^3 cs^2\omega_2\omega_3^2 + 48\omega_4^2\omega_1^3\omega_3^2 v_3^4 + 208\omega_4^2 cs^2\omega_3^3\omega_3^2 + 72\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 v_3^2 - 6\omega_4^2\omega_1^2\omega_2^3 v_1^4\omega_3^2 + 56\omega_4^2\omega_1 cs^2\omega_2^2\omega_3^2 - 56\omega_4^2\omega_1 cs^2\omega_2^3\omega_3 v_3^2 + 72\omega_4^2\omega_1^2 cs^4\omega_2\omega_3^2 + 104\omega_4^2\omega_1^2\omega_2^3\omega_3^2 v_3^2 + 6\omega_4^2\omega_1^3 cs^2\omega_3^3\omega_3^2 v_3^2 + 56\omega_4^2\omega_1 cs^2\omega_2^2\omega_3 - 8\omega_4^2\omega_1^2\omega_2^3\omega_3^2 + 120\omega_4^2\omega_1^2\omega_2\omega_3^2 v_3^4 + 48\omega_4^2\omega_1^3 cs^4\omega_2\omega_3 - 27\omega_4\omega_1^3 cs^4\omega_2^3\omega_3^2 + 9\omega_4^2\omega_1^3 cs^2\omega_3^3\omega_3 + 12\omega_4^2\omega_1^2 cs^4\omega_2^3\omega_3^2 + 1232\omega_4^2\omega_1 cs^2\omega_3^3\omega_3^2 v_3^2 - 9\omega_4^2\omega_1^3 cs^2\omega_3^3\omega_3 v_3^2 + 6\omega_4^2\omega_1^3\omega_2^2 v_1^4\omega_3^2 + 54\omega_4^3 cs^4\omega_2^3\omega_3^2 + 16\omega_4^2\omega_1^2\omega_2\omega_3^2 + 18\omega_4^2\omega_1^3 cs^2\omega_3^3 v_3^2 + 228\omega_4^2\omega_1\omega_3^2\omega_3^2 v_3^4 - 108\omega_4^2\omega_1^3 cs^4\omega_2^3\omega_3 + 184\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 - 56\omega_4^2\omega_1^3\omega_2^3 v_3^2 - 18\omega_4^2\omega_1^2 cs^2\omega_3^3 v_1^2\omega_3^2 - 136\omega_4^2\omega_1^2\omega_2\omega_3 v_3^2 + 36\omega_1^2 cs^2\omega_3^3\omega_3^2 + 54\omega_4^2\omega_1^3 cs^4\omega_3^2 - 36\omega_4\omega_1^2 cs^2\omega_3^3\omega_3^2 + 216\omega_4^2\omega_1^2 cs^4\omega_3^3\omega_3 - 118\omega_4^2\omega_1^3 cs^2\omega_2\omega_3^2 - 40\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 + 18\omega_4^2\omega_1^3 cs^4\omega_3^3\omega_3^2 - 460\omega_4^2\omega_1^2 cs^2\omega_3^3\omega_3^2 v_3^2 - 104\omega_4^2\omega_1^3 cs^2\omega_3^3 - 96\omega_4^2\omega_1^2\omega_2^3\omega_3^2 v_3^4 - 8\omega_4^2\omega_1\omega_2^2\omega_3^3 + 36\omega_4^2\omega_1^2 cs^2\omega_2^3 - 27\omega_4^2\omega_1^3 cs^4\omega_3^3\omega_3 + 52\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3^2 + 14\omega_4^2\omega_1^3\omega_2^3\omega_3 + 9\omega_4\omega_1^3 cs^2\omega_3^3\omega_3^2 - 144\omega_4^2\omega_2^3\omega_3^2 v_3^4 + 152\omega_4^2\omega_1^3\omega_2\omega_3^2 v_3^2 - 18\omega_1^3 cs^2\omega_3^3\omega_3^2 - 36\omega_1^2 cs^2\omega_2^3\omega_3^2 v_3^2 + 448\omega_4^2\omega_1^2 cs^2\omega_2\omega_3^2 v_3^2 + 36\omega_4\omega_1^2 cs^2\omega_3^3\omega_3^2 v_3^2 + 78\omega_4^2\omega_1^3\omega_2^2\omega_3^2 v_3^4 + 394\omega_4^2\omega_1^3 cs^2\omega_2^2\omega_3^2 v_3^2 + 92\omega_4^2\omega_1^2\omega_3^3\omega_3^2 v_3^2 + 36\omega_4\omega_1^3 cs^2\omega_2^2\omega_3 - 342\omega_4^2\omega_1^2 cs^4\omega_3^3\omega_3^2 - 108\omega_1^2 cs^4\omega_3^3\omega_3^2 + 28\omega_4^2\omega_1\omega_3^3\omega_3^2 + 40\omega_4^2\omega_1^2 cs^2\omega_2^3\omega_3 v_3^2 - 72\omega_4^2\omega_1^2 cs^2\omega_3^3\omega_3 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2\omega_3^2 + 108\omega_4\omega_1^2 cs^4\omega_3^3\omega_3^2 + 32\omega_4^2\omega_1\omega_2^3\omega_3^2 v_3^2 + 320\omega_4^2\omega_1^3 cs^2\omega_3^3 v_3^2 + 16\omega_4^2\omega_1^3 cs^2\omega_2\omega_3 v_3^2 + 18\omega_4^2\omega_1^3 cs^2\omega_2^3 v_1^2\omega_3^2 + 6\omega_4^2\omega_1^2\omega_2^3 v_1^2\omega_3^2 + 120\omega_4^2\omega_1^2 cs^4\omega_3^3\omega_3 - 6\omega_4^2\omega_1^3 cs^2\omega_3^3\omega_3^2 - 36\omega_4^2\omega_1^2 cs^2\omega_2^3 v_3^2$

$C_{55} = 6\omega_4 cs^2\omega_2\omega_3 - 8\omega_4\omega_1\omega_3 + 4\omega_4\omega_2\omega_3 v_3^2 + 18\omega_4\omega_1 v_1^2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 - 18\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 - 9\omega_1\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1\omega_2\omega_3 v_3^2 - 27\omega_1 cs^2\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3$

$C_{56} = 138\omega_4\omega_1^3\omega_2^2\omega_3 v_3^4 + 432\omega_4\omega_1 cs^2\omega_2^3\omega_3 v_3^2 + 94\omega_4\omega_1 cs^4\omega_2^3\omega_3 + 36\omega_1 cs^4\omega_2^3\omega_3 + 14\omega_4\omega_1\omega_2^3\omega_3 - 20\omega_4\omega_1^2 cs^2\omega_2^2 + 81\omega_4\omega_1^2\omega_2^3\omega_3 v_3^2 + 42\omega_4\omega_1^3 cs^2\omega_2\omega_3 - \omega_4\omega_1^2\omega_3^3 v_1^4\omega_3 + 108\omega_1 cs^2\omega_3^3\omega_3 v_3^2 + 32\omega_4\omega_1 cs^2\omega_2^2\omega_3 + 24\omega_4\omega_1^3 cs^2\omega_2 v_3^2 + 138\omega_4\omega_1^3\omega_2\omega_3 v_3^2 - 18\omega_4\omega_1^3 cs^4\omega_2^2 + 8\omega_4\omega_1^3 cs^4\omega_2\omega_3 + 18\omega_4\omega_1^2 cs^2\omega_2^3 + 12\omega_4\omega_1\omega_2^3\omega_3 v_3^2 + 144\omega_4\omega_1^3 cs^2\omega_3\omega_3^2 + 7\omega_4\omega_1^3\omega_2^3\omega_3 - 108\omega_1^2 cs^2\omega_2^3\omega_3 v_3^2 + 9\omega_4\omega_1^3 cs^4\omega_2^3 + 96\omega_4\omega_1^3\omega_3\omega_3 v_3^4 - 153\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 v_3^2 + 408\omega_4\omega_1\omega_2^3\omega_3 v_3^4 - 54\omega_4\omega_1 cs^2\omega_3^3\omega_3 + 8\omega_4\omega_1 cs^4\omega_2^3 + 120\omega_4\omega_1^2 cs^2\omega_2\omega_3 v_3^2 - 36\omega_1 cs^2\omega_2^3\omega_3 - 32\omega_4\omega_1^3 cs^4\omega_2\omega_3 - 20\omega_4\omega_1^3 cs^2\omega_3 + 24\omega_4\omega_1 cs^2\omega_2^3 v_3^2 - 4\omega_4\omega_1\omega_2^3\omega_3 + 153\omega_4\omega_1^3 cs^2\omega_2^3\omega_3 v_3^2 - 28\omega_4\omega_1 cs^4\omega_2^2\omega_3 - 16\omega_4\omega_1^2 cs^2\omega_2\omega_3 + 144\omega_4\omega_2^3\omega_3 v_3^2 - 168\omega_4\omega_1^2\omega_2^3\omega_3 v_3^4 - \omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 + 8\omega_4\omega_1^3 cs^4\omega_2 - 96\omega_4\omega_1^2\omega_2\omega_3 v_3^2 + 8\omega_4\omega_1^2\omega_2\omega_3 - 90\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 v_3^2 - 6\omega_4\omega_1^2 cs^2\omega_2^2\omega_3 - 18\omega_4\omega_1^2 cs^4\omega_3^3 - 3\omega_4\omega_1^2 cs^2\omega_2^3 v_1^2\omega_3 + 60\omega_4\omega_1^2 cs^2\omega_2^2 v_3^2 - 36\omega_1^2 cs^4\omega_2^3\omega_3 - 9\omega_4\omega_1^3 cs^2\omega_2^2 - 222\omega_4\omega_1\omega_2^3\omega_3 v_3^2 - 288\omega_4\omega_1^3 cs^2\omega_2\omega_3 v_3^2 - 29\omega_4\omega_1^2 cs^4\omega_3^3\omega_3 - 4\omega_4\omega_1^2\omega_2^3\omega_3 + 192\omega_4\omega_1^2\omega_2\omega_3 v_3^4 + 27\omega_4\omega_1^3 cs^2\omega_2^3 v_3^2 + 17\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 + 20\omega_4\omega_1^2 cs^4\omega_2^2 + 4\omega_4\omega_1^3\omega_2^3 - 60\omega_4\omega_1 cs^2\omega_2^3\omega_3 v_3^2 + \omega_4\omega_1^2\omega_2^3 v_1^2\omega_3 + 40\omega_4 cs^2\omega_2^3\omega_3 - 264\omega_4\omega_2^3\omega_3 v_3^4 - 9\omega_1^3 cs^2\omega_2^3\omega_3 + 84\omega_4\omega_1^2\omega_2^3\omega_3 v_3^2 + 18\omega_4\omega_1^3 cs^2\omega_2^2 - 7\omega_4\omega_1^2\omega_2^3\omega_3 + 10\omega_4\omega_1^2 cs^4\omega_2^3\omega_3 - 54\omega_4\omega_1^2 cs^2\omega_2^3 v_3^2 - 8\omega_4\omega_1^3 cs^2\omega_2 + \omega_4\omega_1^3\omega_2^2 v_1^4\omega_3 - 240\omega_4\omega_1^3\omega_2\omega_3 v_3^4 - 10\omega_4\omega_1^3\omega_2\omega_3 - 81\omega_4\omega_1^3\omega_2^3\omega_3 v_3^2 + 36\omega_1^2 cs^2\omega_2^3\omega_3 + 24\omega_4\omega_1^2 cs^2\omega_2^3\omega_3 - 138\omega_4\omega_1^2\omega_2^3\omega_3 v_3^4 - 60\omega_4\omega_1^3\omega_3 v_3^2 + 3\omega_4\omega_1^3 cs^2\omega_2^2 v_1^2\omega_3 - 8\omega_4\omega_1 cs^2\omega_2^2 - 24\omega_4\omega_1^3 cs^2\omega_2^2\omega_3 + 16\omega_4\omega_1^3 cs^4\omega_3 + 27\omega_1^3 cs^2\omega_2^3\omega_3 v_3^2 - 312\omega_4 cs^2\omega_2^3\omega_3 v_3^2 - 3\omega_4\omega_1^3 cs^4\omega_2^3\omega_3 - 24\omega_4\omega_1\omega_2^2\omega_3 v_3^2 - 8\omega_4\omega_2^3\omega_3 + 9\omega_1^3 cs^4\omega_2^3\omega_3 - 54\omega_4\omega_1^3 cs^2\omega_2^2 v_3^2 - 68\omega_4 cs^4\omega_2^3\omega_3$

$C_{57} = 6\omega_4\omega_3^2 + 6\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_2^2\omega_3 + 18\omega_4^2 cs^2\omega_3 + 12\omega_4^2 - 18\omega_4\omega_1 cs^2\omega_3 + 6v_2^2\omega_3 - 6\omega_3^2 v_3^2 + 6\omega_4^2 v_2^2\omega_3 + 6\omega_4\omega_1 cs^2\omega_2^2 + 12\omega_4\omega_3 v_3^2 - 12\omega_4\omega_3 - 2\omega_4\omega_1\omega_3^2 - 6\omega_4^2 v_3^2 + 18\omega_4^2\omega_1 cs^2 - 6\omega_4^2\omega_3 - 3\omega_1 v_2^2\omega_3^2 - 6\omega_4\omega_1\omega_3 v_3^2 - 18\omega_4 cs^2\omega_3^2 - 6\omega_4^2\omega_1 - 6\omega_4^2\omega_1 cs^2\omega_3 + 3\omega_4^2\omega_1 v_2^2 + 2\omega_4^2\omega_1\omega_3 - 36\omega_4^2 cs^2 + 3\omega_4^2\omega_1 v_3^2 + 36\omega_4 cs^2\omega_3 - 6\omega_4^2 v_2^2 - 6\omega_4 v_2^2\omega_3^2 - 2\omega_4^2\omega_1 v_2^2\omega_3 + 3\omega_1\omega_3^2 v_3^2$

$C_{58} = 6\omega_4 cs^2\omega_2\omega_3 - 8\omega_4\omega_1\omega_3 + 4\omega_4\omega_2\omega_3 v_3^2 + 12\omega_4\omega_1 cs^2\omega_3 + 9\omega_1\omega_2\omega_3 + 2\omega_4\omega_2\omega_3 + 18\omega_4\omega_1 v_2^2\omega_3 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 - 6\omega_4\omega_1\omega_2\omega_3 - 27\omega_4\omega_1 cs^2\omega_2 - 9\omega_1\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1\omega_2\omega_3 v_3^2 - 18\omega_4\omega_2 v_2^2\omega_3 - 27\omega_1 cs^2\omega_2\omega_3 + 18\omega_4\omega_1 cs^2\omega_2\omega_3$

$C_{59} = 6\omega_1 v_3^4 + 9\omega_1\omega_2 v_3^2 + 4 cs^4\omega_2 + 3\omega_1 cs^2\omega_2 + 12\omega_2 v_3^4 + 2\omega_1 cs^4 - 4 cs^2\omega_2 + 48 cs^2\omega_2 v_3^2 - 3\omega_1 cs^4\omega_2 - 12\omega_2 v_3^2 - 2\omega_1 cs^2 + 24\omega_1 cs^2 v_3^2 - 6\omega_1 v_3^2 - 36\omega_1 cs^2\omega_2 v_3^2 - 9\omega_1\omega_2 v_3^4$

$C_{60} = 15\omega_4\omega_1^3\omega_2^2 v_3^2 - 36\omega_4^2\omega_1 cs^2\omega_3^2 v_3^2 - 8\omega_4^2\omega_1^2 cs^2\omega_3^2 + 12\omega_4^2\omega_1 cs^4\omega_3 - 36\omega_4^2\omega_1^3 cs^2\omega_3 v_3^2 - 3\omega_4^2\omega_1^3 cs^4\omega_3^2 + 36\omega_4^2\omega_1^2\omega_3 v_3^4 - 3\omega_4\omega_1^3 cs^2\omega_3^2 + 54\omega_4\omega_1^3 cs^2\omega_3 v_3^2 + 12\omega_4^2\omega_1^2\omega_3^2 v_3^2 + 18\omega_4\omega_1^3\omega_3 v_3^4 + 18\omega_4^2\omega_3^2 v_3^2 + 36\omega_4\omega_1 cs^2\omega_3^2 v_3^2 - 12\omega_4\omega_1^2 cs^4\omega_3^2 + 18\omega_4^2\omega_1^2 v_3^2 - 108\omega_4\omega_1^2 cs^2\omega_3 v_3^2 + 3\omega_4^2\omega_1^3 v_3^4 + 9\omega_1^3\omega_3^2 v_3^4 + 36\omega_4\omega_1^2\omega_3 v_3^2 - 12\omega_4\omega_1 cs^2\omega_3^2 - 48\omega_4^2\omega_1 cs^4\omega_3^2 + 36\omega_4\omega_1^2\omega_3^2 v_3^4 + 3\omega_4^2\omega_1^3 cs^4\omega_3 - 9\omega_4^2\omega_1^3 v_3^2 - 54\omega_4^2\omega_1^2 cs^2 v_3^2 + 72\omega_4^2\omega_1^2 cs^2\omega_3 v_3^2 + 15\omega_4^2\omega_1^3\omega_3 v_3^2 + 12\omega_4^2\omega_1^2 cs^2\omega_3 - 9\omega_4^3\omega_3^2 v_3^2 + 3\omega_4\omega_1^3 cs^4\omega_3^2 - 36\omega_4\omega_1^2\omega_3 v_3^4 + 12\omega_4\omega_1^2 cs^2\omega_3^2 - 3\omega_4^2\omega_1^3\omega_3^2 v_3^2 - 12\omega_4^2\omega_1^2 cs^2\omega_3^2 v_3^2 - 54\omega_4^2\omega_1^2 cs^2\omega_3^2 v_3^2 - 15\omega_4^2\omega_1^3\omega_3 v_3^4 + 24\omega_4^2\omega_1^2 cs^4\omega_3^2 + 72\omega_4\omega_1^2 cs^2\omega_3^2 v_3^2 - 12\omega_4^2\omega_1 cs^2\omega_3 - 36\omega_4\omega_1^2\omega_3^2 v_3^2 + \omega_4^2\omega_1^3 cs^2\omega_3 + 9\omega_4^2\omega_1^3 v_3^4 - 36\omega_4\omega_1^3 cs^2\omega_3^2 v_3^2 + 12\omega_4^2\omega_1 cs^2\omega_3^2 + 24\omega_4 cs^4\omega_3^2 - 3\omega_4^2\omega_1^3 cs^2\omega_3 - 36\omega_4^2\omega_1^2\omega_3 v_3^2 + 27\omega_1^3 cs^2\omega_3^2 v_3^2 - 15\omega_4\omega_1^3\omega_3 v_3^4 + 27\omega_4^2\omega_1^3 cs^2 v_3^2 - 12\omega_4^2\omega_1^2 cs^4\omega_3 + 36\omega_4^2\omega_1 cs^2\omega_3 v_3^2 - 18\omega_4\omega_1^3\omega_3 v_3^2 - 18\omega_1^2\omega_3^2 v_3^4 - 18\omega_4^2\omega_1 v_3^4 + 6\omega_4^2\omega_1^3 cs^2\omega_3^2 v_3^2 + 12\omega_4\omega_1 cs^4\omega_3^2 - 12\omega_4^2\omega_1^2\omega_3^2 v_3^4$

2.7.4   Conservation of momentum: ρv_2

📎 attached text file: `output_d3q27_nse_culbm2_symbolic_pde_02.txt`

$v_2\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_2}{\partial t} + \frac{\delta_l v_1 v_2}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{\delta_l\rho v_2}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l\rho v_1}{\delta_t}\frac{\partial v_2}{\partial x_1} + (cs^2 + v_2^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{2\delta_l\rho v_2}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l v_2 v_3}{\delta_t}\frac{\partial\rho}{\partial x_3} + \frac{\delta_l\rho v_3}{\delta_t}\frac{\partial v_2}{\partial x_3} + \frac{\delta_l\rho v_2}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 + \omega_1)\frac{\delta_l^2 cs^2}{2\omega_1\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_1} +$

$(-12\omega_2 cs^2 - 2\omega_1 + 6\omega_1 cs^2 + 2\omega_2 + 6\omega_1 v_1^2 + 3\omega_1\omega_2 cs^2 - 6\omega_2 v_1^2)\frac{\delta_l^2}{6\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_2} + (\omega_1 - \omega_2)\frac{2\delta_l^2\rho v_1}{\omega_1\omega_2\delta_t}\frac{\partial v_1}{\partial x_1}\frac{\partial v_1}{\partial x_2} +$

$(-\omega_2 cs^2 - \omega_1 + \omega_1 cs^2 + \omega_2 + 3\omega_1 v_1^2 - 3\omega_2 v_1^2)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_1}{\partial x_1} +$

$(8\omega_2 cs^2 - 2\omega_1 - 9\omega_1\omega_2 v_2^2 + 3\omega_1\omega_2 + 4\omega_1 cs^2 - 4\omega_2 - 6\omega_1\omega_2 cs^2 + 6\omega_1 v_2^2 + 12\omega_2 v_2^2)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_2} +$

$(2\omega_1 - 3\omega_1\omega_2 + 4\omega_2)\frac{\delta_l^2\rho v_2}{\omega_1\omega_2\delta_t}\left(\frac{\partial v_2}{\partial x_2}\right)^2 + (-\omega_2 cs^2 - \omega_1 + \omega_1 cs^2 + \omega_2 - 3\omega_2 v_3^2 + 3\omega_1 v_3^2)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_3} +$

$(\omega_1 - \omega_2)\frac{2\delta_l^2\rho v_3}{\omega_1\omega_2\delta_t}\frac{\partial v_3}{\partial x_2}\frac{\partial v_3}{\partial x_3} + (-12\omega_2 cs^2 - 2\omega_1 + 6\omega_1 cs^2 + 2\omega_2 - 6\omega_2 v_3^2 + 3\omega_1\omega_2 cs^2 + 6\omega_1 v_3^2)\frac{\delta_l^2}{6\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_3} +$

$(-2 + \omega_1)\frac{\delta_l^2 cs^2}{2\omega_1\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_2}{\partial x_3} + (-2 + \omega_1)\frac{\delta_l^2 cs^2\rho}{2\omega_1\delta_t}\frac{\partial^2 v_2}{\partial x_1^2} + (-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2)\frac{\delta_l^2 v_1}{3\omega_1\omega_2\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_2} +$

$$(-8\omega_2 cs^2 - 2\omega_1 + 2\omega_1 cs^2 + 2\omega_2 + 6\omega_1 v_1^2 + 3\omega_1\omega_2 cs^2 - 6\omega_2 v_1^2)\frac{\delta_l^2 \rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_1}{\partial x_1 \partial x_2} \; +$$

$$(12\omega_2 cs^2 - 2\omega_1 - 3\omega_1\omega_2 v_2^2 + 3\omega_1\omega_2 + 6\omega_1 cs^2 - 4\omega_2 - 9\omega_1\omega_2 cs^2 + 2\omega_1 v_2^2 + 4\omega_2 v_2^2)\frac{\delta_l^2 v_2}{6\omega_1\omega_2\delta_t}\frac{\partial^2 \rho}{\partial x_2^2} \; +$$

$$(4\omega_2 cs^2 - 2\omega_1 - 9\omega_1\omega_2 v_2^2 + 3\omega_1\omega_2 + 2\omega_1 cs^2 - 4\omega_2 - 3\omega_1\omega_2 cs^2 + 6\omega_1 v_2^2 + 12\omega_2 v_2^2)\frac{\delta_l^2 \rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_2}{\partial x_2^2} \; +$$

$$(-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 + \omega_1 v_3^2)\frac{\delta_l^2 v_3}{3\omega_1\omega_2\delta_t}\frac{\partial^2 \rho}{\partial x_2 \partial x_3} \; +$$

$$(-8\omega_2 cs^2 - 2\omega_1 + 2\omega_1 cs^2 + 2\omega_2 - 6\omega_2 v_3^2 + 3\omega_1\omega_2 cs^2 + 6\omega_1 v_3^2)\frac{\delta_l^2 \rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_3}{\partial x_2 \partial x_3} + (-2+\omega_1)\frac{\delta_l^2 cs^2 \rho}{2\omega_1\delta_t}\frac{\partial^2 v_2}{\partial x_3^2} \; +$$

$$(-1 + 3cs^2 + v_1^2)\frac{\delta_l^3 v_1 v_2}{12\delta_t}\frac{\partial^3 \rho}{\partial x_1^3} + (-1 + cs^2 + 3v_1^2)\frac{\delta_l^3 \rho v_2}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + \; C_1\frac{\delta_l^3 \rho v_1}{12\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_1^3} + \; C_2\frac{\delta_l^3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 \rho}{\partial x_1^2 \partial x_2} \; +$$

$$C_3\frac{\delta_l^3 \rho v_1}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_1}{\partial x_1^2 \partial x_2} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2} + \; C_4\frac{\delta_l^3 v_1 v_2}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 \rho}{\partial x_1 \partial x_2^2} + \; C_5\frac{\delta_l^3 \rho v_2}{12\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + \; C_6\frac{\delta_l^3 \rho v_1}{6\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_1 \partial x_2^2} \; +$$

$$C_7\frac{\delta_l^3}{12\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 \rho}{\partial x_2^3} + \; C_8\frac{\delta_l^3 \rho v_2}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + \; C_9\frac{\delta_l^3 \rho v_3}{4\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_1^2 \partial x_3} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3} + \; C_{10}\frac{\delta_l^3 v_1 v_3}{3\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 \rho}{\partial x_1 \partial x_2 \partial x_3} \; +$$

$$C_{11}\frac{\delta_l^3 \rho v_3}{6\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2 \partial x_3} + \; C_{12}\frac{\delta_l^3 \rho v_1}{6\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_1 \partial x_2 \partial x_3} + \; C_{13}\frac{\delta_l^3 v_2 v_3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 \rho}{\partial x_2^2 \partial x_3} + \; C_{14}\frac{\delta_l^3 \rho v_3}{6\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_2^2 \partial x_3} \; +$$

$$C_{15}\frac{\delta_l^3 \rho v_2}{12\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2} + \; C_{16}\frac{\delta_l^3 \rho v_1}{4\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_3^2} + \; C_{17}\frac{\delta_l^3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 \rho}{\partial x_2 \partial x_3^2} - \frac{\delta_l^3 cs^2 \rho v_2}{6\delta_t}\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2} \; +$$

$$C_{18}\frac{\delta_l^3 \rho v_3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_3}{\partial x_2 \partial x_3^2} + (-1 + 3cs^2 + v_3^2)\frac{\delta_l^3 v_2 v_3}{12\delta_t}\frac{\partial^3 \rho}{\partial x_3^3} + \; C_{19}\frac{\delta_l^3 \rho v_3}{12\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_3^3} + (-1 + cs^2 + 3v_3^2)\frac{\delta_l^3 \rho v_2}{12\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} \; +$$

$$C_{20}\frac{\delta_l^4 v_2}{72\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^4} \; +$$

$$(12\omega_2 cs^2 - 4\omega_1 + 6\omega_1\omega_2 + 6\omega_1 cs^2 - 15\omega_1\omega_2 v_1^2 - 8\omega_2 + 10\omega_1 v_1^2 - 9\omega_1\omega_2 cs^2 + 20\omega_2 v_1^2)\frac{\delta_l^4 \rho v_1 v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} \; +$$

$$C_{21}\frac{\delta_l^4 \rho}{24\omega_4^2\omega_1^3\omega_2^3\delta_t}\frac{\partial^4 v_2}{\partial x_1^4} + \; C_{22}\frac{\delta_l^4 v_1}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} + \; C_{23}\frac{\delta_l^4 \rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + \; C_{24}\frac{\delta_l^4 \rho v_1 v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} \; +$$

$$C_{25}\frac{\delta_l^4 v_2}{36\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} + \; C_{26}\frac{\delta_l^4 \rho v_1 v_2}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + \; C_{27}\frac{\delta_l^4 \rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} + \; C_{28}\frac{\delta_l^4 v_1}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} \; +$$

$$C_{29}\frac{\delta_l^4 \rho}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} + \; C_{30}\frac{\delta_l^4 \rho v_1 v_2}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} + \; C_{31}\frac{\delta_l^4 v_2}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 \rho}{\partial x_2^4} + \; C_{32}\frac{\delta_l^4 \rho}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} \; +$$

$$(-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 + \omega_1 v_3^2)\frac{\delta_l^4 v_1 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^3 \partial x_3} \; +$$

$$(-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 + \omega_1 v_3^2)\frac{\delta_l^4 \rho v_2 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} + \; C_{33}\frac{\delta_l^4 \rho v_1 v_3}{8\omega_4^2\omega_1\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_1^3 \partial x_3} + \; C_{34}\frac{\delta_l^4 \rho v_1 v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} \; +$$

$$+ \; C_{35}\frac{\delta_l^4 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2 \partial x_3} + \; C_{36}\frac{\delta_l^4 \rho v_1 v_3}{6\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2 \partial x_3} + \; C_{37}\frac{\delta_l^4 \rho v_2 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} \; +$$

$$C_{38}\frac{\delta_l^4 \rho}{72\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + \; C_{39}\frac{\delta_l^4 v_1 v_2 v_3}{6\omega_1^3\omega_2^3\delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_2^2 \partial x_3} + \; C_{40}\frac{\delta_l^4 \rho v_2 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} + \; C_{41}\frac{\delta_l^4 \rho v_1 v_3}{6\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1 \partial x_2^2 \partial x_3} \; +$$

$$+ \; C_{42}\frac{\delta_l^4 \rho v_1 v_2}{72\omega_4^2\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} + \; C_{43}\frac{\delta_l^4 v_3}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 \rho}{\partial x_2^3 \partial x_3} + \; C_{44}\frac{\delta_l^4 \rho v_2 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} + \; C_{45}\frac{\delta_l^4 \rho}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} \; +$$

$$(-14\omega_2 cs^2 - 2\omega_1 + 2\omega_1 cs^2 + 2\omega_2 + 3\omega_1 v_1^2 - 3\omega_2 v_3^2 + 6\omega_1\omega_2 cs^2 - 3\omega_2 v_1^2 + 3\omega_1 v_3^2)\frac{\delta_l^4 cs^2 v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} \; +$$

$$(-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2)\frac{\delta_l^4 \rho v_1 v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} + \; C_{46}\frac{\delta_l^4 \rho}{8\omega_4^2\omega_1^3\omega_5\omega_2^3\delta_t}\frac{\partial^4 v_2}{\partial x_1^2 \partial x_3^2} \; +$$

$$(-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 - \omega_2 v_3^2 + \omega_1 v_3^2)\frac{\delta_l^4 \rho v_2 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + \; C_{47}\frac{\delta_l^4 v_1}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2} \; +$$

$$C_{48}\frac{\delta_l^4 \rho}{72\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + \; C_{49}\frac{\delta_l^4 \rho v_1 v_2}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} + \; C_{50}\frac{\delta_l^4 \rho v_1 v_3}{6\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} + \; C_{51}\frac{\delta_l^4 v_2}{36\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} \; +$$

$$+ \; C_{52}\frac{\delta_l^4 \rho}{36\omega_4\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + \; C_{53}\frac{\delta_l^4 \rho v_2 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} \; +$$

$$(-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2)\frac{\delta_l^4 v_1 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} + \; C_{54}\frac{\delta_l^4 \rho v_2 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + \; C_{55}\frac{\delta_l^4 \rho v_1 v_3}{8\omega_4^2\omega_1\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_1 \partial x_3^3} \; +$$

$$+ (-3\omega_2 cs^2 - \omega_1 + 3\omega_1 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2)\frac{\delta_l^4 \rho v_1 v_2}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} + \; C_{56}\frac{\delta_l^4 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 \rho}{\partial x_2 \partial x_3^3} \; +$$

$$C_{57}\frac{\delta_l^4 \rho v_2 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} + \; C_{58}\frac{\delta_l^4 \rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} + \; C_{59}\frac{\delta_l^4 v_2}{72\omega_1\omega_2\delta_t}\frac{\partial^4 \rho}{\partial x_3^4} + \; C_{60}\frac{\delta_l^4 \rho}{24\omega_4^2\omega_1^3\omega_2^3\delta_t}\frac{\partial^4 v_2}{\partial x_3^4} \; +$$

$$(12\omega_2 cs^2 - 15\omega_1\omega_2 v_3^2 - 4\omega_1 + 6\omega_1\omega_2 + 6\omega_1 cs^2 - 8\omega_2 + 20\omega_2 v_3^2 - 9\omega_1\omega_2 cs^2 + 10\omega_1 v_3^2)\frac{\delta_l^4 \rho v_2 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 2\omega_4\omega_1\omega_3 - 6v_1^2\omega_3 - 6\omega_4 v_1^2 - 2\omega_4\omega_1 v_1^2\omega_3 + 6\omega_4 + 9\omega_1 cs^2\omega_3 + 18\omega_4 cs^2\omega_3 - 3\omega_4\omega_1 + 3\omega_4\omega_1 v_1^2 - 6\omega_4\omega_3 - 18cs^2\omega_3 + 9\omega_4\omega_1 cs^2 + 3\omega_1 v_1^2\omega_3 - 6\omega_4\omega_1 cs^2\omega_3 - 3\omega_1\omega_3 + 6\omega_4 v_1^2\omega_3 + 6\omega_3 - 18\omega_4 cs^2$

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$$C_2 = -15\omega_1^2\omega_2 cs^2 v_1^2 - 14\omega_2^2 cs^4 - 18\omega_2^2 cs^2 v_1^2 + 4\omega_2^2 v_1^2 - 2\omega_1\omega_2^2 cs^2 + 3\omega_1\omega_2^2 v_1^4 - \omega_1^2\omega_2^2 cs^4 + 15\omega_1\omega_2^2 cs^2 v_1^2 + 2\omega_1^2 cs^4 - 2\omega_1\omega_2 v_1^2 + 2\omega_1^2\omega_2 cs^2 - 3\omega_1^2\omega_2 v_1^4 - 2\omega_1^2 v_1^2 - 3\omega_1\omega_2^2 v_1^2 + 6\omega_1\omega_2 cs^2 v_1^2 + 14\omega_1\omega_2^2 cs^4 + 12\omega_1^2 cs^2 v_1^2 + 3\omega_1^2\omega_2 v_1^2 + 2\omega_1^2 v_1^4 - 2\omega_1^2 cs^2 + 2\omega_1\omega_2 v_1^4 - 2\omega_1\omega_2^2 cs^4 - 4\omega_2^2 v_1^4 + 2\omega_2^2 cs^2$$

$$C_3 = -5\omega_1\omega_2^2 - 14\omega_2^2 v_1^2 + 9\omega_1\omega_2^2 cs^2 - 2\omega_1\omega_2 + 6\omega_2^2 + 6\omega_1\omega_2 v_1^2 - 9\omega_1^2\omega_2 cs^2 + 8\omega_1^2 v_1^2 + 11\omega_1\omega_2^2 v_1^2 + 2\omega_1\omega_2 cs^2 - 11\omega_1^2\omega_2 v_1^2 + 8\omega_1^2 cs^2 + 5\omega_1^2\omega_2 - 10\omega_2^2 cs^2 - 4\omega_1^2$$

$$C_4 = 2\omega_2^2 v_2^2 - 3\omega_1\omega_2^2 - 4\omega_2^2 v_1^2 - 4\omega_1\omega_2 v_2^2 + 9\omega_1\omega_2^2 cs^2 + 2\omega_1\omega_2 + 2\omega_1^2 v_2^2 + 2\omega_2^2 + 2\omega_1\omega_2 v_1^2 - 9\omega_1^2\omega_2 cs^2 + 2\omega_1^2 v_1^2 + 3\omega_1\omega_2^2 v_1^2 - 6\omega_1\omega_2 cs^2 - 3\omega_1^2\omega_2 v_1^2 + 12\omega_1^2 cs^2 + 3\omega_1^2\omega_2 - 6\omega_2^2 cs^2 - 4\omega_1^2$$

$$C_5 = 12\omega_4\omega_1\omega_2^2 cs^2\omega_3 + 18\omega_4\omega_1^2\omega_2^2 cs^2 - 6\omega_4\omega_1^2\omega_2^2 - 36\omega_1\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1^2\omega_2 v_2^2 - 6\omega_1^2\omega_2^2\omega_3 + 8\omega_4\omega_2^2 v_2^2\omega_3 - 8\omega_4\omega_1\omega_2^2 v_2^2 - 3\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 + 6\omega_1^2\omega_2^2 v_2^2\omega_3 - 8\omega_4\omega_1\omega_2^2\omega_3 + 12\omega_4\omega_1\omega_2 v_1^2\omega_3 - 12\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 24\omega_4\omega_2^2 v_1^2\omega_3 + 16\omega_4\omega_1^2 cs^2\omega_3 + 4\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1^2\omega_2\omega_3 - 2\omega_4\omega_1^2\omega_2 v_2^2\omega_3 + 18\omega_1^2\omega_2^2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2^2 v_1^2\omega_3 - 11\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 + 3\omega_4\omega_1^2\omega_2^2\omega_3 + 4\omega_4\omega_1^2 v_2^2\omega_3 - 4\omega_4\omega_1\omega_2\omega_3 - 24\omega_4\omega_1\omega_2 cs^2 + 4\omega_4\omega_1\omega_2 cs^2\omega_3 - 18\omega_4\omega_1^2\omega_2 v_1^2\omega_3 - 12\omega_1\omega_2^2 v_2^2\omega_3 + 12\omega_1\omega_2^2\omega_3 + 2\omega_4\omega_1\omega_2^2 v_2^2\omega_3 + 8\omega_4\omega_1\omega_2^2 - 12\omega_4\omega_1^2\omega_2 cs^2 + 12\omega_4\omega_1^2 v_1^2\omega_3 + 6\omega_4\omega_1^2\omega_2^2 v_2^2 - 8\omega_4\omega_1^2\omega_3 + 16\omega_4\omega_2^2 cs^2\omega_3$$

$$C_6 = 3\omega_1\omega_2^2 cs^2\omega_3 - 12\omega_1\omega_2 v_2^2\omega_3 - 2\omega_1\omega_2^2 - 4\omega_1^2\omega_3 + 6\omega_1^2 v_2^2\omega_3 + 4\omega_1\omega_2\omega_3 + 6\omega_1\omega_2^2 cs^2 - 3\omega_1^2\omega_2 cs^2\omega_3 - 6\omega_1^2\omega_2 cs^2 + 2\omega_1^2 v_1^2\omega_3 - 4\omega_2^2 cs^2\omega_3 + 2\omega_1\omega_2^2 v_1^2 + \omega_1\omega_2^2 v_1^2\omega_3 + 6\omega_2^2 v_2^2\omega_3 - 2\omega_1^2\omega_2 v_1^2 + 2\omega_1^2\omega_2 - 4\omega_1\omega_2 cs^2\omega_3 - \omega_1^2\omega_2 v_1^2\omega_3 - \omega_1\omega_2^2\omega_3 - 2\omega_2^2 v_1^2\omega_3 + 8\omega_1^2 cs^2\omega_3 + \omega_1^2\omega_2\omega_3$$

$$C_7 = 72\omega_2^2 cs^2 v_2^2 - 16\omega_2^2 v_2^2 + 8\omega_2^2 cs^4 - 48\omega_1^2\omega_2 cs^2 v_2^2 - 16\omega_1\omega_2 v_2^2 + 8\omega_1\omega_2^2 cs^2 + \omega_1^2\omega_2^2 cs^4 - 12\omega_1^2\omega_2 v_2^4 - 4\omega_1^2 v_2^2 + 4\omega_1^2 cs^4 + 4\omega_1^2\omega_2 cs^2 - 7\omega_1^2\omega_2^2 v_2^2 - 24\omega_1\omega_2^2 v_2^4 - 96\omega_1\omega_2^2 cs^2 v_2^2 + 24\omega_1^2 cs^2 v_2^2 - \omega_1^2\omega_2^2 cs^2 + 12\omega_1^2\omega_2 v_2^2 + 4\omega_1^2 v_2^4 + 16\omega_1\omega_2 v_2^2 - 8\omega_1\omega_2^2 cs^4 + 24\omega_1\omega_2^2 v_2^2 - 4\omega_1^2 cs^2 + 48\omega_1\omega_2 cs^2 v_2^2 - 4\omega_1^2\omega_2 cs^4 + 7\omega_1^2\omega_2^2 v_2^4 + 16\omega_2^2 v_2^2 + 24\omega_1^2\omega_2 cs^2 v_2^2 - 8\omega_2^2 cs^2$$

$$C_8 = 28\omega_2^2 v_2^2 + 16\omega_1\omega_2^2 + 24\omega_1\omega_2 v_2^2 - 24\omega_1\omega_2^2 cs^2 - 8\omega_1\omega_2 + 8\omega_1^2 v_2^2 - 12\omega_2^2 - 12\omega_1^2\omega_2 cs^2 + 11\omega_1^2\omega_2^2 v_2^2 + 5\omega_1^2\omega_2^2 cs^2 - 20\omega_1^2\omega_2 v_2^2 - 40\omega_1\omega_2^2 v_2^2 + 8\omega_1\omega_2 cs^2 + 8\omega_1^2 cs^2 + 8\omega_1^2\omega_2 - 4\omega_1^2\omega_2 + 20\omega_2^2 cs^2 - 4\omega_1^2$$

$$C_9 = \omega_4\omega_1 v_3^2 - \omega_1\omega_3 v_3^2 + 2\omega_4 - 3\omega_1 cs^2\omega_3 - \omega_4\omega_1 - 2\omega_4 v_3^2 + 6cs^2\omega_3 + 3\omega_4\omega_1 cs^2 + 2\omega_3 v_3^2 + \omega_1\omega_3 - 2\omega_3 - 6\omega_4 cs^2$$

$$C_{10} = -2\omega_1\omega_2 v_3^2 + \omega_1^2 v_3^2 + \omega_2^2 v_1^2 + 4\omega_1\omega_2 - 2\omega_2^2 - 2\omega_1\omega_2 v_1^2 + \omega_2^2 v_3^2 + \omega_1^2 v_1^2 - 12\omega_1\omega_2 cs^2 + 6\omega_1^2 cs^2 + 6\omega_2^2 cs^2 - 2\omega_1^2$$

$$C_{11} = 3\omega_4\omega_1\omega_2^2 cs^2\omega_3 + 9\omega_4\omega_1^2\omega_2^2 cs^2 - 3\omega_4\omega_1^2\omega_2^2 + 18\omega_1\omega_2^2 cs^2\omega_3 + 3\omega_1^2\omega_2^2\omega_3 + \omega_4\omega_1\omega_2^2\omega_3 v_3^2 + 6\omega_1\omega_2^2\omega_3 v_3^2 - 4\omega_4\omega_1\omega_2 v_3^2 - \omega_4\omega_1\omega_2^2\omega_3 + 2\omega_4\omega_1^2\omega_3 v_3^2 - 12\omega_4\omega_1\omega_2 v_1^2\omega_3 - 3\omega_4\omega_1^2\omega_2 cs^2\omega_3 + 6\omega_4\omega_2^2 v_1^2\omega_3 - 2\omega_4\omega_1^2\omega_2 v_3^2 - \omega_4\omega_1^2\omega_2\omega_3 v_3^2 + 8\omega_4\omega_1^2 cs^2\omega_3 + 2\omega_4\omega_1^2\omega_2 + \omega_4\omega_1^2\omega_2\omega_3 + 3\omega_4\omega_1^2\omega_2^2 v_3^2 - 9\omega_1^2\omega_2 cs^2\omega_3 - 3\omega_2^2\omega_2\omega_3 v_3^2 + 4\omega_4\omega_1\omega_2\omega_3 - 12\omega_4\omega_1\omega_2^2 cs^2 - 4\omega_4\omega_1\omega_2 cs^2\omega_3 - 6\omega_1\omega_2^2\omega_3 - 2\omega_4\omega_2^2\omega_3 v_3^2 + 4\omega_4\omega_1\omega_2^2 - 6\omega_4\omega_1^2\omega_2 cs^2 + 6\omega_4\omega_1^2 v_1^2\omega_3 - 4\omega_4\omega_1^2\omega_3 - 4\omega_4\omega_2^2 cs^2\omega_3$$

$$C_{12} = 3\omega_4\omega_1\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1\omega_2^2 v_1^2 + 9\omega_4\omega_1^2\omega_2^2 cs^2 - 3\omega_4\omega_1^2\omega_2^2 + 18\omega_1\omega_2^2 cs^2\omega_3 - 3\omega_1^2\omega_2 v_1^2\omega_3 + 3\omega_1^2\omega_2^2\omega_3 - 2\omega_4\omega_1^2\omega_2 v_1^2 - \omega_4\omega_1\omega_2^2\omega_3 + 6\omega_4\omega_1^2\omega_3 v_3^2 - 3\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 2\omega_4\omega_2^2 v_1^2\omega_3 + 8\omega_4\omega_1^2 cs^2\omega_3 + 2\omega_4\omega_1^2\omega_2 + \omega_4\omega_1^2\omega_2\omega_3 + 6\omega_1\omega_2^2 v_1^2\omega_3 - 9\omega_1^2\omega_2 cs^2\omega_3 + \omega_4\omega_1\omega_2^2 v_1^2\omega_3 + 4\omega_4\omega_1\omega_2\omega_3 - 12\omega_4\omega_1\omega_2^2 cs^2 + 3\omega_4\omega_1^2 v_1^2 - 4\omega_4\omega_1\omega_2 cs^2\omega_3 - \omega_4\omega_1^2\omega_2 v_1^2\omega_3 - 6\omega_1\omega_2^2\omega_3 + 6\omega_4\omega_2^2\omega_3 v_3^2 + 4\omega_4\omega_1\omega_2^2 - 6\omega_4\omega_1^2\omega_2 cs^2 - 12\omega_4\omega_1\omega_2 v_3^2 + 2\omega_4\omega_1^2 v_1^2\omega_3 - 4\omega_4\omega_1^2\omega_3 - 4\omega_4\omega_2^2 cs^2\omega_3$$

$$C_{13} = 2\omega_2^2 v_2^2 + 2\omega_1\omega_2 v_3^2 - 3\omega_1\omega_2^2 + 2\omega_1^2 v_3^2 - 4\omega_1\omega_2 v_2^2 + 9\omega_1\omega_2^2 cs^2 + 2\omega_1\omega_2 + 2\omega_1^2 v_2^2 + 2\omega_2^2 - 9\omega_1^2\omega_2 cs^2 - 4\omega_2^2 v_3^2 - 6\omega_1\omega_2 cs^2 + 12\omega_1^2 cs^2 + 3\omega_1^2\omega_2 + 3\omega_1\omega_2^2 v_3^2 - 3\omega_1^2\omega_2 v_3^2 - 6\omega_2^2 cs^2 - 4\omega_1^2$$

$$C_{14} = 3\omega_1\omega_2^2 cs^2\omega_3 - 12\omega_1\omega_2 v_2^2\omega_3 - 2\omega_1\omega_2^2 - 4\omega_1^2\omega_3 + 6\omega_1^2 v_2^2\omega_3 + \omega_1\omega_2^2\omega_3 v_3^2 + 4\omega_1\omega_2\omega_3 + 6\omega_1\omega_2^2 cs^2 - 2\omega_2^2\omega_3 v_3^2 - 3\omega_1^2\omega_2 cs^2\omega_3 - 6\omega_1^2\omega_2 cs^2 - 4\omega_2^2 cs^2\omega_3 - \omega_1^2\omega_2\omega_3 v_3^2 + 6\omega_2^2 v_2^2\omega_3 + 2\omega_1^2\omega_2 - 4\omega_1\omega_2 cs^2\omega_3 + 2\omega_1\omega_2^2 v_3^2 + 2\omega_1^2 v_3^2\omega_3 - \omega_1\omega_2^2\omega_3 - 2\omega_1^2\omega_2 v_3^2 + 8\omega_1^2 cs^2\omega_3 + \omega_1^2\omega_2\omega_3$$

$$C_{15} = 12\omega_4\omega_1\omega_2^2 cs^2\omega_3 + 18\omega_4\omega_1^2\omega_2^2 cs^2 - 6\omega_4\omega_1^2\omega_2^2 - 36\omega_1\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1^2\omega_2 v_2^2 - 6\omega_1^2\omega_2^2\omega_3 + 18\omega_4\omega_1\omega_2^2\omega_3 v_3^2 + 8\omega_4\omega_2^2 v_2^2\omega_3 - 8\omega_4\omega_1\omega_2^2 v_2^2 - 3\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 + 6\omega_1^2\omega_2^2 v_2^2\omega_3 - 8\omega_4\omega_1\omega_2^2\omega_3 + 12\omega_4\omega_1^2\omega_3 v_3^2 - 12\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 18\omega_4\omega_1\omega_2\omega_3 v_3^2 + 16\omega_4\omega_1^2 cs^2\omega_3 + 4\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1^2\omega_2\omega_3 - 2\omega_4\omega_1^2\omega_2 v_2^2\omega_3 + 18\omega_1^2\omega_2^2 cs^2\omega_3 - 11\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 + 3\omega_4\omega_1^2\omega_2^2\omega_3 + 4\omega_4\omega_1^2 v_2^2\omega_3 - 4\omega_4\omega_1\omega_2\omega_3 - 24\omega_4\omega_1\omega_2 cs^2 + 4\omega_4\omega_1\omega_2 cs^2\omega_3 - 12\omega_1\omega_2^2 v_2^2\omega_3 + 12\omega_1\omega_2^2\omega_3 + 2\omega_4\omega_1\omega_2^2 v_2^2\omega_3 - 24\omega_4\omega_2^2\omega_3 v_3^2 + 8\omega_4\omega_1\omega_2^2 - 12\omega_4\omega_1^2\omega_2 cs^2 + 12\omega_4\omega_1\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1^2\omega_2^2 v_2^2 - 8\omega_4\omega_1^2\omega_3 + 16\omega_4\omega_2^2 cs^2\omega_3$$

$$C_{16} = 2v_1^2\omega_3 - 2\omega_4 v_1^2 + 2\omega_4 - 3\omega_1 cs^2\omega_3 - \omega_4\omega_1 + \omega_4\omega_1 v_1^2 + 6cs^2\omega_3 + 3\omega_4\omega_1 cs^2 - \omega_1 v_1^2\omega_3 + \omega_1\omega_3 - 2\omega_3 - 6\omega_4 cs^2$$

$$C_{17} = 3\omega_1\omega_2^2 v_3^4 + 15\omega_1\omega_2^2 cs^2 v_3^2 - 2\omega_1\omega_2 v_3^2 - 14\omega_2^2 cs^4 - 2\omega_2^2 v_3^2 - 3\omega_1^2\omega_2 v_3^4 - 15\omega_1^2\omega_2 cs^2 v_3^2 - 2\omega_1\omega_2 cs^2 - \omega_1^2\omega_2^2 cs^4 + 2\omega_1^2 cs^4 + 2\omega_1^2\omega_2 cs^2 - 18\omega_2^2 cs^2 v_3^2 + 4\omega_2^2 v_3^2 + 14\omega_1\omega_2^2 cs^4 - 4\omega_2^2 v_3^4 - 2\omega_1^2 cs^2 - 2\omega_1^2\omega_2 cs^4 - 3\omega_1\omega_2^2 v_3^2 + 6\omega_1\omega_2 cs^2 v_3^2 + 12\omega_1^2 cs^2 v_3^2 + 2\omega_1^2 v_3^4 + 3\omega_1^2\omega_2 v_3^2 + 2\omega_1\omega_2 v_3^4 + 2\omega_2^2 cs^2$$

$$C_{18} = 6\omega_1\omega_2 v_3^2 - 5\omega_1\omega_2^2 + 8\omega_1^2 v_3^2 + 9\omega_1\omega_2^2 cs^2 - 2\omega_1\omega_2 + 6\omega_2^2 - 9\omega_1^2\omega_2 cs^2 - 14\omega_2^2 v_3^2 + 2\omega_1\omega_2 cs^2 + 8\omega_1^2 cs^2 + 5\omega_1^2\omega_2 + 11\omega_1\omega_2^2 v_3^2 - 11\omega_1^2\omega_2 v_3^2 - 10\omega_2^2 cs^2 - 4\omega_1^2$$

$$C_{19} = 2\omega_4\omega_1\omega_3 + 3\omega_4\omega_1 v_3^2 + 3\omega_1\omega_3 v_3^2 + 6\omega_4 + 9\omega_1 cs^2\omega_3 + 18\omega_4 cs^2\omega_3 - 3\omega_4\omega_1 - 6\omega_4 v_3^2 + 6\omega_4\omega_3 v_3^2 - 6\omega_4\omega_3 - 18 cs^2\omega_3 + 9\omega_4\omega_1 cs^2 - 2\omega_4\omega_1\omega_3 v_3^2 - 6\omega_3 v_3^2 - 6\omega_4\omega_1 cs^2\omega_3 - 3\omega_1\omega_3 + 6\omega_3 - 18\omega_4 cs^2$$

$$C_{20} = 12\omega_2 v_1^4 - 4\omega_2 cs^2 + 6\omega_1 v_1^4 - 2\omega_1 cs^2 + 9\omega_1\omega_2 v_1^2 + 24\omega_1 cs^2 v_1^2 - 3\omega_1\omega_2 cs^4 + 2\omega_1 cs^4 - 36\omega_1\omega_2 cs^2 v_1^2 - 6\omega_1 v_1^2 + 3\omega_1\omega_2 cs^2 - 9\omega_1\omega_2 v_1^4 + 4\omega_2 cs^4 - 12\omega_2 v_1^2 + 48\omega_2 cs^2 v_1^2$$

$$C_{21} = 12\omega_4^2\omega_1 v_1^2\omega_3^2 + 12\omega_4\omega_1 cs^2\omega_3^2 - 36\omega_4^2\omega_1 cs^2 v_1^2\omega_3^2 + 27\omega_4^2\omega_1^3 cs^2 v_1^2 + 9\omega_1^3 v_1^4\omega_3^2 + 3\omega_4^2\omega_1^3 v_1^2\omega_3^2 + 3\omega_4\omega_1^3 cs^4\omega_3^2 + 18\omega_1^2 v_1^2\omega_3^2 - 12\omega_4^2\omega_1 cs^2\omega_3 - 9\omega_4^2\omega_1^3 v_1^2 + \omega_4^2\omega_1^3 cs^2\omega_3^2 + 15\omega_4\omega_1^3 v_1^2\omega_3^2 + 36\omega_4\omega_1 cs^2 v_1^2\omega_3^2 + 24\omega_4^2\omega_1^2 cs^4\omega_3^2 + 36\omega_4^2\omega_1 v_1^4\omega_3^2 - 36\omega_4^2\omega_1 v_1^4\omega_3 - 12\omega_4^2\omega_1 cs^4\omega_3 + 12\omega_4^2\omega_1 cs^2\omega_3^2 - 18\omega_4^3 v_1^2\omega_3 - 3\omega_4^2\omega_1^3 cs^2\omega_3 + 24\omega_4^2 cs^4\omega_3 - 15\omega_4^2\omega_1^3 v_1^4\omega_3 + 12\omega_4\omega_1 cs^4\omega_3^2 + 18\omega_4^2\omega_1^2 v_1^2 + 36\omega_4^2\omega_1 cs^2 v_1^2\omega_3 - 36\omega_4^2\omega_1 v_1^2\omega_3 + 12\omega_4^2\omega_1 cs^4\omega_3 - 36\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 - 3\omega_4^2\omega_1^3 cs^4\omega_3 - 15\omega_4^2\omega_1^3 v_1^4\omega_3 - 8\omega_4^2\omega_1^2 cs^2\omega_3^2 - 12\omega_4^2\omega_1^2 cs^2 v_1^2\omega_3 - 36\omega_4^2\omega_1^2 v_1^2\omega_3 - 18\omega_4^2\omega_1^2 v_1^4 -$$

$$12\omega_1^2\omega_1^2 v_1^4\omega_3^2 - 12\omega_4\omega_1^2 cs^4\omega_3^2 - 54\omega_1^2 cs^2 v_1^2\omega_3^2 - 9\omega_1^3 v_1^2\omega_3^2 + 72\omega_4\omega_1^2 cs^2 v_1^2\omega_3^2 + 54\omega_4\omega_1^3 cs^2 v_1^2\omega_3 - 3\omega_4^2\omega_1^3 v_1^2\omega_3^2 - 3\omega_4^4\omega_1^3 cs^2\omega_3^2 - 18\omega_1^2 v_1^4\omega_3^2 -$$
$$54\omega_4^2\omega_1^2 cs^2 v_1^2 + 15\omega_4^2\omega_1^3 v_1^2\omega_3 - 36\omega_4\omega_1^3 cs^2 v_1^2\omega_3^2 + 27\omega_1^3 cs^2 v_1^2\omega_3^2 - 12\omega_4\omega_1 cs^2\omega_3^2 + 36\omega_4^2\omega_1^2 v_1^4\omega_3 - 108\omega_4\omega_1^2 cs^2 v_1^2\omega_3 + 36\omega_4\omega_1^2 v_1^2\omega_3 +$$
$$72\omega_4^2\omega_1^2 cs^2 v_1^2\omega_3 + 12\omega_4^2\omega_1^2 cs^2\omega_3 + 6\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3^2 - 48\omega_4^2\omega_1 cs^4\omega_3^2 + 9\omega_4^2\omega_1^3 v_1^4 + 18\omega_4\omega_1^3 v_1^4\omega_3 + 3\omega_4^2\omega_1^3 cs^4\omega_3$$

$C_{22} = -6\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_2^2 + 72\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 - 288\omega_4^3\omega_2^3 cs^4\omega_3^2 - 16\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 36\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3^2 + 120\omega_4^2\omega_1^4\omega_2^2 cs^4\omega_3 + 8\omega_4^2\omega_1^3\omega_3^2 -$
$6\omega_4^2\omega_1^3\omega_2^3 v_1^4\omega_3^2 + 36\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3^2 + 48\omega_4^2\omega_1^3 v_1^4\omega_3^2 + 144\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3 - 88\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 - 108\omega_4^2\omega_1^2\omega_3^2 cs^4 - 412\omega_4^2\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3^2 -$
$72\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 168\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 - 20\omega_4^2\omega_1^3\omega_2\omega_3^2 + 18\omega_4^2\omega_1^3\omega_3^2 cs^2 v_1^2 + 120\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3^2 + 16\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3 - 14\omega_4^2\omega_1^2\omega_2^3\omega_3^2 -$
$56\omega_4^2\omega_1\omega_2^2 cs^2 v_1^2\omega_3^2 - 104\omega_4^2\omega_1^3 cs^2\omega_3^2 - 92\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3^2 - 56\omega_4^2\omega_1\omega_3^2 cs^2 v_1^2\omega_3 + 9\omega_4\omega_3^2\omega_2^2 cs^2\omega_3^2 - 18\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3^2 - 18\omega_1^3\omega_2^2 cs^2\omega_3^2 +$
$160\omega_4^2\omega_3^3 v_1^2\omega_3^2 - 132\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3^2 + 104\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3^2 + 1232\omega_4^3\omega_1\omega_2^3 cs^2 v_1^2\omega_3 + 56\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2^3 cs^2 v_1^2 - 16\omega_4^2\omega_1^3\omega_3^2 +$
$36\omega_1^2\omega_3^2 cs^2\omega_3^2 - 78\omega_4^2\omega_1\omega_3^2 v_1^4\omega_3^2 + 588\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 - 36\omega_4\omega_1\omega_3^2 cs^2\omega_3^2 - 712\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3^2 - 108\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 - 6\omega_4^2\omega_1^3\omega_2 v_2^2\omega_2^2 +$
$184\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3^2 - 256\omega_4^2\omega_1\omega_3^2 v_1^2\omega_3^2 + 40\omega_4^2\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 - 18\omega_4^2\omega_1^3\omega_3^2 cs^2 - 460\omega_4^2\omega_1^2\omega_3 cs^2 v_1^2\omega_3^2 + 9\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 8\omega_4^2\omega_1^2\omega_2^3\omega_3^2 +$
$12\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 - 24\omega_4\omega_1\omega_2^2 v_1^4\omega_3^2 + 208\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 + 18\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 + 448\omega_4^2\omega_1\omega_2 cs^2 v_1^2\omega_3^2 + 56\omega_4\omega_1\omega_3^2 cs^2\omega_3 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2 +$
$78\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3^2 - 136\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 - 27\omega_4\omega_1^3\omega_2^2 cs^4\omega_3^2 + 16\omega_4^2\omega_1^2\omega_2\omega_3^2 - 144\omega_4^2\omega_3^3 v_1^4\omega_3^2 + 54\omega_1^3\omega_2^3 cs^4\omega_3^2 + 54\omega_4^2\omega_1^3\omega_3 cs^4 + 18\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3 +$
$208\omega_4^2\omega_2^2 cs^2\omega_3^2 - 40\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 + 6\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2 + 48\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 6\omega_4^2\omega_1^3\omega_3^2 v_2^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 -$
$56\omega_4^2\omega_1^3 v_1^2\omega_3^2 - 118\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 - 8\omega_4^2\omega_1\omega_2^2\omega_3^2 + 216\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3 + 14\omega_4^2\omega_1^3\omega_2^2\omega_3^2 + 36\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 + 36\omega_4^2\omega_1^2\omega_3^2 cs^2 +$
$394\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3^2 + 6\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3^2 - 342\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3^2 + 228\omega_4^2\omega_1\omega_3^2 v_1^4\omega_3^2 - 9\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3^2 - 27\omega_4^2\omega_1^3\omega_3^3 cs^4\omega_3 + 18\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 -$
$9\omega_4^2\omega_1^3\omega_3^3 cs^2 v_1^2\omega_3 - 276\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 52\omega_4^2\omega_1^2 v_1^2 cs^2\omega_3^2 + 32\omega_4^2\omega_1\omega_2^3 v_1^2\omega_3^2 - 96\omega_4^2\omega_1^2\omega_2^2 v_1^4\omega_3^2 - 144\omega_4^2\omega_1\omega_3 cs^4\omega_3^2 + 28\omega_4^2\omega_1\omega_2^3\omega_3^2 -$
$784\omega_4^2\omega_2^3 cs^2 v_1^2\omega_3^2 + 152\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 - 108\omega_1^2\omega_2^2 cs^4\omega_3^2 + 92\omega_4^2\omega_1^2\omega_2^3 v_1^2\omega_3^2 - 368\omega_4^2\omega_1\omega_3^2 cs^2\omega_3^2 + 320\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3^2 + 108\omega_4\omega_1^2\omega_3^2 cs^4\omega_3$

$C_{23} = -240\omega_4\omega_1^3\omega_2 v_1^4\omega_3 + 32\omega_4\omega_1\omega_2^2 cs^2\omega_3 + 84\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3 - 20\omega_4\omega_1^2\omega_2^2 cs^2 + 14\omega_4\omega_1\omega_2\omega_3 - 90\omega_4\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 + 94\omega_4\omega_1\omega_3^2 cs^4\omega_3 +$
$27\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2 - 138\omega_4\omega_1^2\omega_3^3 v_1^4\omega_3 + 36\omega_1\omega_3^2 cs^4\omega_3 - 3\omega_4\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 + 36\omega_4^3\omega_3^2 cs^2\omega_3 - \omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 + 7\omega_4\omega_1^3\omega_2^2\omega_3 - 222\omega_4\omega_1\omega_3^2 v_1^2\omega_3 +$
$24\omega_4\omega_1^2\omega_3^2 cs^2\omega_3 - 60\omega_4\omega_1\omega_2^2 cs^2 v_1^2\omega_3 + 9\omega_4\omega_1^3\omega_2^2 cs^4 - 24\omega_4\omega_1\omega_2^2 v_1^4\omega_3 + 10\omega_4\omega_1^2\omega_2^2 cs^4\omega_3 + 42\omega_4\omega_1^3\omega_2\omega_2 cs^2\omega_3 + 8\omega_4\omega_1\omega_3^2 cs^4 +$
$108\omega_1\omega_2^2 cs^2 v_1^2\omega_3 - 288\omega_4^3\omega_2\omega_3 cs^2 v_1^2\omega_3 - 9\omega_1^3\omega_2^3 cs^2\omega_3 + 40\omega_4\omega_2^3 cs^2\omega_3 - \omega_4\omega_1^2\omega_2^2 v_2^4\omega_3 - 4\omega_4\omega_1\omega_2^2\omega_3 - 8\omega_4\omega_1^3\omega_2 cs^2 + 17\omega_4\omega_1^3\omega_2^2 cs^4\omega_3 +$
$432\omega_4\omega_1\omega_2^3 cs^2 v_1^2\omega_3 - 16\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 60\omega_4\omega_3^3 v_1^2\omega_3 + 18\omega_4\omega_1^2\omega_3^2 cs^2 - 18\omega_4\omega_1^3\omega_2 cs^4 + 16\omega_4\omega_1^3 cs^4\omega_3 - 153\omega_4\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 +$
$24\omega_4\omega_1^3\omega_2 cs^2 v_1^2 + 192\omega_4\omega_1^2\omega_2 v_1^4\omega_3 - 81\omega_4\omega_1^2\omega_3^2 v_1^4\omega_3 + 8\omega_4\omega_1^3\omega_2 cs^2\omega_3 - 264\omega_4\omega_1^3 v_1^2\omega_3 - 108\omega_4^3\omega_2^2 cs^2 v_1^2\omega_3 - 54\omega_4\omega_1^2\omega_3^2 cs^2 v_1^2 - 36\omega_1^2\omega_3^2 cs^4\omega_3 +$
$8\omega_4\omega_1^3\omega_2 cs^4 + \omega_4\omega_1^3\omega_2^2 v_2^4\omega_3 - 18\omega_4\omega_1^2\omega_3^2 cs^4 + 408\omega_4\omega_1\omega_3^3 v_1^4\omega_3 - 29\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 8\omega_4\omega_1\omega_3^2 cs^2 + 120\omega_4\omega_1\omega_2^2 cs^2 v_1^2\omega_3 +$
$3\omega_4\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 32\omega_4\omega_1^3\omega_2 cs^4\omega_3 + 12\omega_4\omega_1\omega_2^2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1^2\omega_2^3\omega_3 - 28\omega_4\omega_1\omega_2^2 cs^4\omega_3 - 168\omega_4\omega_1^2\omega_2^2 v_1^4\omega_3 +$
$27\omega_1^3\omega_2^3 cs^2 v_1^2\omega_3 - 54\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2 + 138\omega_4\omega_1^3\omega_2 v_1^2\omega_3 - 312\omega_4\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 + 4\omega_4\omega_1^3\omega_2^3 + 18\omega_4\omega_1^3\omega_2^2 cs^2 + 144\omega_4\omega_1^3 cs^2 v_1^2\omega_3 -$
$54\omega_4\omega_1\omega_3^2 cs^2\omega_3 + 81\omega_4\omega_1^2\omega_3^2 v_1^2\omega_3 - 36\omega_1\omega_3^2 cs^2\omega_3 - 7\omega_4\omega_1^2\omega_2^3\omega_3 - 20\omega_4\omega_1^3 cs^2\omega_3 + 60\omega_4\omega_1^2\omega_2^2 cs^2 v_1^2 + 138\omega_4\omega_1^3\omega_2^2 v_1^4\omega_3 - 96\omega_4\omega_1^2\omega_2 v_1^2\omega_3 -$
$10\omega_4\omega_1^3\omega_2\omega_3 + 153\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 + 20\omega_4\omega_1^2\omega_2^2 cs^4 + 144\omega_4\omega_3^3 v_1^2\omega_3 - 3\omega_4\omega_1^3\omega_2 cs^4\omega_3 + 24\omega_4\omega_1\omega_3^2 cs^2 v_1^2 - 9\omega_4\omega_1^3\omega_2 cs^2 + 9\omega_1^3\omega_2 cs^4\omega_3 -$
$68\omega_4\omega_3^2 cs^4\omega_3 + \omega_4\omega_1^2\omega_2^3 v_2^2\omega_3 - 8\omega_4\omega_3^2\omega_3 + 8\omega_4\omega_1^2\omega_2 cs^4\omega_3 - 24\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 + 96\omega_4\omega_1^3 v_1^4\omega_3$

$C_{24} = -8\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 9\omega_1\omega_2\omega_3 + 6\omega_4\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4\omega_1\omega_2 v_1^2\omega_3 - 9\omega_1\omega_2 v_1^2\omega_3 + 18\omega_4\omega_1 v_1^2\omega_3 +$
$9\omega_4\omega_2 + 4\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2 - 18\omega_4\omega_2 v_2^2\omega_3$

$C_{25} = -3\omega_4^2\omega_1^3\omega_3 cs^2\omega_3^2 + 4\omega_4^2\omega_1\omega_2^3 cs^2 v_2^2\omega_3 - 8\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 + 18\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2 + 4\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 96\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 + 4\omega_4^2\omega_1^3\omega_3^2 +$
$24\omega_4^2\omega_1^3 v_1^4\omega_3 + 35\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 4\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^2 cs^4 - 20\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 - 36\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 84\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 -$
$4\omega_4^2\omega_1^3\omega_2\omega_3^2 + 32\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3 - 30\omega_4^2\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 + 4\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3 + 12\omega_4^2\omega_1\omega_2^3 cs^2 - 52\omega_4^2\omega_3^3 cs^2\omega_3 - 27\omega_4^2\omega_1^3 v_2^2 v_1^2\omega_3 +$
$9\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 - 30\omega_4^2\omega_1\omega_2^3 v_1^2 v_2^2\omega_3 - 32\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 - 18\omega_1^3\omega_2^2 cs^2\omega_3 + 24\omega_4^2\omega_1^3 v_2^2\omega_3 - 36\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3 - 24\omega_4^2\omega_1^2\omega_3^3 v_1^2\omega_3 +$
$324\omega_4^2\omega_1\omega_3^2 cs^2 v_1^2\omega_3 + 28\omega_4^2\omega_1\omega_2^2 cs^2\omega_3 + 36\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 + 4\omega_4^2\omega_3^3\omega_3 - 36\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 + 36\omega_4^2\omega_3^2 cs^2\omega_3 + 36\omega_4\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 -$
$27\omega_4^2\omega_1^2\omega_3^2 v_1^4\omega_3 + 78\omega_4\omega_1\omega_3^2 cs^4\omega_3 - 48\omega_4\omega_1\omega_2^2 v_1^2 v_2^2\omega_3 + 16\omega_4^2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 - 36\omega_4\omega_1^2\omega_3^2 cs^2\omega_3 - 324\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3 -$
$28\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 - 4\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 + 60\omega_4^2\omega_1^2\omega_2^2 v_1^2 v_2^2\omega_3 - 24\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2 + 49\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 42\omega_4^2\omega_1\omega_3^2 v_1^2\omega_3 - 18\omega_4^2\omega_1^3\omega_3^2 cs^2 -$
$138\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 + 9\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3 + 8\omega_4^2\omega_1^2\omega_2^2\omega_3 - 28\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 + 24\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 + 36\omega_4\omega_1\omega_2^2 v_1^4\omega_3 - 4\omega_4^2\omega_3^3 v_2^2\omega_3 +$
$74\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 8\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 + 24\omega_4^2\omega_1^3 v_1^2 v_2^2\omega_3 + 28\omega_4^2\omega_1\omega_2 cs^2\omega_3 - 9\omega_4\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 + 72\omega_4^2\omega_1 cs^4\omega_3 + 27\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3 +$
$12\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 - 27\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 4\omega_4^2\omega_1^2\omega_2\omega_3 + 36\omega_4^2\omega_3^3 v_1^2\omega_3 + 18\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 + 4\omega_4^2\omega_1\omega_2 v_2^2\omega_3 - 9\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 - 60\omega_4^2\omega_2^3 v_1^4\omega_3 +$
$54\omega_4^3\omega_3^2 cs^4\omega_2 + 54\omega_4^2\omega_1^3\omega_3^2 cs^4 + 15\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 16\omega_4^2\omega_3^3 cs^2 v_2^2\omega_3 + 4\omega_4^3\omega_1\omega_2 v_2^2\omega_3 + 20\omega_4^2\omega_3^3 cs^2\omega_3 - 32\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 - 12\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 -$
$12\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2 + 16\omega_4^2\omega_1^3 cs^4 cs^2 v_2^2\omega_3 - 48\omega_4^2\omega_1^3 v_1^2\omega_3 - 25\omega_4^2\omega_1^3 cs^2 cs^2\omega_3 - 4\omega_4^2\omega_1\omega_2 cs^2\omega_3 + 108\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3 - 4\omega_4^2\omega_1^2\omega_3 cs^2 v_2^2\omega_3 + 24\omega_4^2\omega_1^3\omega_2 cs^2 +$
$138\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 + 4\omega_4^2\omega_1\omega_2\omega_2 v_2^2\omega_3 - 119\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3 + 72\omega_4^2\omega_1\omega_3^3 v_1^4\omega_3 - 27\omega_4^2\omega_1^3\omega_3^2 cs^4\omega_3 - 102\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 - 16\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 +$
$12\omega_4^2\omega_1\omega_3^2 v_1^2\omega_3 - 36\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3 - 72\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 - 4\omega_4^2\omega_1\omega_2\omega_3 - 216\omega_4^2\omega_3^3 cs^2 v_1^2\omega_3 + 66\omega_4^2\omega_1\omega_2 v_1^2\omega_3 + 3\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 - 4\omega_4^2\omega_1^3 v_2^2\omega_3 -$
$108\omega_4^2\omega_3^2 cs^4\omega_3 - 12\omega_4^2\omega_1^2 v_1^2 v_2^2\omega_3 + 27\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 - 58\omega_4^2\omega_1\omega_3^2 cs^2\omega_3 + 216\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 - 36\omega_4^2\omega_1^3\omega_2 cs^4 + 108\omega_4^2\omega_1^2\omega_2 cs^4\omega_3$

$C_{26} = -66\omega_1^2\omega_2^2 v_1^2\omega_3 + 6\omega_1\omega_2\omega_3 - 18\omega_1\omega_2 cs^2 + 12\omega_2^3 v_2^2\omega_3 + 12\omega_1^2\omega_2^2\omega_3 + 141\omega_1\omega_3^2 v_1^2\omega_3 - 42\omega_1^2\omega_3^2 cs^2\omega_3 - 108\omega_1^3\omega_2 cs^2\omega_3 + 42\omega_2^3\omega_3 - 6\omega_1^3\omega_2 v_2^2 +$
$23\omega_1^2\omega_3^3\omega_3 + 84\omega_1^3 cs^2\omega_3 + 48\omega_1^3\omega_2\omega_3 + 18\omega_1^2\omega_2^2 v_2^2\omega_3 - 114\omega_2^3 v_1^2\omega_3 - 18\omega_1^2\omega_2 cs^2\omega_3 + 50\omega_3^3\omega_2^2 v_1^2\omega_3 - 9\omega_1\omega_2 v_2^2\omega_3 + 12\omega_1^2\omega_2 v_2^2 - 36\omega_1^3\omega_3 +$
$36\omega_1^2\omega_2^2 cs^2 - 12\omega_1^2\omega_2 v_2^2\omega_3 - 60\omega_1\omega_2^3\omega_3 + 60\omega_1\omega_2^2 v_1^2\omega_3 + 12\omega_1^3 v_2^2\omega_3 - 75\omega_1^3\omega_2 v_1^2\omega_3 - 23\omega_1^3\omega_2^2\omega_3 + 108\omega_1\omega_2^3 cs^2\omega_3 - 50\omega_1^2\omega_2^3 v_1^2\omega_3 + 6\omega_1^2\omega_2 v_1^2\omega_3 -$
$12\omega_1^2\omega_2^2 - 66\omega_2^3 cs^2\omega_3 - 12\omega_1\omega_2^2 v_2^2\omega_3 - 18\omega_1^3\omega_2 cs^2 - 12\omega_1\omega_2^2\omega_3 + 48\omega_3^3 v_1^2\omega_3 - 9\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_1^3\omega_2 + 42\omega_1^3\omega_2 cs^2\omega_3 - 6\omega_1\omega_2^3 v_2^2 + 6\omega_1^2\omega_2\omega_3$

$C_{27} = -12\omega_4\omega_1^3\omega_2 v_1^4\omega_3 - 6\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3 - 48\omega_4\omega_2^3 v_1^4\omega_3 - 54\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 - 4\omega_4^2\omega_1^2\omega_2\omega_3 + 54\omega_4\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 - 84\omega_4\omega_1\omega_2^2 cs^2 v_2^2\omega_3 +$
$180\omega_4\omega_1^2\omega_2^2 v_1^2 v_2^2\omega_3 + 24\omega_4\omega_1^3\omega_2 cs^2 v_2^2\omega_3 + 60\omega_4\omega_1\omega_3^3 cs^2 v_2^2\omega_3 - 18\omega_1^3\omega_2 v_1^2\omega_3 - 30\omega_4\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 + 16\omega_4\omega_1^3 cs^4\omega_3 + 8\omega_4\omega_1\omega_3^3 cs^4\omega_3 -$
$36\omega_4\omega_1^2\omega_3^3 v_1^4\omega_3 + 12\omega_4\omega_1\omega_2^3 v_2^2\omega_3 + 18\omega_1^2\omega_2^3 v_1^4\omega_3 - 9\omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 + 12\omega_4\omega_1^2\omega_2 v_1^4\omega_3 - 126\omega_4\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 - 4\omega_4\omega_1\omega_2^2\omega_3 - \omega_4\omega_1^3\omega_2^3 v_2^2\omega_3 +$
$32\omega_4\omega_1^2\omega_2 cs^2\omega_3 + 150\omega_4\omega_1\omega_3^2 cs^2 v_1^2\omega_3 + 2\omega_4\omega_1^3\omega_2 cs^4\omega_3^2 - 6\omega_4\omega_1\omega_3^2 v_1^2\omega_3 + 36\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 48\omega_4\omega_1^3 v_1^4\omega_3 - 24\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 + 56\omega_4\omega_1^2\omega_2^2 cs^4\omega_3 -$
$8\omega_4\omega_1^3\omega_2 cs^2\omega_3 - 174\omega_4\omega_1^3\omega_2 cs^2 v_1^2\omega_3 + 54\omega_4\omega_1\omega_3^2 cs^2 v_1^2\omega_3 - 144\omega_4\omega_1\omega_2 v_1^2 v_2^2\omega_3 + 28\omega_4\omega_2^3 cs^2\omega_3 - 18\omega_1^3\omega_3^2 cs^2\omega_3 + 66\omega_4\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 -$
$18\omega_4\omega_1^3\omega_2 cs^2\omega_3 + 18\omega_4\omega_1^2\omega_2^3 v_1^4 - 36\omega_4\omega_1\omega_2^3 v_1^4 + 18\omega_4\omega_1\omega_2^3 cs^2 v_1^2\omega_3 + 28\omega_4\omega_1\omega_2^2 cs^4\omega_3 - 12\omega_4\omega_1\omega_2^2 cs^2 v_1^2\omega_3 + 12\omega_4\omega_1\omega_2 v_1^4\omega_3 -$
$90\omega_4\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 + 132\omega_4\omega_1^2\omega_2 cs^2 v_2^2\omega_3 - 216\omega_4\omega_1^2\omega_3 cs^2 v_2^2\omega_3 + 72\omega_4\omega_2^3 cs^2\omega_3 - 18\omega_1\omega_3^2 v_1^2\omega_3 - 90\omega_4\omega_1\omega_3^3 v_1^2 v_2^2\omega_3 - 6\omega_4\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 -$
$36\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 18\omega_4\omega_1\omega_3^2 cs^2 v_1^2\omega_3 - \omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 + 2\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 24\omega_4\omega_1\omega_2^3 v_1^2\omega_3 + 18\omega_1^2\omega_2^3 v_1^2\omega_3 + 48\omega_4\omega_1\omega_2^3 cs^2 v_2^2\omega_3 - 54\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 -$

$$9\omega_4\omega_1^2\omega_3^3 v_1^4\omega_3^2 + 76\omega_4\omega_1\omega_3^3 cs^4\omega_3^2 - 90\omega_4\omega_1^2\omega_3^3 cs^2 v_1^2\omega_3 - 12\omega_4\omega_1^3 v_2^2\omega_3^2 - 18\omega_1^2\omega_3^3 v_1^4\omega_3^2 + 72\omega_1\omega_3^3 cs^4\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 - 42\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3 +$$
$$32\omega_4\omega_1\omega_2^2 cs^2\omega_3^2 - 36\omega_4\omega_1\omega_2^3 v_1^4\omega_3^2 + 24\omega_4\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 + 54\omega_1^2\omega_3^3 cs^2 v_1^2\omega_3 + 54\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2 - 4\omega_4\omega_1\omega_3^3 v_2^2\omega_3^2 - 6\omega_4\omega_1^3\omega_2 cs^2 v_2^2\omega_3 +$$
$$216\omega_1\omega_3^3 cs^2 v_2^2\omega_3 + 18\omega_4\omega_1^2 v_1^2 v_2^2\omega_3 + 18\omega_4\omega_1^3\omega_3^2 v_2^2 + 12\omega_4\omega_1^3 cs^2 v_2^2\omega_3 + \omega_4\omega_1^2\omega_3^3 v_2^2\omega_3 - 2\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 + 4\omega_4\omega_3^3\omega_3^2 - 28\omega_4\omega_1^2\omega_2 cs^4\omega_3^2 +$$
$$24\omega_4\omega_1^3 v_1^4\omega_3^2 + 6\omega_4\omega_1\omega_3^3 v_1^4\omega_3 - 36\omega_4\omega_1^2\omega_3^3 cs^4\omega_3^2 - 3\omega_4\omega_1^3\omega_3^3 cs^4\omega_3^2 - 18\omega_4\omega_1^2\omega_3^3 v_1^2 + 54\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3^2 - 90\omega_4\omega_1\omega_3^2 cs^2 v_2^2\omega_3 + 12\omega_4\omega_1^3\omega_2 v_2^2\omega_3 -$$
$$96\omega_4\omega_1^3 cs^2 v_2^2\omega_3 - 36\omega_4\omega_1^2\omega_2 v_1^2 v_2^2\omega_3 + 8\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 56\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 - 68\omega_4\omega_2^3 cs^4\omega_3^2 + 18\omega_1^3\omega_3 cs^4\omega_3^2 + 6\omega_4\omega_1\omega_2^2 v_1^4\omega_3 - 54\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2 +$$
$$30\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 + 12\omega_4\omega_1^3\omega_2 v_1^2\omega_3 + 12\omega_4\omega_3^3 v_1^4\omega_3 + 108\omega_4\omega_3^3 v_1^2 v_2^2\omega_3 - 48\omega_4\omega_1^2\omega_2 cs^2 v_2^2\omega_3 + 12\omega_4\omega_1\omega_2^2 v_2^2\omega_3 - 18\omega_4\omega_1^3\omega_3^2 v_1^4 + 72\omega_4\omega_1^3 v_1^2 v_2^2\omega_3 +$$
$$18\omega_1^3\omega_2 v_1^4\omega_3^2 - 8\omega_4\omega_1\omega_3^2 cs^2\omega_3 + 36\omega_4\omega_1^2\omega_3^3 v_1^2\omega_3 - 20\omega_4\omega_1^3 cs^2\omega_3^2 - 18\omega_1^2\omega_3^3 v_1^2\omega_3 - 4\omega_4\omega_1^3\omega_2\omega_3^2 + 54\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3^2 + 9\omega_4\omega_1\omega_3^2\omega_2 v_1^4\omega_3^2 -$$
$$18\omega_1^3\omega_2 v_1^4\omega_3^2 + 4\omega_4\omega_1^3\omega_3^2 + 9\omega_4\omega_1^2\omega_3^3 v_1^2\omega_3 + 132\omega_4\omega_1^3 cs^2 v_1^2\omega_3^2 - 18\omega_4\omega_1\omega_3^3 cs^2\omega_3 + 18\omega_1^2\omega_3^3 v_1^2\omega_3 - 72\omega_1\omega_3^3 cs^2\omega_3^2 - 54\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3 +$$
$$36\omega_4\omega_1^3\omega_2 v_1^4\omega_3 + 90\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 + 66\omega_4\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 - 108\omega_4\omega_3^2 cs^2 v_1^2\omega_3 - 18\omega_4\omega_1^2\omega_2^2 v_1^4\omega_3^2 - 28\omega_4\omega_1\omega_2^2 cs^4\omega_3^2 - 18\omega_1^2\omega_2^2 v_1^4\omega_3^2 -$$
$$12\omega_4\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 + 18\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 12\omega_4\omega_2^3 v_2^2\omega_3^2 + 6\omega_4\omega_1^3 cs^2 v_2^2\omega_3 - 36\omega_4\omega_1^2\omega_2 cs^2\omega_3^2 + 36\omega_4\omega_1\omega_2 v_1^4\omega_3 - 14\omega_4\omega_1^3\omega_2 cs^4\omega_3 + 8\omega_4\omega_1^2\omega_2^2\omega_3 -$$
$$72\omega_1^2\omega_2^3 cs^4\omega_3^2 + 18\omega_1\omega_2 v_1^4\omega_3 + 36\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 + \omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 + 12\omega_4\omega_1^2\omega_2 v_2 v_2^2\omega_3 + 54\omega_4\omega_1^3\omega_2^3 cs^2 v_2^2\omega_3 - 14\omega_4\omega_1^3\omega_2^2 cs^4\omega_3^2 + 54\omega_4\omega_1\omega_2^3 v_1^4\omega_3$$

$$C_{28} = 4\omega_1^3\omega_3^2 - 72\omega_1\omega_2^2 v_2^4\omega_3^2 - 2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3^2 + 36\omega_1\omega_3^3 cs^4 - 216\omega_1\omega_2^2 cs^2 v_2^2\omega_3^2 - 48\omega_1^2\omega_2^2 v_1^2 v_2^2\omega_3 - \omega_1^2\omega_3^2 v_1^2\omega_3 - 60\omega_1\omega_2^3 v_2^2\omega_3^2 -$$
$$4\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 + 24\omega_1\omega_3^3 cs^4\omega_3 - 36\omega_3^3 cs^4\omega_3^2 + 24\omega_1\omega_2^2 v_1^2 v_2^2\omega_3 + 216\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 + 8\omega_3^3 v_1^4\omega_3^2 + 18\omega_1^2\omega_3^3 cs^2\omega_3 - 20\omega_1^3\omega_2 cs^2 v_1^2\omega_3 +$$
$$6\omega_1^3\omega_2 cs^4\omega_3^2 + 40\omega_1^2\omega_2 cs^2\omega_3^2 - \omega_1^2\omega_3^2\omega_3 - 52\omega_1^3 cs^2\omega_3^2 + 4\omega_1^3\omega_2 cs^2\omega_3 + 12\omega_1^3\omega_2^2 cs^2 - 12\omega_1^2\omega_2^2 cs^4\omega_3 - 24\omega_2^2\omega_2^2 v_2^2\omega_3 - 36\omega_3^3\omega_2 v_2^4\omega_3 +$$
$$22\omega_1\omega_2^3 cs^2 v_1^2\omega_3 - 4\omega_1^3\omega_2\omega_3^2 + 42\omega_1^2\omega_2^2 cs^4\omega_3^2 - 8\omega_2^3\omega_3^2 + 56\omega_1^3\omega_2 cs^2\omega_3^2 + 8\omega_1\omega_3^3 cs^2 v_1^2\omega_3 + 96\omega_1\omega_2^3 v_1^2 v_2^2\omega_3 + 24\omega_1^3 v_2^4\omega_3^2 - 72\omega_1^2\omega_2^3 cs^2 v_2^2\omega_3^2 +$$
$$5\omega_1^3 cs^2\omega_3^2 - 8\omega_1\omega_3^3 v_1^2\omega_3^2 - 48\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 - 24\omega_1^3\omega_2 v_2^2\omega_3^2 - 4\omega_1^3\omega_2 cs^2 v_1^4\omega_3 + 8\omega_1\omega_2^3 cs^2 v_1^4\omega_3 + 54\omega_1^3\omega_2 cs^4\omega_3 - 324\omega_1^3\omega_2 cs^2 v_2^2\omega_3^2 -$$
$$2\omega_1^2\omega_3^2 cs^2 v_1^4\omega_3 + 24\omega_2^3 v_2^2\omega_3 - 4\omega_1^2\omega_2 v_2^4\omega_3 + 42\omega_1^2\omega_2 v_2^4\omega_3 + 12\omega_1^2\omega_2^2 cs^4\omega_3^2 + 12\omega_1^3\omega_2 cs^2 v_1^2 - 18\omega_1^3\omega_2^2 cs^2 v_1^4\omega_3 + 108\omega_1^3\omega_2 cs^2 v_2^2\omega_3^2 + 4\omega_1^2\omega_2 v_1^4\omega_3 - 24\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 -$$
$$8\omega_1\omega_2^3 cs^2 v_1^2\omega_3 - 54\omega_1^2\omega_3^2 cs^4\omega_3 - 36\omega_1^2\omega_2 cs^4\omega_3^2 + 24\omega_1^2\omega_2 v_1^2 v_2^2\omega_3 - 5\omega_1^3\omega_2^2 cs^2\omega_3 - 4\omega_1^2\omega_2\omega_3^2 + 216\omega_1^3 cs^2 v_2^2\omega_3 + 24\omega_1^3\omega_2^3 v_2^2\omega_3 + 72\omega_3^3 cs^4\omega_3^2 +$$
$$4\omega_1^2\omega_2^2 cs^2\omega_3 - 12\omega_1^3\omega_2 cs^4\omega_3 + 84\omega_1^3\omega_2 v_2^2\omega_3^2 + 72\omega_1^2\omega_2^2 v_2^4\omega_3^2 + 48\omega_1\omega_2^3 v_2^2\omega_3^2 + 8\omega_1\omega_2^3\omega_3^2 - 72\omega_2^3 v_1^2 v_2^2\omega_3 - 4\omega_1^3 v_1^2\omega_3 - 12\omega_1^3\omega_2^2 cs^2 v_1^2 +$$
$$4\omega_1^2\omega_2 v_1^2\omega_3 - 36\omega_1\omega_2^3 v_2^4\omega_3^2 - 8\omega_1\omega_3^3 cs^2\omega_3 + 20\omega_2^3 cs^2\omega_3^2 + 24\omega_3^3 v_1^2 v_2^2\omega_3 + 2\omega_1^3\omega_2 cs^2 v_1^4\omega_3 + 48\omega_3^3 v_1^4\omega_3^2 + 24\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 + \omega_1^2\omega_3^2 v_1^2\omega_3 -$$
$$22\omega_1\omega_2^3 cs^2\omega_3 + 16\omega_1^2 cs^2 v_1^2\omega_3^2 + 18\omega_1^3\omega_2 cs^2 v_1^2\omega_3 - 12\omega_1^2\omega_2^2 cs^2 + \omega_1^3\omega_2\omega_3^2 - 20\omega_2^3 cs^2 v_1^2\omega_3 + 4\omega_1^3\omega_2 v_1^2\omega_3 - 36\omega_1^3\omega_2^2 cs^4 - 84\omega_1\omega_2 cs^4\omega_3^2 -$$
$$34\omega_1^2\omega_2^2 cs^2\omega_3 - 8\omega_1\omega_2 v_1^4\omega_3 - 48\omega_1^3 v_2^2\omega_3 - 6\omega_1^2\omega_2^3 cs^4\omega_3^2 - 24\omega_1^2\omega_2 v_2^2\omega_3 + 72\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 18\omega_1^3\omega_2^2 cs^2\omega_3 + 8\omega_1\omega_2\omega_3^2 - 4\omega_1^2\omega_2 cs^2 v_1^2\omega_3$$

$$C_{29} = 72\omega_4^2\omega_1^2\omega_3^3 cs^2 v_1^2\omega_3 - 852\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 + 240\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 + 162\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2 - 108\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3 - 144\omega_4^2\omega_1^3\omega_2^3 v_1^2 v_2^2\omega_3 +$$
$$80\omega_4^2\omega_3^3 cs^4\omega_3^2 - 16\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 40\omega_4^2\omega_1^2\omega_2 cs^4\omega_3 + 8\omega_4^2\omega_1^3\omega_3^2 - 117\omega_4^2\omega_1^3\omega_3^2 v_1^4\omega_3 + 40\omega_4^2\omega_1^3\omega_3^2 v_1^4\omega_3^2 - 2\omega_4^2\omega_1^3\omega_3 cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2 v_2^4 +$$
$$64\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 + 72\omega_4\omega_1\omega_3^3 v_2^2\omega_3^2 - 492\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 - 108\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 + 24\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 + 36\omega_4^2\omega_1^3 cs^2\omega_3 - 540\omega_4\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 +$$
$$288\omega_4\omega_1^3 v_2^4\omega_3^2 + 16\omega_4^2\omega_1\omega_3^3 cs^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_3 - 108\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3 + 36\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 + 72\omega_4^2\omega_1^2\omega_3^3 v_2^2 - 288\omega_4\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 +$$
$$96\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3 - 108\omega_1^3\omega_3^3 v_2^4\omega_3 + 48\omega_4^2\omega_1\omega_2 cs^2 v_1^2\omega_3 - 2\omega_4^2\omega_1^2\omega_3^3\omega_3^2 + 48\omega_4^2\omega_1\omega_2 cs^2 v_1^2\omega_3 - 40\omega_4^2\omega_1^3 cs^2\omega_3^2 - 6\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3 -$$
$$96\omega_4^2\omega_1\omega_3^3 cs^2 v_1^2\omega_3 - 18\omega_4\omega_1^3\omega_3^3 cs^2\omega_3 + 576\omega_4^2\omega_1\omega_3^3 v_1^2 v_2^2\omega_3 + 174\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3 + 36\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 + 108\omega_4^2\omega_1^3\omega_3^2 v_2^4\omega_3 + 48\omega_4^2\omega_3^3 v_1^2\omega_3 +$$
$$96\omega_4^2\omega_1 v_2^4\omega_3^2 - 108\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3 + 54\omega_1^3\omega_2 v_2^4\omega_3 + 24\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3 - 12\omega_4^2\omega_1\omega_3^3 cs^2 v_1^2\omega_3 - 32\omega_4^2\omega_1\omega_2^2 cs^2\omega_3 + 468\omega_4^2\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 -$$
$$16\omega_4^2\omega_3^3\omega_3^2 - 117\omega_4^2\omega_1^3\omega_3^3 v_2^4\omega_3 + 54\omega_4^2\omega_1^3\omega_3^2 v_2^4 - 324\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 - 180\omega_4\omega_1^2\omega_3^3 v_2^4\omega_3 + 648\omega_4^2\omega_1^3\omega_3^3 cs^2 v_2^2\omega_3 + 48\omega_4^2\omega_1^3 v_2^4\omega_3^2 -$$
$$172\omega_4^2\omega_1\omega_3^3 cs^4\omega_3 + 24\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3 + 144\omega_4^2\omega_1\omega_2 v_1^2 v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2 v_2^2\omega_3 - 492\omega_4^2\omega_1\omega_2 cs^2 v_2^2\omega_3 + 72\omega_4\omega_1^3\omega_2 cs^2 v_1^2\omega_3 - 12\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3 +$$
$$216\omega_4^2\omega_1^3 v_2^4\omega_3 + 72\omega_4\omega_1\omega_3^3 cs^4\omega_3^2 - 36\omega_4^2\omega_1\omega_3^3 cs^4\omega_3 - 86\omega_4^2\omega_1\omega_2^2 v_2^2\omega_3 + 336\omega_4\omega_1\omega_2^2 cs^2 v_2^2\omega_3 - 72\omega_4^2\omega_1\omega_2 cs^2 v_2^2\omega_3 - 288\omega_4^2\omega_1^2\omega_2^2 v_1^2 v_2^2\omega_3 +$$
$$96\omega_4^2\omega_1^2\omega_2 v_2^4\omega_3^2 - 216\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2 - 36\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 48\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3 + 48\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 + 12\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 - 18\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 -$$
$$8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_2 v_2\omega_3 + 60\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 + 72\omega_4^2\omega_1\omega_3^3 cs^2 v_2^2\omega_3 + 20\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 - 48\omega_4^2\omega_3^2 v_2^2\omega_3 + 36\omega_4\omega_1^3\omega_2 cs^2\omega_3 + 24\omega_4^2\omega_1^3\omega_3^3 v_2^4\omega_3 +$$
$$168\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 - 288\omega_4\omega_1^2\omega_3^3 v_2^2\omega_3 + 144\omega_4^2\omega_1^3 v_1^2 v_2^2\omega_3 - 96\omega_4^2\omega_1\omega_2 cs^2 v_1^2\omega_3 - 16\omega_4^2\omega_1\omega_3^3 cs^2\omega_3 - 288\omega_4\omega_1\omega_3^3 v_2^4\omega_3 - 297\omega_4\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 -$$
$$36\omega_4\omega_1^3\omega_2 v_2^4\omega_3 + 32\omega_4^2\omega_1^3 cs^4\omega_3^2 + 24\omega_4^2\omega_1\omega_2 v_1^2\omega_3 + 108\omega_1^3\omega_2 v_2^2\omega_3 + 18\omega_4\omega_1^3\omega_3^3 cs^4\omega_3^2 - 8\omega_4^2\omega_1\omega_2\omega_3 - 432\omega_4^2\omega_3^2 v_1^2 v_2^2\omega_3 - 36\omega_4\omega_1^2\omega_2 v_2^4\omega_3 +$$
$$162\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 - 108\omega_4\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 144\omega_4^2\omega_1\omega_2 v_2^2\omega_3 - 297\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 - 54\omega_4^2\omega_1^3\omega_3^2 v_2^2 - 108\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 - 6\omega_4^2\omega_1^3\omega_3^3 cs^4\omega_3^2 +$$
$$432\omega_4^2\omega_3^3 cs^2 v_2^2\omega_3 + 204\omega_4^2\omega_1^3\omega_2 v_2\omega_2^2 + 8\omega_4^2\omega_3^3 cs^2\omega_3 - 144\omega_4^2\omega_1^2\omega_2 v_2^4\omega_3 - 40\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 + 16\omega_4^2\omega_1\omega_2 cs^4\omega_3 + 117\omega_4^2\omega_1^3\omega_3^2 v_2^2\omega_3 -$$
$$108\omega_4^2\omega_1\omega_2^2 cs^2 v_2^2 + 144\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3 + 264\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3 + 8\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 - 56\omega_4^2\omega_1\omega_2 cs^4\omega_3 - 72\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 - 24\omega_4^2\omega_1^3 v_1^2\omega_3 +$$
$$108\omega_4^2\omega_1^2 v_2^4\omega_3 + 16\omega_4^2\omega_1\omega_2^2\omega_3 - 72\omega_4\omega_1\omega_3^3 v_2^4\omega_3 - 36\omega_4^2\omega_1\omega_2 cs^4\omega_3 - 216\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 + 264\omega_4^2\omega_1^2 cs^2 v_2^2\omega_3 + 2\omega_4^2\omega_1^3\omega_2^2\omega_3 +$$
$$36\omega_4^2\omega_1^3\omega_2 v_2^2 + 36\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 - 72\omega_4\omega_1\omega_3^3 cs^2\omega_3 - 12\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 - 144\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3 + 38\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3 + 86\omega_4^2\omega_1^3\omega_3^3 cs^4\omega_3^2 +$$
$$18\omega_4^2\omega_1^3\omega_3^3 cs^4\omega_3 - 60\omega_4^2\omega_1^2\omega_2 v_2^4\omega_3 + 24\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 + 192\omega_4^2\omega_1^3 v_2^4\omega_3 - 28\omega_4^2\omega_3^3\omega_2 cs^4\omega_3 - 12\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 - 48\omega_4^2\omega_1\omega_2^2 v_1^2\omega_3 -$$
$$24\omega_4^2\omega_1^3\omega_3^3 v_2^2\omega_3 + 16\omega_4^2\omega_1\omega_2^2 cs^4\omega_3 - 54\omega_4^2\omega_3^3 v_2^2\omega_3 + 16\omega_4\omega_1\omega_3^3\omega_3^2 + 24\omega_4^2\omega_3^3 cs^2 v_1^2\omega_3 + 24\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 + 108\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 +$$
$$117\omega_4^2\omega_1^3\omega_3^2 v_2^2\omega_3 + 72\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 96\omega_4^2\omega_1^3 v_2^2\omega_3 + 180\omega_4^2\omega_1^2\omega_3^3 v_2^2\omega_3 + 144\omega_4^2\omega_1^2\omega_2 v_1^2 v_2^2\omega_3 + 288\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 + 6\omega_4^2\omega_1^3\omega_2^3 v_1^2\omega_3 +$$
$$48\omega_4^2\omega_1\omega_3^3 cs^2\omega_3 + 24\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^3 v_2^4 + 36\omega_4\omega_1^3\omega_2 v_2^4\omega_3 - 24\omega_4^2\omega_1\omega_3^3 v_2^4\omega_3 + 324\omega_4\omega_1^3\omega_3^3 cs^2 v_2^2\omega_3 - 72\omega_4\omega_1^2\omega_3^3 cs^4\omega_3$$

$$C_{30} = -54\omega_1\omega_2^2 cs^2\omega_3 - 9\omega_1^2\omega_2^2 v_1^2\omega_3 - 12\omega_1\omega_3^2 + 36\omega_1\omega_2^3 cs^2 - 9\omega_1^2\omega_2^3 v_1^2 + 84\omega_2^3 v_2^2\omega_3 - 51\omega_1^2\omega_2^2\omega_3 - 6\omega_3^3\omega_2 v_1^2 + 27\omega_1\omega_2^3 v_1^2\omega_3 -$$
$$15\omega_1^2 cs^2\omega_3 - 108\omega_1^3\omega_2 cs^2\omega_3 + 27\omega_1^3\omega_2^2 cs^2 - 12\omega_2^3\omega_3 + 5\omega_1^3\omega_2\omega_3 + 84\omega_1^3 cs^4\omega_3 + 48\omega_1^3\omega_2\omega_3 + 132\omega_1^2\omega_2^2 v_2^2\omega_3 - 6\omega_1^2\omega_2^2 v_1^2 - 24\omega_3^3 v_1^2\omega_3 -$$
$$18\omega_1^2\omega_2 cs^2\omega_3 + 5\omega_1^3\omega_2^2 v_1^2\omega_3 - 66\omega_1\omega_3^3 v_2^2\omega_3 - 36\omega_1^3\omega_3 - 18\omega_1^2\omega_2^2 cs^2 - 12\omega_1^2\omega_2 v_2^2\omega_3 + 3\omega_1\omega_3^2\omega_3 + 6\omega_1\omega_2^2 v_1^4\omega_3 + 81\omega_1^2\omega_2^2 cs^2\omega_3 + 48\omega_1^3 v_2^2\omega_3 -$$
$$9\omega_1\omega_3^2 - 18\omega_1^3\omega_2 v_1^2\omega_3 - 5\omega_1^3\omega_2^2\omega_3 + 27\omega_1\omega_2^2 cs^2\omega_3 - 5\omega_1^2\omega_3^2 v_1^2\omega_3 + 6\omega_1^2\omega_2 v_1^4\omega_3 + 6\omega_1^2\omega_2^2 - 12\omega_2^3 cs^2\omega_3 - 120\omega_1\omega_2^2 v_2^2\omega_3 - 18\omega_1^3\omega_2 cs^2 +$$
$$42\omega_1\omega_2^2\omega_3 + 12\omega_1\omega_2^3 v_1^2 - 27\omega_1^2\omega_2^3 cs^2 + 12\omega_1^3 v_1^2\omega_3 + 9\omega_1^2\omega_2^2 - 66\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_1^3\omega_2 + 15\omega_1\omega_2^2 cs^2\omega_3 + 9\omega_1^2\omega_2^2 v_1^2 + 6\omega_1^2\omega_2\omega_3$$

$$C_{31} = 24\omega_1^3\omega_2 cs^4 - 80\omega_1\omega_2^2 cs^2\omega_3 - 1472\omega_1\omega_3^3 cs^2 v_2^2\omega_3 - 464\omega_1^3\omega_2 cs^2 v_2^2\omega_3 - 8\omega_1\omega_3^3 cs^2 - 160\omega_3^3 v_2^2\omega_3 - 16\omega_1^2\omega_2^2\omega_3 - 372\omega_1\omega_3^3 cs^4\omega_3 -$$
$$156\omega_1^2\omega_2^3 cs^2\omega_3 + 96\omega_1^2\omega_2 v_2^4\omega_3 - 98\omega_1^3\omega_2^2 v_2^2\omega_3 - 27\omega_1^3\omega_2^2 v_2^4\omega_3 + 122\omega_1^3\omega_2 cs^2\omega_3 + 16\omega_1^2\omega_3\omega_3 - 120\omega_1^2\omega_2^2 cs^4\omega_3 + 808\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 + 24\omega_1^3 v_2^4\omega_3 +$$
$$8\omega_1^3\omega_2 cs^2 v_2^2 + 16\omega_1^2\omega_3^3\omega_3 - 52\omega_1^3 cs^2\omega_3 - 10\omega_1^3\omega_2\omega_3 - 84\omega_1^3\omega_2 v_2^4\omega_3 + 280\omega_1^2\omega_2 v_2^2\omega_3 + 18\omega_1^3\omega_2 cs^2\omega_3 - 1088\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 - 48\omega_1^2\omega_2 cs^4 -$$
$$80\omega_1^2\omega_2 cs^2\omega_3 + 82\omega_1^3\omega_2^3 cs^4\omega_3 + 180\omega_1^2\omega_2^3 v_2^4\omega_3 + 656\omega_1\omega_2^3 cs^2 v_2^2\omega_3 + 328\omega_1\omega_3^3 v_2^2\omega_3 + 216\omega_2^3 cs^4\omega_3 + 168\omega_1\omega_2^2 v_2^4\omega_3 + 4\omega_3^3\omega_3 +$$
$$164\omega_1^2\omega_2^3 cs^4\omega_3 + 16\omega_1^2\omega_2^2 cs^2 + 90\omega_1^3\omega_2^2 v_2^4\omega_3 - 104\omega_1^2\omega_2 v_2^2\omega_3 + 404\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 28\omega_1\omega_3^3\omega_3 + 30\omega_1^3\omega_2^2 v_2^2\omega_3 + 152\omega_1^2\omega_2^3 cs^2\omega_3 -$$
$$156\omega_1^3\omega_2 cs^4\omega_3 - 28\omega_1^3 v_2^2\omega_3 + 72\omega_1\omega_2^3 cs^4\omega_3 + 8\omega_1^3\omega_2^3\omega_3 + 144\omega_3^3 v_2^4\omega_3 + 320\omega_1\omega_2^3 cs^2\omega_3 + 24\omega_1\omega_3^3 cs^4 - 300\omega_1\omega_3^3 v_2^4\omega_3 - 184\omega_3^3 cs^2\omega_3 +$$
$$440\omega_1^2\omega_2 cs^2 v_2^2\omega_3 + 8\omega_1\omega_3^3 cs^2 v_2^2 - 176\omega_1\omega_2^2 v_2^2\omega_3 - 8\omega_1^3\omega_2 cs^2 + 8\omega_1\omega_2\omega_3 + 72\omega_1^3 cs^4\omega_3 - 16\omega_1^2\omega_2^2 cs^2 v_2^2 - 102\omega_1^3\omega_2^3 cs^2 v_2^2\omega_3 - 264\omega_1^2\omega_2 v_2^4\omega_3 +$$
$$760\omega_2^3 cs^2 v_2^2\omega_3 + 94\omega_1^3\omega_2 v_2^2\omega_3 - 15\omega_1^3\omega_2 cs^4\omega_3 - 3\omega_1^3\omega_2^3\omega_3 - 78\omega_1^3\omega_2^2 cs^2\omega_3 + 72\omega_1^2\omega_2 cs^4\omega_3 - 196\omega_1^2\omega_2^3 v_2^2\omega_3 + 160\omega_1^3 cs^2 v_2^2\omega_3 + 8\omega_1^2\omega_2\omega_2\omega_3$$

$$C_{32} = 8\omega_1^3\omega_2 cs^4 - 16\omega_1\omega_2^2 cs^2\omega_3 - 1008\omega_1\omega_2^3 cs^2 v_2^2\omega_3 - 360\omega_1^3\omega_2 cs^2 v_2^2\omega_3 - 8\omega_1\omega_3^3 cs^2 - 288\omega_2^3 v_2^2\omega_3 - 16\omega_1^2\omega_2^2\omega_3 - 68\omega_1\omega_3^2 cs^4\omega_3 -$$

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$44\omega_1^2\omega_2^3cs^2\omega_3 + 336\omega_1^2\omega_2 v_2^4\omega_3 - 154\omega_1^3\omega_2^2 v_2^2\omega_3 - 87\omega_1^3\omega_2^2 v_2^4\omega_3 + 42\omega_1^3\omega_2 cs^2\omega_3 + 16\omega_2^3\omega_3 - 8\omega_1^2\omega_2^2 cs^4\omega_3 + 504\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 + 96\omega_1^3 v_2^4\omega_3 +$
$24\omega_1^3\omega_2 cs^2 v_2^2 + 16\omega_1^2\omega_3^3\omega_3 - 20\omega_1^3 cs^2\omega_3 - 10\omega_1^3\omega_2\omega_3 - 312\omega_1^3\omega_2 v_2^4\omega_3 + 408\omega_1^2\omega_2^2 v_2^2\omega_3 + 6\omega_1^3\omega_2^2 cs^4\omega_3 - 576\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 - 16\omega_1^2\omega_2^2 cs^4 -$
$16\omega_1^2\omega_2 cs^4\omega_3 + 14\omega_1^3\omega_2^2 cs^4\omega_3 + 620\omega_1^2\omega_2^3 v_2^4\omega_3 + 336\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 + 552\omega_1\omega_3^3 v_2^2\omega_3 + 40\omega_3^3 cs^4\omega_3 + 552\omega_1\omega_2^2 v_2^4\omega_3 + 4\omega_1^3\omega_3 + 28\omega_1^2\omega_3^3 cs^4\omega_3 +$
$16\omega_1^2\omega_2^2 cs^2 + 310\omega_1^3\omega_2^2 v_2^4\omega_3 - 168\omega_1^2\omega_2 v_2^2\omega_3 + 252\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 28\omega_1\omega_3^3\omega_3 + 42\omega_1^3\omega_3^2 v_2^2\omega_3 + 24\omega_1^2\omega_2 cs^2\omega_3 - 32\omega_1^3\omega_2 cs^4\omega_3 - 60\omega_1^3 v_2^2\omega_3 +$
$8\omega_1\omega_2^2 cs^4\omega_3 + 8\omega_1^3\omega_2^2\omega_3 + 528\omega_2^3 v_2^4\omega_3 + 96\omega_1\omega_3^3 cs^2\omega_3 + 8\omega_1\omega_3^3 cs^4 - 1068\omega_1\omega_2^3 v_2^4\omega_3 - 56\omega_3^3 cs^2\omega_3 + 264\omega_1^2\omega_2 cs^2 v_2^2\omega_3 + 24\omega_1\omega_3^3 cs^2 v_2^2 -$
$240\omega_1\omega_2^3 v_2^2\omega_3 - 8\omega_1^3\omega_2 cs^2 + 8\omega_1\omega_2^3\omega_3 + 16\omega_1^3 cs^4\omega_3 - 48\omega_1^2\omega_2^2 cs^2 v_2^2 - 54\omega_1^3\omega_2^3 cs^2 v_2^2\omega_3 - 888\omega_1^2\omega_2 v_2^4\omega_3 + 552\omega_2^3 cs^2 v_2^2\omega_3 + 174\omega_1^3\omega_2 v_2^2\omega_3 -$
$3\omega_1^3\omega_2^3 cs^4\omega_3 - 3\omega_1^3\omega_2^3\omega_3 - 22\omega_1^3\omega_2^2 cs^2\omega_3 + 8\omega_1^2\omega_2 cs^4\omega_3 - 308\omega_1^2\omega_2^3 v_2^2\omega_3 + 144\omega_1^3 cs^2 v_2^2\omega_3 + 8\omega_1^2\omega_2\omega_3$

$C_{33} = 6\omega_4\omega_3^2 - 2\omega_4^2\omega_1\omega_3 v_3^2 + 6\omega_4\omega_1\omega_3 - 36\omega_4^2 cs^2 + 12\omega_4^2 - 6\omega_4\omega_1 v_1^2\omega_3 - 6\omega_4\omega_1 cs^2\omega_3 - 18\omega_4 cs^2\omega_3^2 + 6\omega_3^2 v_3^2 + 36\omega_4 cs^2\omega_3 + 18\omega_4^2\omega_1 cs^2 -$
$6v_1^2\omega_3^2 - 12\omega_4\omega_3 - 2\omega_4\omega_1\omega_3^2 + 2\omega_4\omega_1\omega_3 v_3^2 - 6\omega_4\omega_3 v_3^2 - 6\omega_4^2 v_3^2 + 18\omega_4^2 cs^2\omega_3 - 6\omega_4^2\omega_3 + 3\omega_4^2\omega_1 v_1^2 + 6\omega_4^2\omega_1 v_3^2 - 6\omega_4^2\omega_1 - 18\omega_4\omega_1 cs^2\omega_3 +$
$2\omega_4^2\omega_1\omega_3 - 6\omega_4^2 v_1^2 + 6\omega_4\omega_1 cs^2\omega_3 + 3\omega_4^2\omega_1 v_3^2 + 3\omega_1 v_1^2\omega_3^2 + 12\omega_4 v_1^2\omega_3 - 3\omega_1\omega_3^2 v_3^2$

$C_{34} = -8\omega_4\omega_1\omega_3 - 18\omega_4\omega_2\omega_3 v_3^2 + 2\omega_4\omega_1 v_1^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 9\omega_1\omega_2\omega_3 + 6\omega_4\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4\omega_1\omega_2 v_1^2\omega_3 - 9\omega_1\omega_2 v_1^2\omega_3 +$
$9\omega_4\omega_1\omega_2 + 18\omega_4\omega_1\omega_3 v_3^2 + 4\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2$

$C_{35} = -56\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 v_3^2 + 120\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3^2 v_3^2 + 144\omega_4^2\omega_2^3 cs^4\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 192\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 - 84\omega_4^2\omega_1^2\omega_3^2 cs^2 v_3^2 + 8\omega_4^2\omega_1^3\omega_2^2 +$
$48\omega_4^2\omega_1^3 v_1^4\omega_3 + 30\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3 + 80\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_2^3\omega_3^2 v_3^2 - 252\omega_4^2\omega_1^2\omega_2 cs^4 + 864\omega_4^2\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 - 108\omega_4^2\omega_1^2\omega_3 cs^2\omega_3 +$
$108\omega_1^2\omega_2^3 cs^2\omega_3^2 v_3^2 - 168\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_3 + 24\omega_4^2\omega_3^3\omega_2^2 cs^2 - 72\omega_4^2\omega_1\omega_2 v_1^4\omega_3^2 - 432\omega_4^2\omega_1\omega_2 cs^2 v_1^2\omega_3 - 104\omega_4^2\omega_3^3 cs^2\omega_3^2 -$
$27\omega_4\omega_1^3\omega_3^2 cs^2\omega_3 - 96\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 v_3^2 + 32\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 v_3^2 + 54\omega_1^3\omega_2^2 cs^2\omega_3 - 96\omega_4^2\omega_3^2 v_1^2\omega_3^2 - 108\omega_4\omega_1^2\omega_3^2 cs^2\omega_3^2 v_3^2 - 36\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3^2 -$
$192\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3 - 432\omega_4^2\omega_1\omega_2^3 cs^2 v_1^2\omega_3 + 128\omega_4\omega_1\omega_2^2 cs^2\omega_3 - 60\omega_4^2\omega_3^2\omega_2 v_1^2\omega_3^2 v_3^2 + 8\omega_4^2\omega_1\omega_2^3\omega_3^2 v_3^2 + 8\omega_4^2\omega_2^3\omega_3^2 - 108\omega_1^2\omega_2^3 cs^2\omega_3^2 -$
$24\omega_4^2\omega_1\omega_3^3 cs^4\omega_3^2 - 60\omega_4^2\omega_1\omega_2^3 v_1^2\omega_3^2 v_3^2 - 10\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3^2 v_3^2 + 108\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 - 432\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3^2 + 54\omega_4^2\omega_1^3\omega_2^2 cs^2 v_3^2 -$
$27\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 - 16\omega_4^2\omega_1^2\omega_2^2\omega_3^2 v_3^2 + 8\omega_4^2\omega_1\omega_2^3 cs^2\omega_3^2 v_3^2 + 10\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3 + 96\omega_4^2\omega_1\omega_2^3 v_1^2\omega_3^2 - 54\omega_4^2\omega_1^3\omega_2^2 cs^2 + 27\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 -$
$40\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 + 16\omega_4^2\omega_1^2\omega_2^2\omega_3^2 + 192\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3^2 + 112\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 432\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 + 56\omega_4^2\omega_1\omega_2^3 cs^2\omega_3 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2 +$
$96\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 - 56\omega_4^2\omega_1\omega_3^3 cs^2\omega_3 v_3^2 + 81\omega_4\omega_1^3\omega_3^2 cs^4\omega_3^2 - 8\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2\omega_3 - 24\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 v_3^2 +$
$24\omega_4^2\omega_3^3 v_1^4\omega_3^2 - 162\omega_4\omega_1^3\omega_3^2 cs^4\omega_3^2 + 162\omega_4\omega_1^3\omega_3^2 cs^4 + 8\omega_4^2\omega_1\omega_2^3\omega_3^2 v_3^2 - 104\omega_4^2\omega_3^3 cs^2\omega_3^2 - 64\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 - 24\omega_4^2\omega_1^3 cs^4\omega_3 -$
$8\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 - 72\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 - 96\omega_4^2\omega_1^3 v_1^2\omega_3^2 - 10\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 - 8\omega_4^2\omega_1\omega_2^3\omega_3^2 + 324\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3 + 108\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 v_3^2 +$
$84\omega_4^2\omega_1^3\omega_3^2 cs^2 + 8\omega_4^2\omega_1^3\omega_2\omega_3^2 v_3^2 + 32\omega_4^2\omega_3^3 cs^2\omega_3^2 v_3^2 - 30\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3^2 - 36\omega_4\omega_1\omega_2^3 v_1^4\omega_3^2 + 64\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 - 81\omega_4^3\omega_1^3\omega_3^2 cs^4\omega_3^2 -$
$24\omega_4^2\omega_1^3\omega_2^2 cs^2 v_3^2 - 168\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 - 176\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 + 96\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 + 32\omega_4^2\omega_1^3 cs^2\omega_3^2 v_3^2 + 72\omega_4^2\omega_1^2\omega_2^3 v_1^4\omega_3^2 - 216\omega_4^2\omega_1\omega_2^2 cs^4\omega_3^2 -$
$8\omega_4^2\omega_1\omega_3^3\omega_2^2 + 432\omega_4^2\omega_1^2\omega_3 cs^2 v_1^2\omega_3^2 + 96\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 + 27\omega_4\omega_1^3\omega_3^2 cs^2\omega_3^2 v_3^2 + 10\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 48\omega_4^2\omega_1^3 v_1^2\omega_3^2 v_3^2 + 8\omega_4^2\omega_1\omega_2^3\omega_3^2 v_3^2 +$
$324\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3^2 + 64\omega_4^2\omega_1\omega_2^3 cs^2\omega_3^2 + 432\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3^2 - 54\omega_1^3\omega_2^3 cs^2\omega_3^2 v_3^2 + 72\omega_4^2\omega_2^3 v_1^2\omega_3^2 v_3^2 - 72\omega_4^2\omega_1^2\omega_2 cs^4 - 324\omega_4\omega_1^2\omega_2^3 cs^4\omega_3^2$

$C_{36} = 4\omega_1^2\omega_2^2 v_3^2 - 24\omega_1\omega_2 cs^2\omega_3 + 26\omega_1^2\omega_2^2 v_1^2\omega_3 + 2\omega_1\omega_3^2 - 3\omega_1^3\omega_2\omega_3 v_3^2 - 6\omega_1\omega_3^3 cs^2 - 20\omega_1^2\omega_2\omega_3 - 13\omega_1\omega_3^3 v_1^2\omega_3 - 4\omega_1\omega_2^2\omega_3 v_3^2 -$
$24\omega_1^3\omega_2 cs^2\omega_3 - 10\omega_2^3\omega_3 + 28\omega_1^3 cs^2\omega_3 + 10\omega_1^3\omega_2\omega_3 + 10\omega_2^3 v_1^2\omega_3 - 2\omega_1^3\omega_2 v_3^2 - 30\omega_1^2 cs^2\omega_3 + 4\omega_1^3\omega_2 v_3^2 - 12\omega_1^3\omega_3 - 4\omega_1^2\omega_2\omega_3 v_3^2 +$
$12\omega_1^2\omega_2^2 cs^2 + 10\omega_1\omega_2^3\omega_3 - 4\omega_1\omega_3^3 v_1^2\omega_3 + 48\omega_1^2\omega_2 cs^2\omega_3 - 3\omega_1\omega_2^3\omega_3 v_3^2 - 2\omega_1\omega_3^2 v_3^2 - 13\omega_1^3\omega_2 v_1^2\omega_3 + 6\omega_1^2\omega_2^3\omega_3 v_3^2 - 24\omega_1\omega_3^3 cs^2\omega_3 -$
$22\omega_1^2\omega_2 v_1^2\omega_3 - 4\omega_1^2\omega_2^2 + 26\omega_2^3 cs^2\omega_3 - 6\omega_1^3\omega_2 cs^2 + 8\omega_1\omega_2^3\omega_3 + 16\omega_1^3 v_1^2\omega_3 + 2\omega_1^3\omega_2 + 4\omega_3^3\omega_3 v_3^2 + 14\omega_1^2\omega_2\omega_3$

$C_{37} = -2\omega_4\omega_1\omega_3 - 2\omega_4\omega_2\omega_3 v_3^2 - 27\omega_4\omega_1\omega_2 cs^2 - 9\omega_1\omega_2\omega_3 - 6\omega_4\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 +$
$6\omega_4\omega_1 cs^2\omega_3 + 27\omega_1\omega_2 cs^2\omega_3 + 9\omega_1\omega_2\omega_3 v_3^2$

$C_{38} = 6\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2\omega_3^2 v_3^2 + 324\omega_1^2\omega_5\omega_3^2 cs^2 v_1^2\omega_3^2 - 96\omega_4^2\omega_5\omega_3^2 v_1^4\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_3^2 cs^2\omega_3 - 24\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3^2 - 48\omega_4^2\omega_1\omega_5\omega_3^2 v_1^2\omega_3^2 +$
$8\omega_4^2\omega_5\omega_3^2\omega_3^2 - 8\omega_4^2\omega_1\omega_5\omega_2^2\omega_3^2 - 36\omega_4^2\omega_1^3\omega_5\omega_2 v_1^4 + 36\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3^2 - 28\omega_4^2\omega_1^2\omega_5\omega_3^2 cs^4\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 + 648\omega_4\omega_1^2\omega_5\omega_3^2 cs^2\omega_3^2 v_3^2 +$
$72\omega_4\omega_1^3\omega_5\omega_3^2 cs^2\omega_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2 v_1^4\omega_3^2 - 40\omega_4^2\omega_1^3\omega_5 cs^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 - 2\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3^2 - 8\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3^2 v_3^2 -$
$36\omega_4^2\omega_1^2\omega_5\omega_2 v_1^4\omega_3^2 - 36\omega_4\omega_1^2\omega_5\omega_2 v_1^2\omega_3 + 64\omega_4^2\omega_1\omega_5\omega_2^2 cs^2\omega_3^2 + 54\omega_4\omega_1^3\omega_5\omega_2 v_1^4\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 + 60\omega_4\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3^2 +$
$24\omega_4^2\omega_1\omega_5\omega_2\omega_3^2 v_3^2 - 96\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 v_3^2 + 48\omega_4^2\omega_1^3\omega_5 v_1^4\omega_3^2 + 18\omega_4^2\omega_1^2\omega_5\omega_3^2 v_1^2\omega_3^2 - 108\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3^2 - 54\omega_1^3\omega_5\omega_2 v_1^4\omega_3^2 -$
$72\omega_4^2\omega_1^3\omega_5\omega_2 v_1^4\omega_3^2 - 216\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_2 v_1^4 + 8\omega_4^2\omega_1\omega_5\omega_3^2 cs^4\omega_3^2 - 468\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3^2 - 36\omega_4\omega_1^3\omega_5\omega_2 v_1^2\omega_3^2 -$
$54\omega_4^2\omega_1^3\omega_5\omega_3^2 v_1^4\omega_3^2 - 88\omega_4^2\omega_5\omega_3^2 cs^2\omega_3^2 - 24\omega_4^2\omega_1\omega_5\omega_2 v_1^4\omega_3^2 - 36\omega_4\omega_1^2\omega_5\omega_2 v_1^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 + 108\omega_4^2\omega_1^2\omega_5\omega_3^2 cs^2 v_1^2\omega_3 -$
$108\omega_1^2\omega_5\omega_3^2 v_1^2\omega_3^2 + 160\omega_4^2\omega_1\omega_5\omega_3^2 cs^4\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2 v_1^2\omega_3 + 144\omega_4\omega_1^2\omega_5\omega_3^2 v_1^2\omega_3^2 + 264\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3 v_3^2 + 12\omega_4^2\omega_1^2\omega_5\omega_2 v_1^4\omega_3^2 +$
$162\omega_4^2\omega_1^3\omega_5\omega_3^2 cs^2 v_1^2 + 54\omega_4^2\omega_1^3\omega_5\omega_3^2 v_1^4 - 108\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3^2 - 288\omega_4^2\omega_1\omega_3^2 cs^4\omega_3^2 - 8\omega_4^2\omega_1\omega_5\omega_3^2\omega_3^2 - 18\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3^2 +$
$180\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 - 288\omega_4\omega_1\omega_5\omega_3^2 cs^4\omega_3^2 + 336\omega_4^2\omega_1\omega_5\omega_3^2 cs^2\omega_3 v_3^2 - 108\omega_4\omega_1\omega_5\omega_3^2 cs^2 v_1^2\omega_3^2 - 36\omega_4\omega_1\omega_5\omega_3^2 v_1^2\omega_3^2 + 4\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3^2 +$
$24\omega_4^2\omega_1\omega_5\omega_2\omega_3^2 v_3^2 - 112\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3 + 288\omega_4\omega_1^2\omega_5\omega_3^2 cs^4\omega_3^2 + 6\omega_4\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3^2 + 9\omega_4\omega_1^3\omega_5\omega_2 v_2^2\omega_3^2 - 8\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 +$
$2\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3^2 - 27\omega_4^2\omega_1\omega_5\omega_3^2 cs^2 v_2^2\omega_3 - 56\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3^2 - 648\omega_4\omega_1\omega_5\omega_3^2 cs^2\omega_3^2 v_3^2 - 12\omega_4^2\omega_1\omega_5\omega_2 v_1^2\omega_3^2 - 9\omega_4^2\omega_1^3\omega_5\omega_3^2 v_1^4\omega_3^2 -$
$216\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 - 16\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 + 48\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 v_3^2 + 36\omega_4\omega_1^2\omega_5\omega_3^2 v_1^4\omega_3^2 - 84\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_3^2 cs^2 v_1^2\omega_3^2 +$
$264\omega_4^2\omega_1^2\omega_5 cs^2\omega_3^2 cs^2 v_1^2\omega_3^2 - 54\omega_4^2\omega_1^3\omega_5\omega_2^2 v_1^2 + 360\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 - 216\omega_4^2\omega_1\omega_5\omega_2 cs^2\omega_3^2 - 54\omega_4\omega_1\omega_5\omega_3^2 v_1^2\omega_3^2 -$
$56\omega_4^2\omega_1\omega_5\omega_2 cs^4\omega_3^2 + 162\omega_4^2\omega_1^3\omega_5\omega_3^2 cs^2\omega_3 v_3^2 + 108\omega_4\omega_1^2\omega_5\omega_3^2 v_1^4\omega_3 - 24\omega_4^2\omega_1\omega_5\omega_2\omega_3^2 - 96\omega_4^2\omega_5\omega_3^2 v_1^2\omega_3^2 - 180\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3^2 -$
$108\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 + 8\omega_4^2\omega_1^3\omega_5\omega_3^2 + 16\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 + 300\omega_4^2\omega_1\omega_5\omega_3^2 cs^2 v_1^2\omega_3 + 132\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 - 18\omega_4^2\omega_1^2\omega_5\omega_3^2 v_1^4\omega_3^2 + 54\omega_1^3\omega_5\omega_3^2 v_1^2\omega_3^2 +$
$144\omega_4^2\omega_1^3\omega_5 v_1^2\omega_3^2 v_3^2 - 12\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2^2\omega_3^2 v_3^2 + 152\omega_4^2\omega_5\omega_3^2 cs^4\omega_3^2 + 54\omega_4^2\omega_1^3\omega_5\omega_3^2 v_1^2\omega_3 + 48\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3^2 +$
$36\omega_4\omega_1^3\omega_5\omega_2 v_1^4\omega_3^2 + 36\omega_4\omega_1\omega_5\omega_3^2 cs^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_3^2 cs^4\omega_3^2 + 108\omega_4\omega_1\omega_5\omega_3^2 v_1^4\omega_3^2 - 162\omega_4\omega_1^3\omega_5\omega_3^2 cs^2\omega_3^2 v_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_3^2 cs^4\omega_3^2 +$
$24\omega_4^2\omega_5\omega_3^2 v_1^2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 v_3^2 - 48\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1^3\omega_5 cs^2\omega_3^2\omega_3^2 - 180\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3^2 v_3^2 + 4\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 -$
$28\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 + 72\omega_4\omega_1\omega_5\omega_2 v_1^2\omega_3^2 - 72\omega_4\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 + 72\omega_4\omega_1^3\omega_5\omega_2 cs^2\omega_3^2 - 348\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3^2 + 32\omega_4^2\omega_1^3\omega_5 cs^4\omega_3^2 -$
$6\omega_4^2\omega_1\omega_5\omega_2 cs^2\omega_3^2 v_2^2\omega_3^2 - 162\omega_4^3\omega_1^3\omega_5\omega_3^2 cs^2 v_1^2\omega_3^2 + 132\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2\omega_3^2 + 56\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3^2 + 2\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_2\omega_3^2 v_3^2 -$
$120\omega_4^2\omega_1\omega_5\omega_3^2 cs^2\omega_3^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3^2 - 4\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3^2 + 36\omega_4\omega_1\omega_5\omega_3^2 v_1^4\omega_3^2 - 288\omega_4\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 + 112\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3^2 +$
$27\omega_4^2\omega_1\omega_5\omega_3^2 cs^2\omega_3^2 v_2^2\omega_3^2 - 9\omega_4\omega_1^3\omega_5\omega_3^2 cs^4\omega_3^2 + 288\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3^2 + 216\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3^2 - 2\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3^2 - 168\omega_4^2\omega_1\omega_5\omega_2 cs^2\omega_3^2\omega_3^2 -$
$216\omega_4^2\omega_5\omega_2 cs^2 v_1^2\omega_3^2 - 6\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 + 64\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 + 12\omega_4^2\omega_1\omega_5\omega_3^3 v_1^4\omega_3 - 6\omega_4^2\omega_5\omega_2 cs^2\omega_3^2 v_3^2 + 9\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3 +$
$16\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 + 36\omega_4^2\omega_1^3\omega_5\omega_2^2 v_1^2 + 216\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 + 108\omega_4^2\omega_1\omega_5\omega_2 cs^2 v_1^2\omega_3^2 - 288\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3^2 v_3^2 - 108\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2 +$

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$36\omega_4^2\omega_1^2\omega_5\omega_2^3v_3^4\omega_3 - 180\omega_4^2\omega_1^3\omega_5\omega_2^2cs^2\omega_3v_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2v_1^2\omega_3 + 180\omega_4^2\omega_1\omega_5\omega_2^3cs^2v_1^2\omega_3 + 36\omega_4^2\omega_1^3\omega_5\omega_2^2v_1^2\omega_3 + 72\omega_4^2\omega_1^2\omega_5\omega_2^3v_2^2 +$
$24\omega_4^2\omega_1^3\omega_5\omega_2v_1^4\omega_3 - 36\omega_4\omega_1^3\omega_5\omega_2^2v_1^4\omega_3 - 160\omega_4^2\omega_1\omega_5\omega_2^3cs^2\omega_3 + 108\omega_4^2\omega_1^2\omega_5\omega_2^2cs^2v_1^2\omega_3 + 108\omega_1^2\omega_5\omega_2^3v_1^4\omega_3 - 60\omega_4^2\omega_1^4\omega_5\omega_2^3cs^2v_1^2\omega_3 -$
$12\omega_4^2\omega_1^2\omega_5\omega_2^2v_1^2\omega_3 - 144\omega_4\omega_1^2\omega_5\omega_2^3v_1^4\omega_3 - 24\omega_4^2\omega_1\omega_5\omega_2^2cs^2v_1^2\omega_3 + 288\omega_4\omega_1\omega_5\omega_2^3cs^2\omega_3 + 18\omega_4^2\omega_1^3\omega_5\omega_2^2v_1^4\omega_3 + 240\omega_4^2\omega_5\omega_2^3cs^2\omega_3^2v_3^2$

$C_{39} = 4\omega_1^3v_2^2 + 6\omega_1^2\omega_2^2v_3^2 + 6\omega_1\omega_3^2 - 18\omega_1\omega_3^2cs^2 - 3\omega_1^3\omega_2v_1^2 - 12\omega_1\omega_2^2 + 4\omega_1^3v_1^2 + 2\omega_2^3v_3^2 - 4\omega_2^3v_2^2 + 36\omega_1\omega_2^2cs^2 + 6\omega_2^2v_1^2 - 3\omega_1^3\omega_2v_3^2 +$
$2\omega_2^3v_1^2 + 4\omega_1^3v_3^2 - 72\omega_1^2\omega_2cs^2 + 36\omega_1^2\omega_3^2cs^2 - 12\omega_1\omega_2v_2^2 - 3\omega_1\omega_3^3v_3^2 + 12\omega_1\omega_2^3v_2^2 - 6\omega_1^2\omega_2v_1^2 + 24\omega_1^2\omega_2 - 12\omega_1^2\omega_2^2 - 12\omega_1^3 - 18\omega_1^3\omega_2cs^2 -$
$3\omega_1\omega_3^3v_1^2 + 36\omega_1^3cs^2 + 6\omega_1^3\omega_2 - 6\omega_1^2\omega_2v_3^2$

$C_{40} = -63\omega_4\omega_1^3\omega_3^3\omega_2^2 + 72\omega_4^2\omega_1^2\omega_2^3v_2^2\omega_3 + 20\omega_4^2\omega_1^3\omega_2^2\omega_3v_3^2 + 48\omega_4^2\omega_1^2\omega_2^3\omega_3 - 144\omega_4^2\omega_1^3\omega_2cs^2\omega_3 - 36\omega_4\omega_1^2\omega_3^3\omega_2v_3^2 - 144\omega_4^2\omega_1^3\omega_3^2 -$
$144\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2 - 96\omega_4^2\omega_3^2\omega_2^3v_3^2 - 36\omega_4\omega_1\omega_3^3v_2^2\omega_3^2 + 36\omega_4^2\omega_1^3v_2^2\omega_2\omega_3 + 324\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 + 144\omega_4^2\omega_1^3\omega_2\omega_3 + 36\omega_4\omega_1^3\omega_2^2v_2^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^3v_2^2 -$
$72\omega_4\omega_1^3\omega_2^2\omega_3 - 36\omega_4\omega_1\omega_3^3v_2^2\omega_3 - 216\omega_4^2\omega_1^3\omega_2cs^2 + 432\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 + 20\omega_4^2\omega_1^3\omega_3^2\omega_2^2 + 336\omega_4^2\omega_1^3cs^2\omega_3 - 24\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 + 189\omega_4\omega_1^3\omega_3^2cs^2\omega_3^2 -$
$36\omega_4\omega_1^3\omega_2^2\omega_3^2v_3^2 + 36\omega_4\omega_1^2\omega_3^3v_2^2\omega_3^2 + 144\omega_4^2\omega_1^4\omega_3^2\omega_2\omega_3v_3^2 + 72\omega_4^2\omega_3^2v_1^2\omega_3 - 324\omega_4\omega_1^3\omega_3^2cs^2\omega_3 + 216\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3 - 72\omega_4^2\omega_1\omega_2^2cs^2\omega_3^2 +$
$108\omega_4^2\omega_1\omega_3^2\omega_3^2v_3^2 + 24\omega_4^2\omega_3^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_3^3v_3^2 - 63\omega_4^2\omega_1^3\omega_3^2\omega_2^2v_3^2 + 48\omega_4^2\omega_1^3\omega_2\omega_3 + 12\omega_4^2\omega_1\omega_3^3v_2^2\omega_3 - 36\omega_4\omega_1^3v_2^2\omega_3^2\omega_3 + 36\omega_4^2\omega_1^2\omega_2^2\omega_3^3v_3^2 +$
$72\omega_4\omega_1^3\omega_2^2\omega_3 - 108\omega_4^2\omega_1^2\omega_3^3\omega_3 - 432\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 - 36\omega_4^2\omega_1^2\omega_2^3\omega_3v_3^2 - 60\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 - 108\omega_4^2\omega_1\omega_3^2v_1^2\omega_3^2 + 324\omega_4^2\omega_1^3\omega_3^2cs^2 -$
$189\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 + 108\omega_4\omega_1^3\omega_3^2\omega_3 + 72\omega_4\omega_1\omega_3^3\omega_3^2v_3^2 - 108\omega_4^2\omega_1^2\omega_2^3\omega_3 + 12\omega_4^2\omega_1^2v_2^2\omega_3 + 48\omega_4^2\omega_3^2v_2^2\omega_3 - 360\omega_4^2\omega_1^3\omega_2cs^2\omega_3 - 36\omega_4\omega_1\omega_3^3\omega_3^2 +$
$36\omega_4\omega_1^3\omega_3^2v_2^2\omega_3 + 63\omega_4\omega_1^3\omega_3^3\omega_2^2v_3^2 - 216\omega_4\omega_1^3\omega_2cs^2\omega_3^2 - 36\omega_4\omega_1\omega_3^3cs^2\omega_3 - 60\omega_4^2\omega_1^2\omega_3^2\omega_3v_3^2 - 216\omega_4^2\omega_1^2\omega_2v_1^2\omega_3 - 54\omega_1^3\omega_3^2\omega_3v_3^2 - 108\omega_1^2\omega_3^2v_2^2\omega_3^2 +$
$72\omega_4\omega_1^3\omega_3^2 + 12\omega_4\omega_1\omega_3^3\omega_2\omega_3 + 96\omega_4^2\omega_1^2\omega_2\omega_3 - 48\omega_4^2\omega_1\omega_3^2v_2^2\omega_3 + 48\omega_4^2\omega_1^3\omega_3^2v_3^2 + 54\omega_4^2\omega_1^3\omega_3^2v_3^2 - 108\omega_4\omega_1\omega_3^3\omega_2^2\omega_3 - 36\omega_4\omega_1^2\omega_3^3v_3^2 - 24\omega_4^2\omega_1^3v_3^2 -$
$36\omega_4^2\omega_1^3\omega_2v_2^2\omega_3 + 24\omega_4^2\omega_1^2\omega_2\omega_3v_3^2 - 120\omega_4^2\omega_3^2cs^2\omega_3 - 144\omega_4^2\omega_1^3\omega_2cs^2\omega_3 - 108\omega_4^2\omega_1^3\omega_2\omega_3 + 144\omega_4^2\omega_3^3v_1^2\omega_3^2 + 144\omega_4\omega_1^2\omega_2^3\omega_3 + 60\omega_4^2\omega_1^3\omega_2^2cs^2\omega_3 +$
$24\omega_4^2\omega_1\omega_2^3\omega_3 - 108\omega_4^2\omega_1^3\omega_3^2 - 36\omega_4^2\omega_1^3\omega_3^2v_2^2\omega_3 - 20\omega_4^2\omega_1^3\omega_2^2\omega_3 - 144\omega_4^2\omega_1^2\omega_3^2\omega_3 - 36\omega_4^2\omega_1^3\omega_3^2v_2^2 + 324\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 - 432\omega_4^2\omega_1^2\omega_3^2cs^2 +$
$108\omega_4\omega_1\omega_3^3cs^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_2\omega_3^2v_3^2 - 48\omega_4^2\omega_1^3\omega_2v_2^2\omega_3^2 + 36\omega_4\omega_1^3\omega_2^2\omega_3v_3^2 - 24\omega_4^2\omega_1^3\omega_2v_2^2\omega_3 + 180\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 - 20\omega_4^2\omega_1^3\omega_3^2\omega_3^2v_3^2 +$
$54\omega_1^3\omega_3^2v_2^2\omega_3 + 108\omega_1^2\omega_3^2\omega_3^2v_3^2 - 36\omega_4\omega_1\omega_3^3\omega_3^2 - 108\omega_4^2\omega_1^3\omega_2v_1^2\omega_3 + 72\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 + 144\omega_4^2\omega_1^3\omega_2^2 + 216\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 + 63\omega_4^2\omega_1^3\omega_3^3\omega_3 -$
$180\omega_4^2\omega_1^3\omega_3^2\omega_3^2v_3^2 - 72\omega_4^2\omega_1^3\omega_2^2\omega_3 + 24\omega_4^2\omega_1^3\omega_2^2\omega_3v_3^2 + 48\omega_4^2\omega_1^3v_2^2\omega_3 + 180\omega_4^2\omega_1^2\omega_3^2v_2^2\omega_3 + 180\omega_4^2\omega_1\omega_3^2cs^2\omega_3 + 216\omega_4\omega_1^3\omega_3^2cs^2\omega_3 + 54\omega_4^2\omega_1^3\omega_3^2v_3^2$

$C_{41} = \omega_4\omega_1^2\omega_3^2v_1^2\omega_3 - 3\omega_4\omega_1^2\omega_2\omega_3v_3^2 + 4\omega_4\omega_1^3\omega_3^2v_3^2 - 2\omega_4\omega_1\omega_2\omega_3 + 20\omega_4\omega_1^2\omega_2\omega_3^2 - 3\omega_4\omega_1^2\omega_3^3\omega_3v_3^2 - 3\omega_1^3\omega_3^2v_1^2\omega_3 - 2\omega_4\omega_1^3\omega_2\omega_3v_3^2 -$
$4\omega_4\omega_1\omega_2^3\omega_3^2 - 18\omega_1^2\omega_3^3cs^2\omega_3 - 36\omega_4\omega_1^2\omega_2cs^2\omega_3^2 - 6\omega_4\omega_1^3\omega_2^2\omega_3 - 6\omega_4\omega_1^2\omega_3^2 + \omega_4\omega_1\omega_3^3v_1^2\omega_3 - 18\omega_4\omega_1^2\omega_3^2cs^2\omega_3 + 4\omega_4\omega_1^3v_1^2\omega_3^2 - 6\omega_1^2\omega_2^3\omega_3^2 -$
$3\omega_4\omega_1\omega_3^2v_3^2 - 3\omega_1^3\omega_2\omega_3^2v_3^2 - 12\omega_4\omega_1^2\omega_2cs^2\omega_3 + 20\omega_4\omega_3^2cs^2\omega_3 + 6\omega_1^2\omega_3^3\omega_3 - 18\omega_4\omega_1^3\omega_2cs^2\omega_3 + 18\omega_1^2\omega_3^2cs^2\omega_3 - 3\omega_1\omega_3^3v_1^2\omega_3 + 3\omega_1^2\omega_2^2\omega_3v_3^2 +$
$6\omega_4\omega_1^2\omega_3^2\omega_3^2v_3^2 + 6\omega_4\omega_1^3\omega_2^2 - 3\omega_4\omega_1\omega_3^3v_1^2\omega_3 + 18\omega_4\omega_1^2\omega_3^2cs^2 + 3\omega_1^3\omega_3^2v_1^2\omega_3 + 12\omega_4\omega_1^3v_2^2\omega_3 - 6\omega_1^2\omega_2^2\omega_3 + 3\omega_4\omega_1^3\omega_2^2v_1^2\omega_3 + 6\omega_4\omega_1^2\omega_3^2v_1^2\omega_3 -$
$12\omega_4\omega_1\omega_3^2cs^2\omega_3 - 3\omega_4\omega_1\omega_3^3v_3^2 + 6\omega_4\omega_1\omega_3^3\omega_3 - 3\omega_1\omega_3^3\omega_3v_3^2 + 3\omega_1^2\omega_2^2v_1^2\omega_3 - 3\omega_4\omega_1\omega_3^2v_1^2 - 4\omega_4\omega_2^3\omega_3^2 - 18\omega_1^3\omega_2^2cs^2\omega_3 + 4\omega_4\omega_2^3\omega_3^2v_3^2 +$
$\omega_4\omega_1\omega_3^3\omega_3v_3^2 + 3\omega_4\omega_1^2\omega_3^2v_1^2 - 4\omega_4\omega_1^3\omega_2\omega_3v_3^2 + 6\omega_4\omega_1^2\omega_2^2cs^2\omega_3 - 2\omega_4\omega_1^2\omega_2\omega_3 - 2\omega_4\omega_1^3\omega_2v_1^2\omega_3 + 4\omega_4\omega_2^3v_1^2\omega_3 + 36\omega_4\omega_1\omega_2^2v_2^2\omega_3 - 6\omega_1^3\omega_2\omega_3 -$
$18\omega_4\omega_1^3\omega_2cs^2 + 6\omega_4\omega_1\omega_2^2cs^2\omega_3 - 3\omega_4\omega_1^2\omega_3^2v_1^2\omega_3 + 28\omega_4\omega_1^3cs^2\omega_3 - 3\omega_1^2\omega_3^2v_1^2\omega_3 - 4\omega_4\omega_1^2\omega_2v_1^2\omega_3 + 6\omega_4\omega_1^3\omega_2\omega_3 + \omega_4\omega_1^2\omega_2^2\omega_3v_3^2 -$
$4\omega_4\omega_1\omega_2^2\omega_3^2v_3^2 - 12\omega_4\omega_1^3\omega_3^2 + 6\omega_4\omega_1^2\omega_3^3\omega_3 - 18\omega_1\omega_1^3cs^2\omega_3 + 3\omega_1^3\omega_3^2v_1^2\omega_3 - 18\omega_1\omega_3^3cs^2\omega_3 + 4\omega_4\omega_3^3\omega_2\omega_3 + 3\omega_4\omega_1^3\omega_3^2\omega_3v_3^2 -$
$3\omega_4\omega_1^3\omega_2v_1^2\omega_3 + 3\omega_4\omega_1^2\omega_3^2v_3^2 + 6\omega_1^3\omega_2^2\omega_3 + 3\omega_1^3\omega_2\omega_3v_3^2 + 3\omega_1^2\omega_2^2\omega_3^2v_3^2 - 12\omega_4\omega_3^2v_2^2\omega_3 + 18\omega_4\omega_1^2\omega_2cs^2\omega_3 + 36\omega_4\omega_1^2\omega_2cs^2\omega_3^2 - 4\omega_4\omega_1\omega_3^2v_1^2\omega_3 -$
$12\omega_4\omega_1^2\omega_2\omega_3 + 18\omega_4\omega_1^3\omega_3^2cs^2\omega_3 + 18\omega_1^3\omega_3^2cs^2\omega_3 - 36\omega_4\omega_1^2\omega_2v_2^2\omega_3 - 3\omega_4\omega_1^3\omega_2\omega_3v_3^2 + 6\omega_1\omega_3^3\omega_3^2$

$C_{42} = -63\omega_4\omega_1^3\omega_3^3\omega_2^2 + 72\omega_4^2\omega_1^2\omega_2^3v_2^2\omega_3 + 48\omega_4^2\omega_1^2\omega_2\omega_3 - 144\omega_4^2\omega_1^3\omega_2cs^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^3v_1^2 - 144\omega_4^2\omega_1^3\omega_3^2 - 144\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2 + 72\omega_4^2\omega_3^2\omega_3^2v_3^2 -$
$36\omega_4\omega_1\omega_3^3v_2^2\omega_3^2 + 36\omega_4^2\omega_1^3v_2^2\omega_2\omega_3 - 36\omega_4\omega_1^3\omega_2^2v_1^2\omega_3 - 24\omega_4\omega_1^3\omega_2v_1^2\omega_3 + 324\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 + 144\omega_4^2\omega_1^3\omega_2\omega_3 + 36\omega_4\omega_1^3\omega_2^2v_2^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^3v_2^2 -$
$72\omega_4\omega_1^3\omega_2^2\omega_3 - 36\omega_4\omega_1\omega_2^2v_2^2\omega_3 - 216\omega_4^2\omega_1^3\omega_2cs^2 + 432\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 + 20\omega_4^2\omega_1^3\omega_3^2\omega_2^2 + 336\omega_4^2\omega_1^3cs^2\omega_3 + 20\omega_4^2\omega_1^3\omega_2^2v_1^2\omega_3 - 60\omega_4^2\omega_1^2\omega_2v_1^2\omega_3 +$
$189\omega_4\omega_1^3\omega_3^2cs^2\omega_3 + 36\omega_4\omega_1^2\omega_2^2v_2^2\omega_3 - 96\omega_4^2\omega_2^3v_1^2\omega_3 - 324\omega_4\omega_1^3\omega_3^2cs^2\omega_3 - 36\omega_4^2\omega_1^2v_2^2v_1^2\omega_3 - 72\omega_4\omega_1\omega_2^2cs^2\omega_3 - 108\omega_4\omega_1\omega_3^3\omega_2^2v_3^2 +$
$24\omega_4^2\omega_3^2\omega_3^2 + 48\omega_4^2\omega_3^2\omega_2\omega_3 + 12\omega_4^2\omega_1\omega_3^3v_2^2\omega_3 - 36\omega_4\omega_1^3v_2^2\omega_3^2\omega_3 + 72\omega_4^2\omega_1^3\omega_2^2\omega_3 + 72\omega_4^2\omega_1^3\omega_2v_1^2\omega_3 - 108\omega_4^2\omega_1^2\omega_3^3\omega_3 - 432\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 +$
$72\omega_4\omega_1^3\omega_3^2v_1^2\omega_3 + 216\omega_4^2\omega_1^2\omega_2^3v_3^2 - 60\omega_4^2\omega_1^3\omega_2cs^2\omega_3 + 108\omega_4\omega_1\omega_3^2v_1^2\omega_3 + 36\omega_4\omega_1^3\omega_2v_1^2\omega_3 + 324\omega_4^2\omega_1^3\omega_3^2cs^2 + 36\omega_4\omega_1^2\omega_3^2v_1^2\omega_3 -$
$189\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 + 108\omega_4\omega_1^3\omega_3^2\omega_3 - 108\omega_4^2\omega_1^2\omega_2^3\omega_3 + 12\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3 + 48\omega_4^2\omega_3^2v_2^2\omega_3 - 360\omega_4^2\omega_1^3\omega_2cs^2\omega_3 - 36\omega_4\omega_1\omega_3^3\omega_3^2 + 36\omega_4\omega_1^3\omega_3^2v_2^2\omega_3 -$
$216\omega_4\omega_1^3\omega_2cs^2\omega_3^2 - 36\omega_4\omega_1\omega_3^3cs^2\omega_3 + 144\omega_4^2\omega_1\omega_2^3v_1^2\omega_3 + 24\omega_4^2\omega_1^2\omega_2v_1^2\omega_3 - 108\omega_1^3\omega_3^2v_2^2\omega_3^2 - 24\omega_4^2\omega_3^2\omega_2v_1^2\omega_3 + 72\omega_4^2\omega_1^3\omega_3^2 + 12\omega_4^2\omega_1\omega_2^3\omega_3 +$
$96\omega_4^2\omega_1^2\omega_2\omega_3 - 48\omega_4^2\omega_1\omega_3^2v_2^2\omega_3 + 144\omega_4^2\omega_1^3\omega_3^2v_3^2 + 54\omega_4^2\omega_1^3\omega_3^2v_3^2 - 108\omega_4\omega_1\omega_3^3\omega_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2v_2^2\omega_3 - 216\omega_4^2\omega_1^2\omega_2\omega_3v_3^2 - 54\omega_1^3\omega_3^2v_1^2\omega_3 -$
$120\omega_4^2\omega_3^2cs^2\omega_3 - 144\omega_4^2\omega_1^2\omega_2cs^2\omega_3 + 63\omega_4\omega_1^3\omega_3^2v_1^2\omega_3 - 108\omega_4^2\omega_1^3\omega_2\omega_3 - 36\omega_4\omega_1^2\omega_3^2v_1^2\omega_3 + 48\omega_4^2\omega_3^3v_1^2\omega_3 + 144\omega_4\omega_1^2\omega_2^3\omega_3 + 60\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 +$
$24\omega_4^2\omega_1\omega_2^3\omega_3 + 54\omega_4^2\omega_1^3\omega_3^2v_1^2 - 108\omega_4^2\omega_1^3\omega_3^2 - 36\omega_4^2\omega_1^3\omega_3^2v_2^2\omega_3 - 20\omega_4^2\omega_1^3\omega_2^2\omega_3 - 144\omega_4^2\omega_1^2\omega_3^2\omega_3 - 36\omega_4^2\omega_1^3\omega_3^2v_2^2 + 324\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 -$
$180\omega_4\omega_1^2\omega_3^3v_1^2\omega_3 - 432\omega_4^2\omega_1^2\omega_3^2cs^2 + 108\omega_4\omega_1\omega_3^3cs^2\omega_3^2 + 108\omega_1^2\omega_3^3v_1^2\omega_3 - 108\omega_4^2\omega_3\omega_2\omega_3^2v_3^2 - 48\omega_4^2\omega_3^2\omega_2v_2^2\omega_3 - 24\omega_4^2\omega_1\omega_2v_2^2\omega_3 +$
$180\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 + 24\omega_4^2\omega_1\omega_2v_1^2\omega_3 + 54\omega_1^3\omega_3^2v_2^2\omega_3 - 36\omega_4\omega_1\omega_3^3\omega_3^2 - 72\omega_4^2\omega_3^2\omega_2v_1^2\omega_3 - 36\omega_4\omega_1^3\omega_3^2v_1^2 + 144\omega_4^2\omega_1^2\omega_2^2 + 216\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3 -$
$63\omega_4^2\omega_1^3\omega_3^2v_1^2\omega_3 + 63\omega_4\omega_1^3\omega_3^2\omega_3 - 72\omega_4\omega_1^2\omega_2^2\omega_3 + 48\omega_4^2\omega_1^3v_2^2\omega_3 + 180\omega_4\omega_1^2\omega_3^2v_2^2\omega_3 - 20\omega_4^2\omega_1^3\omega_3^2v_1^2\omega_3 + 180\omega_4^2\omega_1\omega_3^2cs^2\omega_3 + 216\omega_4\omega_1^3\omega_3^2cs^2\omega_3$

$C_{43} = 4\omega_1^3\omega_3^2 - 72\omega_1\omega_2^2v_2^4\omega_3 + 8\omega_2^3\omega_3^2v_3^2 + 36\omega_2^2\omega_3^2cs^4 - 20\omega_1^3\omega_2cs^2\omega_3^2v_3^2 + 22\omega_1\omega_3^2cs^2\omega_3^2v_3^2 - 216\omega_1\omega_2^2cs^2v_2^2\omega_3^2 - 60\omega_1\omega_2^3v_2^2\omega_3^2 +$
$24\omega_1\omega_3^2cs^4\omega_3 - 36\omega_2^2cs^4\omega_3^2 + 216\omega_1^2\omega_2^2cs^2v_2^2\omega_3 - 2\omega_1^2\omega_3^2cs^2\omega_3^2v_3^2 + 18\omega_1^2\omega_3^2cs^2\omega_3 + 6\omega_1^2\omega_3^2cs^4\omega_3 + 40\omega_1^2\omega_2cs^2\omega_3^2 + 24\omega_1^3\omega_2^2v_2^2\omega_3v_3^2 -$
$\omega_1^2\omega_3^2\omega_3^2 - 52\omega_1^3cs^2\omega_3^2 + 12\omega_1^2\omega_3^2cs^2v_3^2 + 4\omega_1^3\omega_2cs^2\omega_3 + 12\omega_1^3\omega_2^2cs^2 - 12\omega_1^2\omega_2^2cs^4\omega_3 - 24\omega_1^2\omega_2^2v_2^2\omega_3 - \omega_1^2\omega_3^2\omega_3v_3^2 - 36\omega_1^3\omega_2v_2^4\omega_3 - 4\omega_1^3\omega_2\omega_3 +$
$42\omega_1^2\omega_2^2cs^4\omega_3 - 8\omega_2^3\omega_3^2 + 56\omega_1^3\omega_2cs^2\omega_3^2 - 72\omega_2^3v_2^2\omega_3v_3^2 + 24\omega_1^3v_2^4\omega_3 - 2\omega_1^2\omega_2cs^2\omega_3^2v_3^2 - 72\omega_2^2\omega_3cs^2v_2^2\omega_3 + 5\omega_1^2\omega_3^2cs^2\omega_3 + 4\omega_1^2\omega_2^2\omega_3v_3^2 -$
$24\omega_1^3v_2^2\omega_3^2 + 54\omega_1^3\omega_2^2cs^4\omega_3 + 24\omega_1^3v_2^2\omega_3^2v_3^2 - 324\omega_1^3\omega_2cs^2v_2^2\omega_3^2 + 24\omega_1^3\omega_2^2v_2^2 + 24\omega_1^2\omega_2v_2^2\omega_3^2v_3^2 - 4\omega_1^2\omega_2^2\omega_3v_3^2 + 42\omega_1\omega_3^2cs^4\omega_3^2 +$
$18\omega_1^3\omega_2cs^2\omega_3v_3^2 - 8\omega_1\omega_2\omega_3^2v_3^2 + 108\omega_1\omega_3^2cs^2v_2^2\omega_3 + 8\omega_1\omega_2\omega_3^2cs^2\omega_3v_3^2 - 8\omega_1\omega_3^2\omega_2cs^2\omega_3 - 54\omega_1^3v_2^2\omega_3^2 - 4\omega_1^3\omega_3v_3^2 - 36\omega_2^2cs^4\omega_3^2 -$
$5\omega_1^3\omega_2cs^2\omega_3^2 - 4\omega_1^3\omega_2\omega_3^2 + 216\omega_1^2cs^2v_2^2\omega_3 + 24\omega_1^2\omega_2v_2^2\omega_3^2 + 72\omega_1^2cs^4\omega_3^2 + 4\omega_1^2\omega_2^2cs^2\omega_3 + 2\omega_1^3\omega_3^2cs^2\omega_3^2v_3^2 - 12\omega_1^3\omega_2cs^4\omega_3 + 84\omega_1^3\omega_2v_2^2\omega_3^2 +$
$4\omega_1^2\omega_2\omega_3v_3^2 + 72\omega_1^2\omega_2v_2^4\omega_3^2 - 24\omega_1^2\omega_3^2\omega_2\omega_3v_3^2 + 48\omega_1\omega_2^2v_2^2\omega_3^2 + 8\omega_1\omega_2^3\omega_3 - 4\omega_1^2\omega_3^2cs^2\omega_3v_3^2 + 96\omega_1\omega_3^2v_2^2\omega_3v_3^2 - 48\omega_3^3v_2^2\omega_3^2v_3^2 - 36\omega_1\omega_3^2v_2^4\omega_3^2 -$
$8\omega_1\omega_3^2cs^2\omega_3 + 20\omega_3^2cs^2\omega_3^2 + 24\omega_1\omega_3^2v_2^2\omega_3^2v_3^2 - 18\omega_1^2\omega_3^2cs^2\omega_3v_3^2 + 48\omega_3^2v_2^4\omega_3^2 - 22\omega_1\omega_3^2cs^2\omega_3^2 - 8\omega_1\omega_3^2\omega_3v_3^2 - 4\omega_1^2cs^2\omega_3^2v_3^2 - 12\omega_1^2\omega_3^2cs^2 +$
$\omega_1^3\omega_3^2\omega_3^2 + \omega_1^2\omega_3^2\omega_3v_3^2 + 16\omega_1^3cs^2\omega_3^2v_3^2 - 36\omega_1^3\omega_2cs^4 - 84\omega_1^3\omega_2cs^4\omega_3^2 - 34\omega_1^2\omega_2cs^2\omega_3^2 - 12\omega_1^3\omega_2cs^2v_3^2 - 4\omega_1^3\omega_2cs^2\omega_3v_3^2 - 48\omega_1^3v_2^2\omega_3^2 -$
$48\omega_1^2\omega_2v_2^2\omega_3^2v_3^2 - 6\omega_1^2\omega_3^2cs^4\omega_3^2 + 4\omega_1^3\omega_2\omega_3v_3^2 - 20\omega_3^2cs^2\omega_3^2v_3^2 - 24\omega_1^2\omega_2v_2^2\omega_3^2 + 8\omega_1\omega_3^2cs^2\omega_3v_3^2 + 72\omega_1^3\omega_2cs^2v_2^2\omega_3^2 - 18\omega_1^3\omega_2cs^2\omega_3 + 8\omega_1\omega_2^3\omega_3^2$

$C_{44} = -5\omega_1^2\omega_2^3\omega_3v_3^2 - 6\omega_1^2\omega_2^2v_2^2 - 54\omega_1\omega_2cs^2\omega_3 - 12\omega_1\omega_3^2 - 18\omega_1^2\omega_2\omega_3v_3^2 + 36\omega_1\omega_2^3cs^2 + 84\omega_3^2v_2^2\omega_3 - 51\omega_1^2\omega_2^2\omega_3 - 15\omega_1^2\omega_3^2cs^2\omega_3 +$
$6\omega_1\omega_2^3v_3^2 - 108\omega_1^3\omega_2cs^2\omega_3 + 27\omega_1^3\omega_2^2cs^2 - 12\omega_2^3\omega_3 + 5\omega_1^2\omega_3^2\omega_3 + 84\omega_1^3cs^2\omega_3 + 48\omega_1^3\omega_2\omega_3 + 132\omega_1^2\omega_2^2v_2^2\omega_3 - 9\omega_1^2\omega_3^2v_3^2 - 6\omega_1^3\omega_2v_3^2 -$
$18\omega_1^2\omega_2cs^2\omega_3 + 12\omega_1\omega_3^2v_3^2 - 66\omega_1\omega_2^2v_2^2\omega_3 - 36\omega_1^3\omega_3 + 6\omega_1^3\omega_2\omega_3v_3^2 - 18\omega_1^2\omega_2^2cs^2 - 12\omega_1\omega_2v_2^2\omega_3 + 3\omega_1\omega_2^3\omega_3 + 81\omega_1^2\omega_2^2cs^2\omega_3 + 48\omega_1^3v_2^2\omega_3 +$

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$$27\omega_1\omega_2^3\omega_3 v_3^2 - 9\omega_1^3\omega_2^2 + 12\omega_1\omega_3^3 v_3^2 - 5\omega_1^3\omega_2\omega_3 - 9\omega_1^3\omega_2^2\omega_3 v_3^2 + 27\omega_1\omega_3^2 cs^2\omega_3 + 9\omega_1^3\omega_2^2 v_3^2 + 6\omega_1^2\omega_2^2 - 12\omega_2^2 cs^2\omega_3 - 120\omega_1\omega_2^2 v_2^2\omega_3 -$$
$$18\omega_1^3\omega_2 cs^2 + 42\omega_1\omega_2^2\omega_3 - 27\omega_1^2\omega_2^2 cs^2 + 5\omega_1^3\omega_2^2 v_2^2 v_3 + 9\omega_1^2\omega_2^3 - 66\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_1^3\omega_2 - 24\omega_2^2\omega_3 v_3^2 + 15\omega_1^2\omega_2^2 cs^2\omega_3 + 6\omega_1^2\omega_2\omega_3$$

$C_{45} = -852\omega_4^2\omega_1\omega_2^3 cs^2 v_2^2\omega_3 + 48\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 v_3^2 + 240\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 - 6\omega_4^2\omega_1^3\omega_2^2\omega_3^2 v_3 + 162\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2 - 108\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3^2 + 80\omega_4^2\omega_2^3 cs^4\omega_3^2 -$
$16\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 40\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 - 72\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 - 117\omega_4^2\omega_1^3 v_3^2 v_2^4\omega_3^2 + 144\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3^2 v_3^2 + 40\omega_4^2\omega_1^2\omega_3^2 v_2^4\omega_3^2 -$
$2\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2^2 v_2^2 + 64\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 + 48\omega_4^2\omega_2^3\omega_3^2 v_3^2 + 72\omega_4\omega_1\omega_3^3 v_2^2\omega_3^2 - 492\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3^2 - 108\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 +$
$36\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 540\omega_4\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 + 288\omega_4^2\omega_1^2\omega_3^2 v_2^4\omega_3^2 + 16\omega_4^2\omega_1\omega_3 cs^4\omega_3^2 - 8\omega_4^2\omega_1^3\omega_2\omega_2^2 - 108\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 + 36\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 +$
$72\omega_4^2\omega_1^2\omega_2^3 v_2^2 + 96\omega_4^2\omega_1\omega_3^2 v_2^2\omega_3^2 - 108\omega_1^2\omega_2^3 v_2^4\omega_3^2 - 2\omega_4^2\omega_1^3\omega_2^2\omega_3^2 - 40\omega_4^2\omega_1^3 cs^2\omega_3^2 - 18\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 + 24\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 + 174\omega_4^2\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3^2 +$
$36\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3^2 + 108\omega_4\omega_1^3\omega_3^3 v_2^4\omega_3 + 96\omega_4^2\omega_1\omega_2^2 v_2^4\omega_3^2 - 108\omega_4\omega_1^2\omega_2^3 cs^2 v_2^2\omega_3 + 54\omega_3^3\omega_2^2 v_2^4\omega_3^2 - 32\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 + 468\omega_4^2\omega_1^4\omega_3^3 cs^2 v_2^2\omega_3 -$
$48\omega_4^2\omega_1\omega_3^3\omega_3^2 v_3^2 - 16\omega_4^2\omega_3^3\omega_3^2 - 117\omega_4\omega_1^3\omega_3^3 v_3^2 v_2^4\omega_3^2 + 54\omega_4^2\omega_1^3\omega_3^3 v_3^4 - 324\omega_4^2\omega_1^3\omega_3 cs^2 v_2^2\omega_3^2 - 180\omega_4\omega_1^2\omega_3^3 v_3^2\omega_3 + 648\omega_4\omega_1^2\omega_3 cs^2 v_2^4\omega_3^2 + 48\omega_4^2\omega_1^3 v_3^4\omega_3^2 +$
$144\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3^2 v_3^2 - 172\omega_4^2\omega_1\omega_3^3 cs^4\omega_3^2 + 24\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3^2 - 492\omega_4^2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3^2 + 12\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3^2 v_3^2 + 72\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3^2 +$
$144\omega_4^2\omega_1^3 v_3^2\omega_3^2 v_3^2 + 216\omega_4^2\omega_1^2\omega_3^3 v_2^4\omega_3^2 + 72\omega_4\omega_1\omega_3^3 cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 24\omega_4^2\omega_1^2\omega_2^3\omega_3^2 - 86\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3^2 - 12\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 v_3^2 +$
$336\omega_4^2\omega_1\omega_2^2 cs^2 v_2^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3^2 + 96\omega_4^2\omega_1^2\omega_2 v_2^4\omega_3^2 - 216\omega_4^2\omega_1^2\omega_3^3 cs^2 v_2^2 - 36\omega_4^2\omega_1^3\omega_3 cs^2\omega_3^2 - 18\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 - 12\omega_4\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 -$
$8\omega_4^2\omega_1^3\omega_2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3 + 60\omega_4^2\omega_1^2 v_2^2\omega_3^2\omega_3 - 432\omega_4^2\omega_3^3 v_2^2\omega_3^2 v_3^2 + 72\omega_4\omega_1\omega_3^3 cs^2 v_2^2\omega_3^2 + 20\omega_4^2\omega_2^2 cs^2 cs^4\omega_3^2 - 48\omega_4^2\omega_3^3 v_2^2\omega_3^2 +$
$36\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_3^3 v_2^4\omega_3^2 + 168\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3^2 - 288\omega_4^2\omega_1^2\omega_3^3 v_2^2\omega_3^2 - 16\omega_4^2\omega_1\omega_3^3 cs^2\omega_3 - 288\omega_4^2\omega_1^2\omega_3^2 v_2^2\omega_3^2 v_3^2 - 288\omega_4\omega_1\omega_3^3 v_2^4\omega_3^2 -$
$297\omega_4\omega_1^3\omega_3^3 cs^2 v_2^2\omega_3^2 - 36\omega_4\omega_1^3\omega_2 v_2^4\omega_3^2 + 32\omega_4^2\omega_1^3 cs^4\omega_3^2 - 96\omega_4^2\omega_1\omega_3^3 cs^2\omega_3^2 v_3^2 + 108\omega_1^2\omega_3^3 v_2^2\omega_3^2 + 18\omega_4^2\omega_1^3\omega_3 cs^4\omega_3^2 + 48\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 -$
$8\omega_4^2\omega_1^3\omega_2\omega_3^2 - 36\omega_4\omega_1^3\omega_2 v_2^4\omega_3^2 + 162\omega_1^3\omega_3^3 cs^2 v_2^2\omega_3^2 - 108\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3^2 - 144\omega_4\omega_1\omega_3^3 v_2^2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_3^2 v_3^2 - 297\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3^2 -$
$54\omega_4^2\omega_1^3\omega_2 v_2^2 - 108\omega_4\omega_1^3\omega_3^3 v_2^2\omega_3^2 - 6\omega_4^2\omega_1^3\omega_3 cs^4\omega_3^2 + 432\omega_4^2\omega_3^3 cs^2 v_2^2\omega_3^2 + 204\omega_4\omega_1^3\omega_2 v_2^2\omega_3^2 + 24\omega_4^2\omega_1\omega_3^2 v_2^2\omega_3^2 + 8\omega_4^2\omega_3^3 cs^2\omega_3^2 -$
$144\omega_4^2\omega_1^2\omega_3^2 v_2^4\omega_3^2 - 40\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 + 16\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 + 117\omega_4\omega_1^3\omega_3^3\omega_3^2 v_2^2\omega_3 - 96\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 v_3^2 - 108\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2 + 264\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3^2 +$
$8\omega_4^2\omega_1^3 v_2^2\omega_3^2\omega_3^2 - 56\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 + 108\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3 + 16\omega_4\omega_1\omega_2^2\omega_3^2 + 144\omega_4\omega_1\omega_2^2 v_2^2\omega_3^2 v_3^2 - 72\omega_4\omega_1\omega_3^3 v_2^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 +$
$72\omega_4^2\omega_1^3\omega_3^3 cs^2\omega_3 v_3^2 - 216\omega_4^2\omega_1^2\omega_3^3 v_2^2\omega_3 + 264\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3^2 + 2\omega_4^2\omega_1^3\omega_2^2\omega_3^2 + 36\omega_4^2\omega_1^3\omega_2^2 v_2^2 + 36\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 - 72\omega_4\omega_1\omega_3^3 cs^2\omega_3^2 +$
$24\omega_4^2\omega_1^3\omega_2\omega_2 v_2^2 v_3^3 + 24\omega_4^2\omega_3^3 cs^2\omega_3^2 v_3^2 - 144\omega_4^2\omega_1\omega_2 v_2^2\omega_3^2 + 38\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3^2 - 288\omega_4^2\omega_1^3 v_2\omega_3^2\omega_3^2 v_3^2 + 86\omega_4^2\omega_1^3\omega_3 cs^4\omega_3^2 + 48\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 +$
$18\omega_4^2\omega_1^3\omega_3 cs^4\omega_3 - 60\omega_4^2\omega_1^2\omega_2 v_2^4\omega_3^2 + 24\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 + 576\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3^2 v_3^2 + 192\omega_4^2\omega_3^3 v_2^4\omega_3^2 - 28\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 - 12\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 -$
$24\omega_4^2\omega_1^3\omega_3^2 v_2^2\omega_3^2 + 6\omega_4^2\omega_1^3\omega_2^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1 cs^2\omega_3^2 v_3^2 + 16\omega_4^2\omega_1\omega_2 cs^4\omega_3^2 - 54\omega_1^3\omega_3^3 v_2^2\omega_3^2 + 16\omega_4^2\omega_1\omega_3^3\omega_3^2 + 108\omega_4\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3^2 -$
$144\omega_4^2\omega_1^2\omega_3^3 v_2^2\omega_3^2 v_3^2 + 117\omega_4\omega_1^3\omega_3^3 v_2^2\omega_3^2 + 72\omega_4\omega_1^3\omega_3^3 cs^2 v_2^2\omega_3^2 - 12\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 - 48\omega_4^2\omega_1\omega_2^2\omega_3 v_3^2 - 96\omega_4^2\omega_1^3 v_2^2\omega_3^2 + 180\omega_4^2\omega_2^2 v_2^2\omega_2\omega_3 +$
$288\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 + 48\omega_4\omega_1\omega_3^3 cs^2\omega_3^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^3 v_2^2 + 36\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3^2 - 24\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3^2 + 324\omega_4\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3^2 - 72\omega_4\omega_1^2\omega_3 cs^4\omega_3^2$

$C_{46} = 6\omega_4^2\omega_1^2\omega_5 v_1^2 + 18\omega_4^2\omega_1\omega_5 cs^2\omega_3^2 v_3^2 + 8\omega_4^2\omega_1^2\omega_5 cs^2\omega_3 - 12\omega_4\omega_1\omega_5 cs^2 v_1^2\omega_3 - 3\omega_4^3\omega_5 v_1^4\omega_3^2 + 16\omega_4^2\omega_5 cs^4\omega_3^2 - 6\omega_4\omega_1^2\omega_5 cs^2\omega_3^2 v_3^2 +$
$12\omega_4\omega_1\omega_5 cs^2 v_1^2\omega_3 - 18\omega_4^2\omega_1^2\omega_5 cs^2\omega_3^2 v_3^2 + 3\omega_4\omega_1^3\omega_5 v_1^4\omega_3^2 + 3\omega_4^2\omega_1^3\omega_5 v_3^4 + 18\omega_1^2\omega_5 cs^2 v_1^2\omega_3^2 - 12\omega_4\omega_1\omega_5 cs^2\omega_3^2 v_3^2 + 2\omega_4\omega_1^3\omega_5 cs^2\omega_3^2 +$
$6\omega_1^2\omega_5\omega_3^2 v_3^2 - 6\omega_4\omega_1^2\omega_5\omega_3^2 v_3^2 + 6\omega_4^2\omega_1^2\omega_5 cs^2 v_1^2\omega_3 - 6\omega_4^2\omega_1^2\omega_5\omega_3 v_3^2 + 8\omega_4^2\omega_1\omega_5 cs^4\omega_3 + 9\omega_4^2\omega_1^3\omega_5 cs^2 v_1^2 + 6\omega_4^2\omega_1^2\omega_5 v_1^4\omega_3 + 32\omega_4^2\omega_1^2 cs^4\omega_3^2 -$
$6\omega_4\omega_1^2\omega_5 cs^2 v_1^2\omega_3^2 + 3\omega_4^2\omega_1^3\omega_5\omega_3 v_3^2 - 8\omega_4^2\omega_1\omega_5 cs^4\omega_3^2 + 3\omega_4\omega_1^3\omega_5\omega_3^2 v_3^4 + 6\omega_4^2\omega_1^2\omega_5 v_3^2 - 8\omega_4\omega_1^2\omega_5 cs^2\omega_3^2 - 3\omega_1^3\omega_5\omega_3^2 v_3^4 - 6\omega_4^2\omega_1^2\omega_5 cs^2\omega_3 v_3^2 -$
$3\omega_4^3\omega_1^3\omega_5 v_1^4\omega_3 - 18\omega_4^2\omega_1^2\omega_5 cs^2 v_1^2 - 2\omega_4^2\omega_1^3\omega_5 cs^2\omega_3 + 3\omega_4\omega_1^3\omega_5 v_1^4 - 6\omega_4\omega_1^2\omega_5 v_1^4\omega_3^2 - 8\omega_4\omega_1\omega_5 cs^4\omega_3 + 9\omega_4\omega_1^3\omega_5 cs^2 v_3^2 + 6\omega_1^2\omega_5 v_1^4\omega_3^2 -$
$2\omega_4\omega_1^3\omega_5\omega_3^2 - 8\omega_4^2\omega_1^3 cs^4\omega_3^2 - 3\omega_4^2\omega_1^3\omega_5\omega_3 v_3^4 - 8\omega_4^2\omega_1\omega_5 cs^2\omega_3^2 - 6\omega_4^2\omega_3^3 cs^2\omega_3 v_3^2 - 3\omega_4\omega_3^3\omega_5\omega_3^2 v_3^2 - 6\omega_4^2\omega_1^2\omega_5 v_3^2 +$
$3\omega_1^3\omega_5\omega_3^2 v_3^2 + 12\omega_4\omega_1\omega_5 cs^2\omega_3^2 v_3^2 - 8\omega_4^2\omega_1\omega_5\omega_3^2 + 3\omega_1^3\omega_5 v_1^2\omega_3^2 - 3\omega_4^2\omega_1^3\omega_5 v_1^2 - 3\omega_4\omega_1^3\omega_5 v_1^2\omega_3^2 + 2\omega_4^2\omega_1\omega_5 cs^4\omega_3 + 6\omega_4\omega_1^3\omega_5 cs^2\omega_3^2 v_3^2 +$
$9\omega_1^2\omega_5 cs^2\omega_3^2 v_3^2 - 6\omega_4^2\omega_1^2\omega_5 v_1^4 + 6\omega_4\omega_1^2\omega_5 v_1^2\omega_3^2 + 8\omega_4\omega_1\omega_5 cs^2\omega_3^2 - 6\omega_1^2\omega_5 v_1^2\omega_3^2 + 6\omega_4\omega_1^3\omega_5 cs^2 v_1^2\omega_3 + 8\omega_4^2\omega_1\omega_5 cs^4\omega_3 - 6\omega_4\omega_1^3\omega_5 cs^2 v_1^2\omega_3 -$
$3\omega_4^2\omega_1^3\omega_5 v_3^2 - 6\omega_1^2\omega_5\omega_3^2 v_3^2 - 32\omega_4^2\omega_1 cs^4\omega_3^2 + 6\omega_4\omega_1^2\omega_5\omega_3^2 v_3^2 - 9\omega_1^3\omega_5 cs^2 v_1^2\omega_3^2 + 6\omega_4^2\omega_1^2\omega_5\omega_3 v_3^2 + 3\omega_4^2\omega_1^3\omega_5 v_1^2\omega_3$

$C_{47} =$
$108\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 - 432\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 v_3^2 + 120\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 v_3^2 + 144\omega_4^2\omega_3^3 cs^4\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 108\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3^2 + 192\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 +$
$8\omega_4^2\omega_1^3\omega_3^2 - 108\omega_4\omega_1^2\omega_3^3 cs^2 v_1^2\omega_3^2 + 30\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 + 80\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 - 96\omega_4^2\omega_3^3\omega_3^2 v_3^2 - 252\omega_4^2\omega_1^3\omega_2 cs^4 - 36\omega_4^2\omega_1^3\omega_2\omega_3 v_3^4 + 32\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 -$
$108\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 168\omega_4^2\omega_1\omega_3^3 cs^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_2 + 54\omega_4^2\omega_1^3\omega_3^2 cs^2 v_1^2 + 24\omega_4^2\omega_1^3\omega_2 cs^2 - 8\omega_4^2\omega_3^3\omega_2 cs^2 v_1^2\omega_3 - 56\omega_4^2\omega_1\omega_2 cs^2 v_1^2\omega_3^2 -$
$104\omega_4^2\omega_1^3 cs^2\omega_3^2 - 56\omega_4^2\omega_1\omega_3^3 cs^2 v_1^2\omega_3 - 27\omega_4\omega_1^3\omega_3^2 cs^2\omega_3^2 - 96\omega_4^2\omega_1\omega_2^2 v_1^2\omega_3^2 v_3^2 + 864\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 v_3^2 + 54\omega_1^3\omega_3^2 cs^2\omega_3^2 - 8\omega_4^2\omega_3^2 v_1^2\omega_3^2 -$
$16\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3 + 8\omega_4^2\omega_1\omega_3^2 cs^2 v_1^2\omega_3 + 128\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 - 60\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 v_3^2 + 96\omega_4^2\omega_1\omega_3^3\omega_3^2 v_3^2 - 84\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2 + 8\omega_4^2\omega_3^3\omega_3^2 + 48\omega_4^2\omega_1^3\omega_3^2 v_3^4 -$
$108\omega_1^2\omega_3^3 cs^2\omega_3^2 - 24\omega_4^2\omega_1\omega_3^3 cs^4\omega_3^2 - 60\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3^2 v_3^2 + 108\omega_4\omega_1^2\omega_3^3 cs^2\omega_3^2 - 40\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3 - 192\omega_4^2\omega_1^2\omega_2^2\omega_3^2 v_3^2 - 432\omega_4\omega_1\omega_3^3 cs^2\omega_3^2 v_3^2 +$
$10\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3 + 8\omega_4^2\omega_1\omega_3^2 v_1^2\omega_3^2 + 64\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 - 54\omega_4^2\omega_1^3\omega_2 cs^2 - 10\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 + 27\omega_4\omega_1^3\omega_3^3 cs^2\omega_3 - 432\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 +$
$16\omega_4^2\omega_1^2\omega_3^2 - 72\omega_4^2\omega_1\omega_2\omega_3^4 + 192\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 + 112\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 56\omega_4^2\omega_1\omega_3^3 cs^2\omega_3 + 144\omega_4^2\omega_3^3 cs^4\omega_3^2 +$
$8\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3 + 81\omega_4\omega_1^3\omega_3^2 cs^2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2 - 8\omega_4^2\omega_1^3\omega_2\omega_2 - 36\omega_4^2\omega_1^3\omega_2\omega_3 v_3^4 - 96\omega_4^2\omega_1\omega_3^3\omega_3^2 - 24\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 v_3^2 - 162\omega_4^2\omega_1^3 cs^4\omega_3^2 +$
$162\omega_4^2\omega_1^3\omega_2 cs^4 + 96\omega_4^2\omega_1\omega_2\omega_3 v_3^2 - 104\omega_4^2\omega_1^3 cs^2\omega_3^2 - 64\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 - 24\omega_4^2\omega_1^3 cs^4\omega_3 - 432\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 - 72\omega_4^2\omega_1 cs^4\omega_3^2 - 8\omega_4^2\omega_1^3 v_1^2\omega_3^2 -$
$10\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2\omega_3^2 v_3^4 - 8\omega_4^2\omega_1\omega_2\omega_3^2 + 324\omega_4^2\omega_1^2\omega_3 cs^4\omega_3 + 84\omega_4^2\omega_1^2\omega_3 cs^2 + 24\omega_4^2\omega_3\omega_3^2 v_3^4 + 10\omega_4^2\omega_2\omega_3^2 cs^2 v_1^2\omega_3 + 96\omega_4^2\omega_1\omega_2\omega_3^2 v_3^2 +$
$432\omega_4^2\omega_3^2 cs^2\omega_3^2 v_3^2 - 30\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3 + 27\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3 - 81\omega_4^2\omega_1^3\omega_3 cs^4\omega_3 - 54\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3 - 27\omega_4^2\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3 - 168\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 -$
$176\omega_4^2\omega_1^2 cs^2\omega_3^2 + 8\omega_4^2\omega_1\omega_2 v_1^2\omega_3^2 + 432\omega_4^2\omega_1 cs^2\omega_3^2 v_3^2 - 216\omega_4\omega_1\omega_2^2 cs^4\omega_3 - 8\omega_4^2\omega_1\omega_3^2\omega_3 + 32\omega_4^2\omega_2^2 cs^2 v_1^2\omega_3 + 8\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 +$
$48\omega_4^2\omega_1^3 v_1^2\omega_3^2 v_3^2 + 96\omega_4\omega_1\omega_2^2\omega_3^2 v_3^2 + 324\omega_1^2\omega_3^2 cs^4\omega_3 + 64\omega_4\omega_1\omega_3^3 cs^2\omega_3^2 + 32\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3^2 + 72\omega_4^2\omega_2 v_1^2\omega_3^2 v_3^2 - 72\omega_4^2\omega_1^3\omega_2 cs^4 - 324\omega_4\omega_1^2\omega_2^2 cs^4\omega_3$

$C_{48} =$
$60\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2\omega_3^2 v_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 cs^2\omega_3 - 96\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 cs^2 v_1^2\omega_3 + 24\omega_4^2\omega_1\omega_5\omega_3^2 v_1^2\omega_3^2 + 8\omega_4^2\omega_5\omega_2^2\omega_3^2 - 8\omega_4^2\omega_1\omega_5\omega_2\omega_3^2 + 36\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3^2 -$
$28\omega_4^2\omega_1^2\omega_5\omega_3^2 cs^4\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 - 216\omega_4\omega_1^2\omega_5\omega_3^2 cs^2\omega_3^2 v_3^2 + 54\omega_4^3\omega_1\omega_5\omega_3^2 v_3^4 + 72\omega_4\omega_3^3\omega_5\omega_3^2 cs^2\omega_3 + 162\omega_4^2\omega_1^3\omega_5\omega_3^2 cs^2 v_3^2 -$
$40\omega_4\omega_1^3\omega_5 cs^2\omega_3^2 - 36\omega_4\omega_1^3\omega_5\omega_2^2 v_3^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 + 12\omega_4^2\omega_1\omega_5\omega_3^2\omega_3 v_3^4 - 36\omega_4\omega_1^2\omega_5\omega_2\omega_3 v_3^4 - 2\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3 + 18\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 v_3^2 -$
$8\omega_4^2\omega_1^3\omega_5\omega_2\omega_2\omega_3 - 72\omega_4^2\omega_1\omega_5\omega_2 v_1^2\omega_3^2 v_3^2 - 36\omega_4\omega_1\omega_5\omega_2\omega_3 v_3^4 + 54\omega_4^2\omega_1^3\omega_5\omega_2\omega_3 v_3^2 + 64\omega_4^2\omega_1\omega_5\omega_2 cs^2\omega_3^2 + 36\omega_4^2\omega_1^2\omega_5\omega_3^2\omega_3 v_3^4 + 6\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3^2 +$
$324\omega_4^2\omega_1\omega_5\omega_3^2 cs^2\omega_3^2 v_3^2 - 48\omega_4\omega_1\omega_5\omega_3^2\omega_3^2 v_3^2 - 108\omega_4\omega_1^2\omega_5\omega_3^2 cs^2\omega_3^2 v_3^2 - 24\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2 v_3^2 + 162\omega_4^2\omega_1^3\omega_5\omega_3^2 cs^2 v_1^2\omega_3^2 + 648\omega_4\omega_1^2\omega_5\omega_3^2 cs^2 v_1^2\omega_3^2 +$
$8\omega_4^2\omega_1\omega_5\omega_2\omega_3^2 cs^4\omega_3^2 - 72\omega_4\omega_1^3\omega_5\omega_2 cs^2\omega_3^2 - 88\omega_4^2\omega_1\omega_5\omega_2 cs^2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 v_3^2 - 36\omega_4\omega_1\omega_5\omega_3^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1\omega_5\omega_3^2 v_3^4 +$
$36\omega_4^2\omega_1\omega_5\omega_3^2\omega_3 v_3^4 + 24\omega_4^2\omega_1\omega_5\omega_3^2 v_1^2\omega_3^2 - 12\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2\omega_3 v_3^2 + 160\omega_4^2\omega_1\omega_5\omega_3 cs^4\omega_3^2 + 108\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3^2\omega_3 v_3^2 - 288\omega_4^2\omega_1\omega_5\omega_3 cs^4\omega_3^2 - 8\omega_4^2\omega_1\omega_5\omega_3^2\omega_3^2 -$
$180\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 - 288\omega_4\omega_1\omega_5\omega_3^2 cs^4\omega_3^2 + 180\omega_4^2\omega_1\omega_5\omega_3^2 cs^2\omega_3 v_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_3 v_3^2 - 96\omega_4\omega_1\omega_5\omega_3^2\omega_3 v_3^4 - 648\omega_4\omega_1\omega_5\omega_3^2 cs^2 v_1^2\omega_3^2 +$
$4\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 - 108\omega_1^2\omega_5\omega_3^2\omega_3^2 v_3^2 - 112\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3 + 288\omega_4^2\omega_1^2\omega_5\omega_3 cs^4\omega_3^2 - 54\omega_3^3\omega_5\omega_3^2 v_3^4 + 6\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3^2 -$
$72\omega_4^2\omega_1^3\omega_5\omega_2\omega_2 v_3^2 + 9\omega_4\omega_1^3\omega_5\omega_2\omega_3^2 v_3^4 + 54\omega_4\omega_1^3\omega_5\omega_2\omega_3^2\omega_3 v_3^4 - 18\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 v_3^2 - 8\omega_4^2\omega_1^3\omega_5\omega_2\omega_3 + 2\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3^2 - 27\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3^2 -$
$56\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3^2 - 108\omega_4\omega_1\omega_5\omega_3^2 cs^2\omega_3^2 v_3^2 + 48\omega_4^2\omega_1^3\omega_5\omega_3^2 v_3^4 - 9\omega_4^2\omega_1^3\omega_5\omega_3^2\omega_3 v_2^4\omega_3^2 - 36\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2\omega_3 v_3^4 + 144\omega_4\omega_1^2\omega_5\omega_2\omega_3^2 v_3^2 - 72\omega_4^2\omega_1^2\omega_5\omega_2\omega_3 v_3^4 -$

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$$108\omega_4\omega_1^2\omega_5\omega_2^2cs^2\omega_3^2v_3^2 - 216\omega_4^2\omega_1^2\omega_5\omega_3cs^4\omega_3 - 16\omega_4^2\omega_1^3\omega_5\omega_2cs^2\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2cs^2\omega_3v_3^2 - 48\omega_4^2\omega_1^2\omega_5\omega_3^2v_1^2\omega_3 - 468\omega_4^2\omega_1^2\omega_5\omega_3^2cs^2v_1^2\omega_3 + 24\omega_4^2\omega_1^3cs^2v_1^2\omega_3^2 + 360\omega_4^2\omega_1^2\omega_5v_1^2\omega_3^2v_3^2 - 24\omega_4^2\omega_1^3\omega_5\omega_2\omega_3v_3^4 - 56\omega_4^2\omega_1\omega_5\omega_2^2cs^4\omega_3 - 108\omega_4^2\omega_1^3\omega_5\omega_3^2cs^2\omega_3v_3^2 - 162\omega_4\omega_1^3\omega_5\omega_2^2cs^2v_1^2\omega_3 + 24\omega_4^2\omega_5\omega_3^2\omega_3^2v_3^2 - 24\omega_4^3\omega_1\omega_5v_1^2\omega_3^2 - 180\omega_4^2\omega_1\omega_5\omega_3^2v_1^2\omega_3^2v_3^2 + 8\omega_4^3\omega_1\omega_5\omega_3^2 + 16\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2v_3^2 - 120\omega_4^2\omega_1\omega_5\omega_3^2cs^2v_1^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2v_1^2\omega_3^2 + 36\omega_4\omega_1\omega_5\omega_2\omega_3^2\omega_3^2v_3^4 + 144\omega_4^2\omega_1^3\omega_5v_1^2\omega_3^2v_3^2 - 348\omega_4^2\omega_1^3\omega_5\omega_2cs^2\omega_3^2v_3^2 + 72\omega_4^2\omega_1\omega_5\omega_2\omega_3^2v_3^2 + 36\omega_4\omega_1^3\omega_5\omega_2^2\omega_3^2v_3^2 + 152\omega_4^2\omega_5\omega_2cs^4\omega_3^2 - 162\omega_1^3\omega_5\omega_3^2cs^2\omega_3^2v_3^2 + 132\omega_4^2\omega_1^2\omega_5\omega_2cs^2v_1^2\omega_3 - 36\omega_4\omega_1^2\omega_5\omega_3^2\omega_3\omega_3v_3^2 + 36\omega_4^2\omega_1\omega_5\omega_3^2cs^2\omega_3 + 12\omega_4^2\omega_1^2\omega_5\omega_2^2\omega_3v_3^4 - 54\omega_4\omega_1^3\omega_5\omega_3^2\omega_3^2v_3^2 + 18\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2v_3^4 - 108\omega_4^2\omega_1^3\omega_5\omega_2cs^2v_3^2 - 72\omega_4^2\omega_1^3\omega_3^2cs^4\omega_3 + 108\omega_4\omega_1^3\omega_5\omega_3^2cs^2\omega_3^2v_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_3^2cs^4\omega_3 - 24\omega_4^2\omega_5\omega_3^2v_1^2\omega_3^2 - 96\omega_4^2\omega_1^3\omega_5\omega_2^2\omega_3v_3^2 - 84\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2v_3^2 + 264\omega_4^2\omega_1^3\omega_5cs^2\omega_3^2v_3^2 - 180\omega_4^2\omega_1^3\omega_5\omega_2v_1^2\omega_3^2v_3^2 - 144\omega_4\omega_1^2\omega_5\omega_3^2\omega_3^2v_3^4 + 4\omega_4^2\omega_1^2\omega_5\omega_2cs^2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_2v_3^2 - 28\omega_4^2\omega_1^3\omega_5\omega_2cs^4\omega_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2v_1^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_5\omega_3cs^4\omega_3^2 + 72\omega_4^2\omega_1^3\omega_5\omega_2cs^2\omega_3 - 12\omega_4^2\omega_1^3\omega_5\omega_2cs^2v_1^2\omega_3^2 + 24\omega_4^2\omega_1\omega_5\omega_2\omega_3^2v_3^4 + 108\omega_1^2\omega_5\omega_2\omega_3^2v_3^4 + 32\omega_4^2\omega_1^3\omega_5cs^4\omega_3^2 - 6\omega_4^2\omega_1^2\omega_5\omega_2cs^2v_3^2\omega_3^2 + 48\omega_4^2\omega_1^2\omega_5cs^2cs^2\omega_3^2v_3^2 + 56\omega_4^2\omega_1^2\omega_5\omega_2^2cs^4\omega_3^2 + 2\omega_4^2\omega_1^3\omega_5\omega_2\omega_2^2v_3^4\omega_3^2 + 54\omega_1^3\omega_5\omega_3^2\omega_3^2v_3^2 + 132\omega_4^2\omega_1^3\omega_5\omega_2\omega_2^2\omega_3v_3^2 + 300\omega_4^2\omega_1\omega_5\omega_3^2cs^2\omega_3^2v_3^2 - 54\omega_4\omega_1^3\omega_5\omega_2^2v_3^2 + 48\omega_4^2\omega_5\omega_2cs^2v_1^2\omega_3 - 4\omega_4^2\omega_1^3\omega_5\omega_2cs^2\omega_3^2 + 36\omega_4\omega_1\omega_5\omega_2^2\omega_3^2v_3^4 - 288\omega_4\omega_1^2\omega_5\omega_3^2cs^2\omega_3^2 - 12\omega_4^2\omega_1\omega_5\omega_2\omega_3\omega_3v_3^2 + 112\omega_4^2\omega_1^2\omega_5\omega_3^2cs^4\omega_3 + 27\omega_4\omega_1^3\omega_5\omega_3^2cs^2v_2^2\omega_3^2 + 108\omega_4\omega_1^2\omega_5\omega_3^2cs^2\omega_3^2v_3^2 + 36\omega_4\omega_1^2\omega_5\omega_2^2\omega_3^2v_3^2 - 9\omega_4\omega_1^3\omega_5\omega_3^2v_2^2\omega_3^2 + 288\omega_4^2\omega_1^2\omega_3^2cs^4\omega_3^2 - 18\omega_4^2\omega_1^2\omega_5\omega_3^2\omega_3v_3^4 + 216\omega_4^2\omega_5\omega_3^2v_1^2\omega_3^2v_3^2 - 216\omega_4^2\omega_1^2\omega_5\omega_3^2cs^2v_3^2 - 2\omega_4^2\omega_1^2\omega_5\omega_3^2v_3^4\omega_3^2 - 24\omega_4^2\omega_1\omega_5\omega_2cs^2cs^2\omega_3^2v_3^2 + 240\omega_4^2\omega_5\omega_3^2cs^2v_1^2\omega_3^2 - 6\omega_4^2\omega_1^3\omega_5\omega_3^2cs^4\omega_3^2 + 64\omega_4^2\omega_1^2\omega_5\omega_2cs^2\omega_3^2 - 60\omega_4^2\omega_1^2\omega_5\omega_3^2cs^2\omega_3^2v_3^2 + 9\omega_4^2\omega_1^3\omega_5\omega_3^2v_2^2\omega_3 + 16\omega_4^2\omega_1^3\omega_5\omega_2cs^4\omega_3 + 216\omega_4^2\omega_1^2\omega_5\omega_3^2cs^2\omega_3 - 288\omega_4^2\omega_1\omega_5\omega_2^2v_1^2\omega_3^2v_3^2 + 180\omega_4\omega_1^3\omega_5\omega_2cs^2\omega_3v_3^2 + 336\omega_4^2\omega_1\omega_5\omega_3^2cs^2v_1^2\omega_3 - 160\omega_4^2\omega_1\omega_5\omega_3^2cs^2\omega_3 + 264\omega_4^2\omega_1^2\omega_5\omega_2cs^2v_1^2\omega_3 - 6\omega_4^2\omega_1\omega_5\omega_3^2cs^2v_1^2\omega_3^2 + 36\omega_4\omega_1^2\omega_5\omega_2^2\omega_3v_3^2 - 54\omega_4\omega_1^3\omega_5\omega_3\omega_3v_3^4 + 108\omega_4\omega_1^2\omega_5\omega_3^2cs^2\omega_3v_3^2 - 168\omega_4^2\omega_1\omega_5\omega_2^2cs^2v_1^2\omega_3 - 36\omega_4^2\omega_1^2\omega_5\omega_3\omega_3v_3^2 + 288\omega_4\omega_1\omega_5\omega_3^2cs^2\omega_3^2 + 108\omega_4^2\omega_1\omega_5\omega_3^2\omega_3^2v_3^4 - 216\omega_4^2\omega_5\omega_3^2cs^2\omega_3^2v_3^2$$

$C_{49} = -2\omega_4\omega_1\omega_3 + 2\omega_4\omega_1v_1^2\omega_3 - 27\omega_4\omega_1\omega_2cs^2 - 9\omega_1\omega_2\omega_3 - 6\omega_4\omega_2cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 9\omega_1\omega_2v_1^2\omega_3 + 9\omega_4\omega_1\omega_2 - 2\omega_4\omega_2v_1^2\omega_3 + 6\omega_4\omega_1cs^2\omega_3 + 27\omega_1\omega_2cs^2\omega_3 - 9\omega_4\omega_1\omega_2v_1^2$

$C_{50} = -24\omega_1\omega_2^2cs^2\omega_3 + 6\omega_1^2\omega_2^2v_1^2\omega_3 + 2\omega_1\omega_3^2 - 13\omega_1^3\omega_2\omega_3v_3^2 - 6\omega_1\omega_3^2cs^2 - 20\omega_1^2\omega_2^2\omega_3 - 2\omega_1^3\omega_2v_1^2 - 3\omega_1\omega_2v_1^2\omega_3 - 4\omega_1\omega_2^2\omega_3v_3^2 - 24\omega_1^3\omega_2cs^2\omega_3 - 10\omega_2^3\omega_3 + 28\omega_1^3cs^2\omega_3 + 10\omega_1^3\omega_2\omega_3 + 4\omega_1^2\omega_2^2v_1^2 + 4\omega_2^3v_1^2\omega_3 - 30\omega_1^2\omega_2cs^2\omega_3 + 16\omega_1^3\omega_3v_3^2 - 12\omega_1^3\omega_3 - 22\omega_1^2\omega_2\omega_3v_3^2 + 12\omega_1^2\omega_2^2cs^2 + 10\omega_1\omega_2\omega_3 - 4\omega_1\omega_2^2v_1^2\omega_3 + 48\omega_1^2\omega_2^2cs^2\omega_3 - 13\omega_1\omega_2\omega_3v_3^2 - 3\omega_1^3\omega_2v_1^2\omega_3 + 26\omega_1^2\omega_2^2\omega_3v_3^2 - 24\omega_1\omega_3^2cs^2\omega_3 - 4\omega_1^2\omega_2v_1^2\omega_3 - 4\omega_1^2\omega_2^2 + 26\omega_2^3cs^2\omega_3 - 6\omega_1^3\omega_2cs^2 + 8\omega_1\omega_2^3\omega_3 - 2\omega_1\omega_2\omega_3^2v_1^2 + 4\omega_1^3v_1^2\omega_3 + 2\omega_1^3\omega_2 + 10\omega_2^3\omega_3v_3^2 + 14\omega_1^2\omega_2\omega_3$

$C_{51} =$
$-3\omega_4^2\omega_1^3\omega_2^3cs^2\omega_3^2 + 4\omega_4^2\omega_1\omega_3^3cs^2v_2^2\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3^2 - 27\omega_4^2\omega_1^3\omega_2^2\omega_3v_3^2 + 18\omega_4^2\omega_1\omega_3^3cs^2v_2^2 + 4\omega_4^2\omega_1^3\omega_2\omega_3cs^2\omega_3 + 96\omega_4^2\omega_1^2\omega_2^2cs^4\omega_3 + 4\omega_4^2\omega_1^3\omega_3^3 - 27\omega_4^2\omega_1^2\omega_3^2\omega_3v_3^4 - 12\omega_4^2\omega_1^2v_2^2\omega_2\omega_3^2v_3^2 + 35\omega_4^2\omega_1^3\omega_2cs^4\omega_3 + 4\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2 + 24\omega_4^2\omega_2^3\omega_3v_3^2 - 72\omega_4^2\omega_1^2\omega_3^2cs^4 - 36\omega_4^2\omega_1\omega_2\omega_3^2v_3^2 - 20\omega_4^2\omega_1^3\omega_2cs^2v_2^2\omega_3^2 - 36\omega_4^2\omega_1\omega_2^2cs^2\omega_3 + 36\omega_4\omega_1\omega_2^2\omega_3^2v_3^4 - 84\omega_4^2\omega_1\omega_3^2cs^4\omega_3 - 4\omega_4^2\omega_3^3\omega_2\omega_3^2 + 32\omega_4^2\omega_1^2\omega_2^2cs^2v_2^2\omega_3^2 + 4\omega_4^2\omega_1\omega_3^3v_2^2\omega_3^2 + 12\omega_4^2\omega_1^3\omega_2^2cs^2 - 52\omega_4^2\omega_1^3cs^2\omega_3^2 + 9\omega_4\omega_1^3\omega_2^3cs^2\omega_3^2 - 32\omega_4^2\omega_1\omega_3^2cs^2v_2^2\omega_3^2 - 18\omega_1^3\omega_2^3cs^2\omega_3^2 + 28\omega_4^2\omega_1\omega_3^2cs^2\omega_3^2 + 36\omega_4^2\omega_1^2\omega_3^2cs^2v_2^2\omega_3 - 42\omega_4^2\omega_1\omega_3^2\omega_3^2v_3^2 + 4\omega_4^2\omega_1^3\omega_3^3 + 24\omega_4^2\omega_1^3\omega_3^3 - 36\omega_4^2\omega_1^3cs^2v_2^2\omega_3^2 + 36\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3^2 + 36\omega_4\omega_1^2\omega_3^2cs^2v_2^2\omega_3^2 + 78\omega_4^2\omega_1\omega_3cs^4\omega_3^2 + 16\omega_4^2\omega_1^2\omega_2cs^2v_2^2\omega_3^2 - 138\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3v_3^2 - 36\omega_4\omega_1\omega_3^2cs^2\omega_3^2 + 24\omega_4^2\omega_1^3v_2^2\omega_2\omega_3v_3^2 - 24\omega_4^2\omega_1^2\omega_2^2\omega_3v_3^2 + 324\omega_4^2\omega_1\omega_3^2cs^2\omega_3^2v_3^2 - 28\omega_4^2\omega_1\omega_2cs^2v_2^2\omega_3^2 - 4\omega_4^2\omega_1^3\omega_2cs^2v_2^2\omega_3^2 - 24\omega_4^2\omega_1^2\omega_3^2cs^2v_2^2 + 49\omega_4^2\omega_1^2\omega_3^2cs^2\omega_3^2 - 18\omega_4^2\omega_1^3\omega_3^2cs^2 + 9\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 - 324\omega_4^2\omega_1^3\omega_2cs^2\omega_3^2v_3^2 + 8\omega_4^2\omega_1^2\omega_2\omega_3^2 + 36\omega_4^2\omega_3^3v_2^2\omega_3v_3^2 - 28\omega_4^2\omega_1\omega_3^2cs^2v_2^2\omega_3 + 24\omega_4^2\omega_1^2\omega_2cs^4\omega_3^2 - 4\omega_4^2\omega_3^3v_2^2\omega_3^2 + 74\omega_4^2\omega_1^3\omega_2cs^2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2cs^2v_2^2\omega_3^2 + 28\omega_4^2\omega_1\omega_3^2cs^2\omega_3^2 + 60\omega_4^2\omega_1^2v_2^2v_2^2\omega_3^2v_3^2 - 9\omega_4\omega_1^3\omega_3^2cs^2v_2^2\omega_3^2 + 72\omega_4^2\omega_1^3cs^4\omega_3^2 - 27\omega_4\omega_1\omega_3^3cs^4\omega_3^2 - 4\omega_4^2\omega_1^2\omega_2\omega_3^2 + 18\omega_1^3\omega_3^2cs^2v_2^2\omega_3^2 + 72\omega_4^2\omega_1\omega_2^3\omega_3v_3^4 + 4\omega_4^2\omega_1\omega_2^2v_2^2\omega_3^2 - 48\omega_4^2\omega_1^3\omega_3^2v_3^2 - 9\omega_4\omega_1^3\omega_3^2cs^2v_2^2\omega_3^2 + 54\omega_1^3\omega_3^2cs^4\omega_3^2 + 54\omega_4^2\omega_1^3\omega_3^2cs^4 + 15\omega_4^2\omega_1^3\omega_3^2cs^4\omega_3^2 + 16\omega_4^2\omega_3^2cs^2v_2^2\omega_3^2 + 4\omega_4^2\omega_1\omega_2v_2^2\omega_3^2 + 12\omega_4^2\omega_1^2\omega_2\omega_3v_3^2 + 20\omega_4^2\omega_3^2cs^2\omega_3^2 - 32\omega_4^2\omega_1^2\omega_2cs^2\omega_3 - 12\omega_4^2\omega_1^3\omega_2cs^4\omega_3 - 12\omega_4^2\omega_1^3\omega_2cs^2v_2^2 + 16\omega_4^2\omega_1^3cs^2v_2^2\omega_3 - 25\omega_4^2\omega_1^3\omega_2cs^2\omega_3 - 36\omega_4^2\omega_1^2\omega_2^2\omega_3v_3^2 - 4\omega_4^2\omega_1\omega_2^2\omega_3^2 - 48\omega_4^2\omega_1\omega_2^2v_2^2\omega_3^2v_3^2 + 108\omega_4^2\omega_1^3\omega_3cs^4\omega_3^2 - 4\omega_4^2\omega_1^2\omega_2cs^2v_2^2\omega_3^2 + 24\omega_4^2\omega_1^2\omega_3cs^2 - 60\omega_4^2\omega_3^2\omega_3^2v_3^2 + 66\omega_4^2\omega_1^3\omega_2\omega_3^2v_3^2 - 216\omega_4^2\omega_1^2\omega_3cs^2\omega_3^2v_3^2 + 4\omega_4^2\omega_1\omega_2v_2^2\omega_3^2 - 30\omega_4^2\omega_1\omega_3v_2^2\omega_3^2v_3^2 - 119\omega_4^2\omega_1^2\omega_3^2cs^4\omega_3^2 - 27\omega_4^2\omega_1^3\omega_3cs^4\omega_3^2 + 27\omega_4^2\omega_1^2\omega_2\omega_3^2v_3^2 - 30\omega_4^2\omega_1\omega_3^2v_2^2\omega_3^2 - 102\omega_4^2\omega_1^3\omega_2cs^4\omega_3^2 - 16\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3^2 + 27\omega_4^2\omega_1^2\omega_2^2\omega_3^2v_3^2 + 216\omega_4^2\omega_1^2cs^2\omega_3^2v_3^2 - 72\omega_4^2\omega_1\omega_2^2cs^4\omega_3^2 - 4\omega_4^2\omega_1\omega_3^2\omega_3^2 + 3\omega_4^2\omega_1^3\omega_3^2cs^2v_2^2\omega_3^2 + 138\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3^2v_3^2 + 12\omega_4^2\omega_1\omega_3^2\omega_2\omega_3v_3^2 - 4\omega_4^2\omega_1^3v_2^2\omega_3^2 - 108\omega_1^2\omega_2^3cs^2\omega_3^2 - 58\omega_4^2\omega_1\omega_3^2cs^2\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2cs^4 + 108\omega_4^2\omega_1^2\omega_3^2cs^4\omega_3^2$

$C_{52} = 36\omega_4\omega_1^3\omega_2^2\omega_3v_3^4 - 18\omega_1^2\omega_2^3\omega_3v_3^2 + 18\omega_4\omega_1^2\omega_3^2v_3^4 - 48\omega_4\omega_1^3\omega_3^2v_3^2 - 4\omega_4\omega_1^2\omega_2\omega_3^2 + 36\omega_4\omega_1^2\omega_3^2\omega_3v_3^2 - 84\omega_4\omega_1\omega_2^2cs^2v_2^2\omega_3^2 + 150\omega_4\omega_1\omega_3^2cs^2\omega_3^2v_3^2 - 18\omega_1^3\omega_2^2\omega_3v_3^4 + 24\omega_4\omega_1^3\omega_2cs^2v_2^2\omega_3 - 174\omega_4\omega_1^3\omega_2cs^2\omega_3^2v_3^2 + 54\omega_1\omega_2^2cs^2\omega_3^2v_3^2 + 12\omega_4\omega_1\omega_2^2\omega_3v_3^4 + 60\omega_4\omega_1\omega_2^2cs^2v_2^2\omega_3 + 16\omega_4\omega_1^3cs^4\omega_3^2 + 8\omega_4\omega_1\omega_2^3cs^4\omega_3 + 12\omega_4\omega_1\omega_3^3v_2^2\omega_3^2 + 12\omega_4\omega_1^3\omega_2\omega_3v_3^2 - 126\omega_4\omega_1^2\omega_2^2cs^2v_2^2\omega_3 - 4\omega_4\omega_1\omega_2\omega_3^2 - 54\omega_1^2\omega_3^2cs^2\omega_3^2v_3^2 - \omega_4\omega_1^2\omega_3^2v_3^4\omega_3^2 + 32\omega_4\omega_1^3\omega_2cs^2\omega_3^2 + 2\omega_4\omega_1^3\omega_2^2cs^4\omega_3 - 36\omega_4\omega_1\omega_3^2\omega_3^2v_3^4 + 36\omega_4\omega_1\omega_3^2cs^2\omega_3^2 - 18\omega_1^3\omega_2^3\omega_3v_3^4 - 9\omega_4\omega_1\omega_2^2\omega_3^2v_3^2 - 24\omega_4\omega_1^2\omega_2^2v_2^2\omega_3^2 + 56\omega_4\omega_1^2\omega_2^2cs^4\omega_3 + 18\omega_4\omega_1^2\omega_2^2 - 18\omega_1^3\omega_2^2\omega_3^2 - 8\omega_4\omega_1^2\omega_2cs^2\omega_3 + 28\omega_4\omega_1\omega_3^2cs^2\omega_3^2 - 18\omega_1^3\omega_2^2cs^2\omega_3 - 9\omega_4\omega_1^2\omega_2^2\omega_3v_3^4 + 54\omega_4\omega_1\omega_2cs^2v_3^2 - 30\omega_4\omega_1^2\omega_3^2cs^2\omega_3^2v_3^2 + 66\omega_4\omega_1^2\omega_2^2cs^2v_2^2\omega_3^2 - 18\omega_4\omega_1^3\omega_3^2cs^2\omega_3 + 6\omega_4\omega_1\omega_3^2\omega_3v_3^4 + 108\omega_4\omega_3^2v_2^2\omega_3^2v_3^2 + 12\omega_4\omega_1^2\omega_2\omega_3v_3^4 + 18\omega_4\omega_1\omega_3^2cs^2\omega_3^2 + 28\omega_4\omega_1^2\omega_2^2cs^4\omega_3^2 + 132\omega_4^2\omega_1^2\omega_3^2cs^2v_2^2\omega_3 - 54\omega_4^2\omega_1^2cs^2\omega_3^2v_3^2 - 216\omega_1^2\omega_3^2cs^2v_2^2\omega_3 + 72\omega_1^2\omega_3^2cs^2\omega_3 + 72\omega_4\omega_1^3v_2^2\omega_3^2v_3^2 - 6\omega_4\omega_1\omega_3^2cs^2v_2^2\omega_3 + 24\omega_4\omega_1^2\omega_2cs^2\omega_3v_3^2 + 18\omega_1^2\omega_2^2\omega_3^2v_3^2 - 36\omega_4\omega_1^3\omega_2cs^4\omega_3 - \omega_4\omega_1^3\omega_2v_2^2\omega_3^2 - 42\omega_4\omega_1^2\omega_2^2\omega_3v_3^2 + 2\omega_4\omega_1^3cs^2\omega_3^2 - 48\omega_4\omega_3^2\omega_3^2v_3^4 - 12\omega_4\omega_1\omega_2cs^2\omega_3^2v_3^2 + 48\omega_4\omega_1\omega_3^2cs^2v_2^2\omega_3^2 + 76\omega_4\omega_1\omega_3^2cs^4\omega_3^2 - 12\omega_4\omega_1^3v_2^2\omega_3^2 + 72\omega_1\omega_2cs^4\omega_3^2 + 6\omega_4^2\omega_1^2\omega_2\omega_3v_3^4 + 90\omega_4\omega_1^3\omega_2cs^2\omega_3v_3^2 + 32\omega_4\omega_1\omega_2cs^2\omega_3^2 - 54\omega_1^3\omega_2cs^2\omega_3v_3^2 - 36\omega_4\omega_1\omega_2v_2^2\omega_3^2v_3^2 - 24\omega_4\omega_1\omega_3^2\omega_3v_3^2 - 4\omega_4\omega_1\omega_3^2\omega_3^2 - 18\omega_1\omega_2^3\omega_3v_3^2 - 6\omega_4\omega_1^3\omega_2cs^2v_2^2\omega_3^2 + 216\omega_1\omega_3^2cs^2v_2^2\omega_3^2 + 12\omega_4\omega_1^3cs^2v_2^2\omega_3^2 + 4\omega_4\omega_1^3\omega_2^2v_2^2\omega_3^2 - 2\omega_4\omega_1^3cs^2\omega_3^2 - 18\omega_1^2\omega_2^2\omega_3v_3^4 + 4\omega_4\omega_3^2\omega_3^2 - 28\omega_4\omega_1^2\omega_2cs^4\omega_3^2 + 30\omega_4\omega_1^3\omega_2cs^2\omega_3^2v_3^2 - 18\omega_4\omega_1^2\omega_2^2\omega_3v_3^4 + 12\omega_4\omega_2^3\omega_3v_3^2 - 36\omega_4\omega_2v_2^2cs^4\omega_3 - 3\omega_4\omega_1^3\omega_3^2cs^4\omega_3 - 6\omega_4\omega_1\omega_2^3\omega_3v_3^2 + 54\omega_1^3\omega_3^2cs^2\omega_3v_3^2 + 54\omega_4\omega_1^2\omega_2cs^2\omega_3^2v_3^2 - 90\omega_4\omega_1^3\omega_3^2cs^2v_2^2\omega_3 + 12\omega_4\omega_1^2v_2^2\omega_2\omega_3^2 - 96\omega_4\omega_2^3cs^2v_2^2\omega_3^2 + 8\omega_4\omega_1^3\omega_2cs^4\omega_3 - 56\omega_4\omega_1^2cs^2\omega_3 - 68\omega_4\omega_1\omega_3^2cs^4\omega_3^2 + 18\omega_4\omega_1^3\omega_3^2cs^4\omega_3^2 + 54\omega_4\omega_1\omega_3^2\omega_3^2v_3^4 - 48\omega_4\omega_1^2\omega_3^2cs^2v_2^2\omega_3^2 + 18\omega_4\omega_1^3\omega_3^2v_3^4 + 12\omega_4\omega_1\omega_2^2\omega_3v_2^2\omega_3^2v_3^2 - 90\omega_4\omega_1\omega_2^2v_2^2\omega_3^2 - 8\omega_4\omega_1\omega_3^2cs^2\omega_3 + 54\omega_4\omega_1^2cs^2\omega_3v_3^2 - 20\omega_4\omega_1cs^2\omega_3^2 - 4\omega_4\omega_1^3\omega_2\omega_3^2 - 6\omega_4\omega_1^2\omega_2\omega_3v_3^2 + 36\omega_4\omega_1\omega_2^2\omega_3v_3^2 + 4\omega_4\omega_1^3\omega_3^2 + 54\omega_4\omega_1^3cs^2\omega_3v_3^2 - 18\omega_4\omega_1\omega_3^2cs^2\omega_3 - 72\omega_1\omega_3^2cs^2\omega_3 - 12\omega_4\omega_1^2\omega_2cs^2\omega_3^2v_3^2 - 12\omega_4\omega_1^3\omega_2\omega_3v_3^2 - 36\omega_4\omega_1^3\omega_2\omega_3v_3^2 - 28\omega_4\omega_1\omega_2cs^4\omega_3^2 + 24\omega_4\omega_3^2\omega_3^2v_3^4 - 18\omega_4\omega_1^2\omega_3^2v_3^2 + 18\omega_1^3\omega_2\omega_3v_3^4 - 90\omega_4\omega_1^2\omega_3^2cs^2\omega_3v_3^2 - 36\omega_4\omega_1^2\omega_3^2\omega_3v_3^2 - 144\omega_4\omega_1\omega_3^2v_2^2\omega_3^2v_3^2 + 18\omega_1^3\omega_2^2\omega_3v_3^2 + 18\omega_4\omega_1^3\omega_3^2cs^4\omega_3 + 18\omega_1^2\omega_3^2\omega_3^2v_3^2 - 12\omega_4\omega_3^2v_2^2\omega_3^2 + 6\omega_4\omega_1^3\omega_2cs^2v_2^2\omega_3^2 + 9\omega_4\omega_1^3\omega_2\omega_3v_3^4 - 54\omega_4\omega_1^3\omega_2cs^2v_3^2 - 18\omega_4\omega_1^2\omega_2^2v_3^4 - 36\omega_4\omega_1^2\omega_2cs^2\omega_3^2 + 18\omega_1^3\omega_2cs^2\omega_3v_3^4 - 18\omega_4\omega_1\omega_2cs^2\omega_3v_3^2 - 14\omega_4\omega_1^3\omega_2cs^4\omega_3^2 + 9\omega_4\omega_1^2\omega_2\omega_3^2v_3^2 + 8\omega_4\omega_1^2\omega_2^2\omega_3^2 + 132\omega_4\omega_1^3cs^2\omega_3^2v_3^2 + 180\omega_4\omega_1^2\omega_2v_2^2\omega_3^2v_3^2 - 72\omega_1^2\omega_3^2cs^4\omega_3 + 36\omega_4\omega_1^3\omega_2cs^2\omega_3 - 36\omega_4\omega_1^3\omega_2cs^2\omega_3v_3^2 + \omega_4\omega_1^3\omega_2v_2^2\omega_3^2 + 12\omega_4\omega_1^2\omega_2v_2^2\omega_3^2 - 108\omega_4\omega_3^2cs^2\omega_3^2v_3^2 + 54\omega_4\omega_1^3cs^2v_2^2\omega_3 + 66\omega_4\omega_1^2\omega_2\omega_3v_3^2 - 14\omega_4\omega_1^2\omega_2cs^4\omega_3^2$

$C_{53} = -50\omega_1^2\omega_3^2\omega_3v_3^2 + 6\omega_1\omega_3^2 - 75\omega_1^3\omega_2\omega_3v_3^2 - 18\omega_1\omega_3^2cs^2 + 12\omega_2^3\omega_3v_3^2 + 12\omega_1^2\omega_2^2\omega_3 - 42\omega_1^2\omega_3^2cs^2\omega_3 + 60\omega_1\omega_2\omega_3v_3^2 - 108\omega_1^3\omega_2cs^2\omega_3 + 42\omega_2^3\omega_3 - 6\omega_1^3\omega_2v_2^2 + 23\omega_1^3\omega_2\omega_3 + 84\omega_1^3cs^2\omega_3 + 48\omega_1^3\omega_2\omega_3 + 18\omega_1^2\omega_2^2v_2^2\omega_3 - 18\omega_1^3\omega_2cs^2\omega_3 + 48\omega_1^3\omega_3v_3^2 - 9\omega_1\omega_2\omega_3^2v_2^2\omega_3 + 12\omega_1^2\omega_2^2v_2^2 - 36\omega_3^3\omega_3 + 6\omega_1^2\omega_2\omega_3v_3^2 + 36\omega_1^2\omega_2^2cs^2 - 12\omega_1^2\omega_2v_2^2\omega_3 - 60\omega_1\omega_2^2\omega_3 + 12\omega_1^3v_2^2\omega_3 + 141\omega_1\omega_2^3\omega_3v_3^2 - 23\omega_1^3\omega_2^2\omega_3 - 66\omega_1^2\omega_2^2\omega_3v_3^2 + 108\omega_1\omega_2^3cs^2\omega_3 - 12\omega_1^2\omega_2^2 -$

$$66\omega_2^3 cs^2\omega_3 - 12\omega_1\omega_2^2 v_2^2\omega_3 - 18\omega_1^3\omega_2 cs^2 - 12\omega_1\omega_2^2\omega_3 + 50\omega_1^3\omega_2^2\omega_3 v_3^2 - 9\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_1^3\omega_2 - 114\omega_2^3\omega_3 v_3^2 + 42\omega_1^3\omega_2^2 cs^2\omega_3 - 6\omega_1\omega_2^3 v_2^2 + 6\omega_1^2\omega_2\omega_3$$

$$C_{54} = -8\omega_4\omega_1\omega_3 + 4\omega_4\omega_2\omega_3 v_3^2 + 18\omega_4\omega_1 v_1^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 9\omega_1\omega_2\omega_3 + 6\omega_4\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 - 18\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 - 9\omega_1\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1\omega_2\omega_3 v_3^2$$

$$C_{55} = 6\omega_4\omega_3^2 + 6\omega_4\omega_1\omega_3 - 36\omega_4^2 cs^2 + 6\omega_4^2 v_1^2\omega_3 + 12\omega_4^2 - 6\omega_4^2\omega_1 cs^2\omega_3 - 18\omega_4 cs^2\omega_3^2 - 6\omega_3^2 v_3^2 + 36\omega_4 cs^2\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 + 18\omega_4^2\omega_1 cs^2 + 12\omega_4\omega_3 v_3^2 + 6v_1^2\omega_3 - 12\omega_4\omega_3 - 2\omega_4\omega_1\omega_3^2 - 6\omega_4^2 v_3^2 + 18\omega_4^2 cs^2\omega_3 - 6\omega_4^2\omega_3 + 3\omega_4^2\omega_1 v_1^2 - 6\omega_4\omega_1\omega_3 v_3^2 - 6\omega_4 v_1^2\omega_3 - 6\omega_4^2\omega_1 - 18\omega_4\omega_1 cs^2\omega_3 - 2\omega_4^2\omega_1 v_1^2\omega_3 + 2\omega_4^2\omega_1\omega_3 - 6\omega_4^2 v_1^2 + 6\omega_4\omega_1 cs^2\omega_3^2 + 3\omega_4^2\omega_1 v_3^2 - 3\omega_1 v_1^2\omega_3^2 + 3\omega_1\omega_3^2 v_3^2$$

$$C_{56} = -6\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3^2 - 56\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 v_3^2 - 92\omega_4^2\omega_1^3\omega_2^2\omega_3^2 v_3^2 - 288\omega_4^2\omega_2^3 cs^4\omega_3^2 - 16\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 120\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 - 36\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 - 36\omega_4^2\omega_1^2\omega_2^3 cs^2 v_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 - 78\omega_4^2\omega_1^2\omega_3^3\omega_3 v_3^2 - 6\omega_4^2\omega_1^2\omega_3^3 v_2^2\omega_3 + 144\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3 - 88\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 + 160\omega_4^2\omega_2^3\omega_3^2 v_3^2 - 108\omega_4^2\omega_1^2\omega_3^2 cs^4 - 132\omega_4^2\omega_1^3\omega_2\omega_3^2\omega_3 - 72\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 24\omega_4^2\omega_1\omega_2^2\omega_3^2 v_3^2 - 36\omega_4^2\omega_3^2 cs^2\omega_3^2 v_3^2 - 168\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 - 20\omega_4^2\omega_1^3\omega_2\omega_3^2 - 14\omega_4^2\omega_1^2\omega_3^3\omega_3^2 - 104\omega_4^2\omega_1 cs^2\omega_3^2 + 9\omega_4\omega_1^3\omega_3^3 cs^2\omega_3^2 - 412\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 v_3^2 - 18\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3^2 - 18\omega_3^3\omega_2^2 cs^2\omega_3^2 + 36\omega_4\omega_1^2\omega_3^2 cs^2\omega_3^2 v_3^2 + 56\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 - 256\omega_4^2\omega_1\omega_2^3\omega_3^2 v_3^2 - 16\omega_4^2\omega_2^2\omega_3^2 + 48\omega_4^2\omega_1^3\omega_3^2 v_3^2 + 36\omega_1^2\omega_3^2 cs^2\omega_3^2 + 588\omega_4^2\omega_1\omega_3^2 cs^4\omega_3^2 - 460\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 v_3^2 - 36\omega_4\omega_1^2\omega_3^2 cs^2\omega_3^2 + 18\omega_4^2\omega_1^3\omega_3^2 cs^2 v_3^2 - 9\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3 v_3^2 - 108\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 + 104\omega_4^2\omega_1^2\omega_2^3\omega_3^2 v_3^2 - 6\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3^2 + 1232\omega_4^2\omega_1\omega_3^2 cs^2\omega_3^2 v_3^2 + 184\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3^2 - 18\omega_4^2\omega_1^3\omega_3^2 cs^2 + 9\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3 - 712\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 - 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 + 120\omega_4^2\omega_1^2\omega_2\omega_3 v_3^4 + 12\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 + 208\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 + 6\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3^2 v_3^2 + 18\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3^2 + 56\omega_4^2\omega_1\omega_3^2 cs^2\omega_3 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2 - 56\omega_4^2\omega_1\omega_3^2 cs^2\omega_3 v_3^2 - 27\omega_4\omega_1^3\omega_3^2 cs^4\omega_3^2 + 16\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 v_3^2 + 16\omega_4^2\omega_1^2\omega_2\omega_3^2 + 228\omega_4^2\omega_1\omega_3^2\omega_3^2 v_3^4 - 56\omega_4^2\omega_1^3\omega_3^2 v_3^2 + 54\omega_3^3\omega_2^2 cs^4\omega_3^2 + 54\omega_4^2\omega_1^3\omega_2^2 cs^4 + 18\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3^2 - 136\omega_4^2\omega_1^2\omega_2\omega_3^2 v_3^2 + 208\omega_4^2\omega_2^3 cs^2\omega_3^2 - 40\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 + 48\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 448\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 + 6\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 - 118\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 - 96\omega_4^2\omega_1^2\omega_2^2\omega_3^2 v_3^4 - 8\omega_4^2\omega_1\omega_2^2\omega_3^2 + 216\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 + 72\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 v_3^2 + 14\omega_4^2\omega_1^3\omega_2^2\omega_3^2 + 36\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 + 36\omega_4^2\omega_1^3\omega_2 cs^2 - 144\omega_4^2\omega_2^3\omega_3^2 v_3^4 + 152\omega_4^2\omega_1^3\omega_2\omega_3^2 v_3^2 - 784\omega_4^2\omega_2^3 cs^2\omega_3^2 v_3^2 + 6\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3^2 - 342\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3^2 + 40\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 - 27\omega_4^2\omega_1^3\omega_3^2 cs^4\omega_3 + 78\omega_4^2\omega_1^3\omega_2^2\omega_3 v_3^2 - 276\omega_4^2\omega_1\omega_2 cs^4\omega_3^2 + 52\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 + 92\omega_4^2\omega_1^2\omega_2^3\omega_3^2 v_3^2 + 320\omega_4^2\omega_1^3 cs^2\omega_3^2 v_3^2 - 144\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 + 28\omega_4^2\omega_1\omega_2^3\omega_3^2 - 9\omega_4\omega_1^3\omega_2^3 cs^2\omega_3^2 v_3^2 + 394\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 32\omega_4^2\omega_1\omega_2^2\omega_3^2 v_3^2 - 108\omega_1^2\omega_2^3 cs^4\omega_3^2 - 368\omega_4^2\omega_1\omega_3^2 cs^2\omega_3^2 + 18\omega_3^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 108\omega_4\omega_1^2\omega_3^2 cs^4\omega_3^2$$

$$C_{57} = -8\omega_4\omega_1\omega_3 + 4\omega_4\omega_2\omega_3 v_3^2 - 27\omega_4\omega_1\omega_2 cs^2 + 9\omega_1\omega_2\omega_3 + 6\omega_4\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 18\omega_4\omega_1 v_3^2\omega_3 + 9\omega_4\omega_1\omega_2 + 2\omega_4\omega_1\omega_3 v_3^2 - 9\omega_4\omega_1\omega_2 v_3^2 - 6\omega_4\omega_1\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 - 9\omega_1\omega_2\omega_3 v_3^2 + 6\omega_4\omega_1\omega_2\omega_3 v_3^2 - 18\omega_4\omega_2 v_2^2\omega_3$$

$$C_{58} = 138\omega_4\omega_1^3\omega_2^2\omega_3 v_3^4 + 32\omega_4\omega_1\omega_2^2 cs^2\omega_3 - 20\omega_4\omega_1^2\omega_2^2 cs^2 + 14\omega_4\omega_1\omega_2^3\omega_3 + 81\omega_4\omega_1^2\omega_2^3\omega_3 v_3^2 + 144\omega_4\omega_1^3 cs^2\omega_3 v_3^2 + 94\omega_4\omega_1\omega_2^3 cs^4\omega_3 + 36\omega_1\omega_2^3 cs^4\omega_3 + 138\omega_4\omega_1^3\omega_2\omega_3 v_3^2 - 312\omega_4\omega_2^3 cs^2\omega_3 v_3^2 + 27\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 - 3\omega_4\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 - 4\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 + 7\omega_4\omega_1^3\omega_2^2\omega_3 + 24\omega_4\omega_1^3\omega_2 cs^2 v_3^2 + 120\omega_4\omega_1^2\omega_2 cs^2\omega_3 v_3^2 + 24\omega_4\omega_1^2\omega_3^2 cs^2\omega_3 + 96\omega_4\omega_1^3\omega_3 v_3^4 + 9\omega_4\omega_1^3\omega_2^3 cs^4 + 10\omega_4\omega_1^2\omega_2^2 cs^4\omega_3 + 42\omega_4\omega_1^3\omega_2 cs^2\omega_3 - 54\omega_4\omega_1^2\omega_3^2 cs^2 v_3^2 + 408\omega_4\omega_1\omega_3^3\omega_3 v_3^4 + 8\omega_4\omega_1\omega_3^2 cs^4 - 9\omega_1^3\omega_2^3 cs^2\omega_3 + 40\omega_4\omega_3^3 cs^2\omega_3 + 27\omega_4\omega_1^3\omega_2^3 cs^2 v_3^2 - \omega_4\omega_1^2\omega_2^3 v_3^4\omega_3 - 4\omega_4\omega_1\omega_3^3\omega_2\omega_3 - 8\omega_4\omega_1^3\omega_2 cs^2 + 17\omega_4\omega_1^3\omega_2^2 cs^4\omega_3 - 16\omega_4\omega_1^2\omega_2 cs^2\omega_3 + 18\omega_4\omega_1^2\omega_3^3 cs^2 - 18\omega_4\omega_1^3\omega_2^2 cs^4 + 16\omega_4\omega_1^3 cs^4\omega_3 + 144\omega_4\omega_3^3\omega_3 v_3^2 - 168\omega_4\omega_1^2\omega_2^2\omega_3 v_3^4 + 153\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 - 96\omega_4\omega_1^2\omega_2\omega_3 v_3^2 + 8\omega_4\omega_1^2\omega_2\omega_3 - 36\omega_1^2\omega_3^2 cs^4\omega_3 + 8\omega_4\omega_1^3\omega_2 cs^4 - 60\omega_4\omega_1\omega_2^2 cs^2\omega_3 v_3^2 + 60\omega_4\omega_1^2\omega_2^2 cs^2 v_3^2 + \omega_4\omega_1^3\omega_2^2 v_2^4\omega_3 - 18\omega_4\omega_1^2\omega_3^2 cs^4 - 29\omega_4\omega_1^2\omega_2^3 cs^4\omega_3 - 8\omega_4\omega_1\omega_2^3 cs^2 - 222\omega_4\omega_1\omega_3^3\omega_3 v_3^2 + 3\omega_4\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 32\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 6\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1^2\omega_2^3\omega_3 - 28\omega_4\omega_1\omega_2^2 cs^4\omega_3 + 192\omega_4\omega_1^2\omega_2\omega_3 v_3^4 + 24\omega_4\omega_1\omega_2^2 cs^2 v_3^2 + 4\omega_4\omega_1^3\omega_3 + 18\omega_4\omega_1^3\omega_2^2 cs^2 - 54\omega_4\omega_1\omega_3^2 cs^2\omega_3 - 90\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 - 264\omega_4\omega_3^3\omega_3 v_3^4 - 36\omega_1\omega_3^3 cs^2\omega_3 + 84\omega_4\omega_1^2\omega_2^2\omega_3 v_3^2 - 7\omega_4\omega_1^2\omega_3^3\omega_3 - 20\omega_4\omega_1^3 cs^2\omega_3 - 108\omega_1^2\omega_3^3 cs^2\omega_3 v_3^2 - 240\omega_4\omega_1^3\omega_2\omega_3 v_3^4 - 10\omega_4\omega_1^3\omega_2\omega_3 - 81\omega_4\omega_1^3\omega_2^2\omega_3 v_3^2 + 20\omega_4\omega_1^2\omega_2^2 cs^4 - 153\omega_4\omega_1^2\omega_3^3 cs^2\omega_3 v_3^2 - 138\omega_4\omega_1^2\omega_3^3\omega_3 v_3^2 - 3\omega_4\omega_1^3\omega_2^3 cs^4\omega_3 - 60\omega_4\omega_1^3\omega_3 v_3^2 - 54\omega_4\omega_1^3\omega_2^2 cs^2 v_3^2 - 9\omega_4\omega_1^3\omega_2^3 cs^2 + 432\omega_4\omega_1\omega_3^2 cs^2\omega_3 v_3^2 + 9\omega_1^3\omega_3^3 cs^4\omega_3 - 68\omega_4\omega_2^3 cs^4\omega_3 + \omega_4\omega_1^2\omega_2^3 v_2^2\omega_3 - 24\omega_4\omega_1\omega_3^3\omega_3 v_3^2 - 8\omega_4\omega_3^3\omega_3 + 8\omega_4\omega_1^2\omega_2 cs^4\omega_3 - 24\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 - 288\omega_4\omega_1^3\omega_2 cs^2\omega_3 v_3^2 + 108\omega_1\omega_3^3 cs^2\omega_3 v_3^2$$

$$C_{59} = 6\omega_1 v_3^4 - 4\omega_2 cs^2 + 9\omega_1\omega_2 v_3^2 + 24\omega_1 cs^2 v_3^2 + 12\omega_2 v_3^4 - 2\omega_1 cs^2 - 3\omega_1\omega_2 cs^4 + 2\omega_1 cs^4 - 12\omega_2 v_3^2 + 48\omega_2 cs^2 v_3^2 + 3\omega_1\omega_2 cs^2 + 4\omega_2 cs^4 - 36\omega_1\omega_2 cs^2 v_3^2 - 6\omega_1 v_3^2 - 9\omega_1\omega_2 v_3^4$$

$$C_{60} = 12\omega_4\omega_1^2 cs^2\omega_3^2 + 15\omega_4\omega_1^3\omega_3^2 v_3^2 + 54\omega_4\omega_1^3 cs^2\omega_3 v_3^2 + 3\omega_4\omega_1^3 cs^4\omega_3^2 + 36\omega_4\omega_1 cs^2\omega_3^2 v_3^2 + 36\omega_4^2\omega_1^2\omega_3 v_3^4 - 12\omega_4^2\omega_1 cs^2\omega_3 + 12\omega_4\omega_1^2\omega_3^2 v_3^2 - 36\omega_4\omega_1 cs^2\omega_3^2 v_3^2 + \omega_4^2\omega_1^3 cs^2\omega_3^2 + 18\omega_4\omega_1^3\omega_3 v_3^4 + 18\omega_1^2\omega_3^2 v_3^2 + 18\omega_4^2\omega_1^2 v_3^2 - 36\omega_4\omega_1^3 cs^2\omega_3 v_3^2 + 24\omega_4^2\omega_1^2 cs^4\omega_3 - 12\omega_4\omega_1^2 cs^4\omega_3 + 27\omega_4^2\omega_1^3 cs^2 v_3^2 + 3\omega_4^2\omega_1^3\omega_3 v_3^4 + 9\omega_1^3\omega_3^2 v_3^4 + 72\omega_4^2\omega_1^2 cs^2\omega_3 v_3^2 + 12\omega_4^2\omega_1 cs^2\omega_3^2 + 36\omega_4\omega_1^2\omega_3 v_3^2 - 3\omega_4^2\omega_1^3 cs^2\omega_3 + 24\omega_4^2 cs^4\omega_3^2 + 36\omega_4\omega_1^2\omega_3^2 v_3^4 - 108\omega_4\omega_1^2 cs^2\omega_3 v_3^2 - 9\omega_4^2\omega_1^3 v_3^2 + 12\omega_4\omega_1 cs^4\omega_3^2 + 15\omega_4^2\omega_1^3\omega_3 v_3^2 + 72\omega_4\omega_1^2 cs^2\omega_3^2 v_3^2 - 9\omega_1^3\omega_3^2 v_3^2 - 36\omega_4\omega_1^2\omega_3 v_3^4 + 12\omega_4\omega_1 cs^4\omega_3 - 3\omega_4^2\omega_1^3 cs^4\omega_3^2 - 54\omega_1^2 cs^2\omega_3^2 v_3^2 - 8\omega_4^2\omega_1^2 cs^2\omega_3^2 - 3\omega_4^2\omega_1^3\omega_3^2 v_3^2 - 12\omega_4\omega_1^2 cs^4\omega_3^2 - 15\omega_4^2\omega_1^3\omega_3 v_3^4 - 12\omega_4^2\omega_1^2 cs^2\omega_3^2 v_3^2 - 36\omega_4\omega_1^2\omega_3^2 v_3^2 - 3\omega_4\omega_1^3 cs^2\omega_3^2 + 9\omega_4^2\omega_1^3 v_3^4 - 36\omega_4^2\omega_1^2\omega_3 v_3^2 + 36\omega_4^2\omega_1 cs^2\omega_3 v_3^2 - 12\omega_4\omega_1 cs^2\omega_3^2 - 15\omega_4\omega_1^3\omega_3 v_3^4 + 6\omega_4^2\omega_1^3 cs^2\omega_3^2 v_3^2 + 27\omega_1^3 cs^2\omega_3^2 v_3^2 - 18\omega_4\omega_1^3\omega_3 v_3^2 - 18\omega_1^2\omega_3^2 v_3^4 - 18\omega_4^2\omega_1^2 v_3^4 + 12\omega_4^2\omega_1^2 cs^2\omega_3 - 36\omega_4\omega_1^3 cs^2\omega_3^2 v_3^2 - 48\omega_4^2\omega_1 cs^4\omega_3^2 - 12\omega_4^2\omega_1^2\omega_3^2 v_3^4 - 54\omega_4^2\omega_1^2 cs^2 v_3^2 + 3\omega_4^2\omega_1^3 cs^4\omega_3$$

2.7.5 Conservation of momentum: ρv_3

 attached text file: `output_d3q27_nse_culbm2_symbolic_pde_03.txt`

$$v_3\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_3}{\partial t} + \frac{\delta_l v_1 v_3}{\delta_t}\frac{\partial\rho}{\partial x_1} + \frac{\delta_l \rho v_3}{\delta_t}\frac{\partial v_1}{\partial x_1} + \frac{\delta_l \rho v_1}{\delta_t}\frac{\partial v_3}{\partial x_1} + \frac{\delta_l v_2 v_3}{\delta_t}\frac{\partial\rho}{\partial x_2} + \frac{\delta_l \rho v_3}{\delta_t}\frac{\partial v_2}{\partial x_2} + \frac{\delta_l \rho v_2}{\delta_t}\frac{\partial v_3}{\partial x_2} + (cs^2 + v_3^2)\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} +$$
$$\frac{2\delta_l \rho v_3}{\delta_t}\frac{\partial v_3}{\partial x_3} + (-2 + \omega_1)\frac{cs^2\delta_t^2}{2\omega_1\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_3}{\partial x_1} +$$
$$(6\omega_1 cs^2 - 2\omega_1 - 12\omega_2 cs^2 + 2\omega_2 + 6\omega_1 v_1^2 + 3\omega_1\omega_2 cs^2 - 6\omega_2 v_1^2)\frac{\delta_l^2}{6\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_3} + (\omega_1 - \omega_2)\frac{2\delta_t^2\rho v_1}{\omega_1\omega_2\delta_t}\frac{\partial v_1}{\partial x_1}\frac{\partial v_1}{\partial x_3} +$$
$$(-2 + \omega_1)\frac{cs^2\delta_t^2}{2\omega_1\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_2} + (6\omega_1 cs^2 - 2\omega_1 - 12\omega_2 cs^2 + 2\omega_2 + 6\omega_1 v_2^2 + 3\omega_1\omega_2 cs^2 - 6\omega_2 v_2^2)\frac{\delta_l^2}{6\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_3} +$$
$$(\omega_1 - \omega_2)\frac{2\delta_t^2\rho v_2}{\omega_1\omega_2\delta_t}\frac{\partial v_2}{\partial x_2}\frac{\partial v_2}{\partial x_3} + (\omega_1 cs^2 - \omega_1 - \omega_2 cs^2 + \omega_2 + 3\omega_1 v_1^2 - 3\omega_2 v_1^2)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_1} +$$

$$\left(\omega_1 cs^2 - \omega_1 - \omega_2 cs^2 + \omega_2 + 3\omega_1 v_2^2 - 3\omega_2 v_2^2\right)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_2}{\partial x_2} \; +$$

$$\left(-9\omega_1\omega_2 v_3^2 + 4\omega_1 cs^2 - 2\omega_1 + 3\omega_1\omega_2 + 8\omega_2 cs^2 - 4\omega_2 + 12\omega_2 v_3^2 - 6\omega_1\omega_2 cs^2 + 6\omega_1 v_3^2\right)\frac{\delta_l^2}{3\omega_1\omega_2\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_3} \; +$$

$$\left(2\omega_1 - 3\omega_1\omega_2 + 4\omega_2\right)\frac{\delta_l^2\rho v_3}{\omega_1\omega_2\delta_t}\left(\frac{\partial v_3}{\partial x_3}\right)^2 + \left(-2+\omega_1\right)\frac{cs^2\delta_l^2\rho}{2\omega_1\delta_t}\frac{\partial^2 v_3}{\partial x_1^2} + \left(-2+\omega_1\right)\frac{cs^2\delta_l^2\rho}{2\omega_1\delta_t}\frac{\partial^2 v_3}{\partial x_2^2} \; +$$

$$\left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2\right)\frac{\delta_l^2 v_1}{3\omega_1\omega_2\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_3} \; +$$

$$\left(2\omega_1 cs^2 - 2\omega_1 - 8\omega_2 cs^2 + 2\omega_2 + 6\omega_1 v_1^2 + 3\omega_1\omega_2 cs^2 - 6\omega_2 v_1^2\right)\frac{\delta_l^2\rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_1}{\partial x_1\partial x_3} \; +$$

$$\left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2\right)\frac{\delta_l^2 v_2}{3\omega_1\omega_2\delta_t}\frac{\partial^2\rho}{\partial x_2\partial x_3} \; +$$

$$\left(2\omega_1 cs^2 - 2\omega_1 - 8\omega_2 cs^2 + 2\omega_2 + 6\omega_1 v_2^2 + 3\omega_1\omega_2 cs^2 - 6\omega_2 v_2^2\right)\frac{\delta_l^2\rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_2}{\partial x_2\partial x_3} \; +$$

$$\left(-3\omega_1\omega_2 v_3^2 + 6\omega_1 cs^2 - 2\omega_1 + 3\omega_1\omega_2 + 12\omega_2 cs^2 - 4\omega_2 + 4\omega_2 v_3^2 - 9\omega_1\omega_2 cs^2 + 2\omega_1 v_3^2\right)\frac{\delta_l^2 v_3}{6\omega_1\omega_2\delta_t}\frac{\partial^2\rho}{\partial x_3^2} \; +$$

$$\left(-9\omega_1\omega_2 v_3^2 + 2\omega_1 cs^2 - 2\omega_1 + 3\omega_1\omega_2 + 4\omega_2 cs^2 - 4\omega_2 + 12\omega_2 v_3^2 - 3\omega_1\omega_2 cs^2 + 6\omega_1 v_3^2\right)\frac{\delta_l^2\rho}{6\omega_1\omega_2\delta_t}\frac{\partial^2 v_3}{\partial x_3^2} \; +$$

$$\left(-1 + 3cs^2 + v_1^2\right)\frac{\delta_l^3 v_1 v_3}{12\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + \left(-1 + cs^2 + 3v_1^2\right)\frac{\delta_l^3\rho v_3}{12\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_1\frac{\delta_l^3\rho v_1}{12\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_1^3} - \frac{cs^2\delta_l^3\rho v_3}{6\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} \; +$$

$$C_2\frac{\delta_l^3\rho v_2}{4\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_2} - \frac{cs^2\delta_l^3\rho v_3}{6\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C_3\frac{\delta_l^3\rho v_1}{4\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_2^2} + \left(-1 + 3cs^2 + v_2^2\right)\frac{\delta_l^3 v_2 v_3}{12\delta_t}\frac{\partial^3\rho}{\partial x_2^3} \; +$$

$$\left(-1 + cs^2 + 3v_2^2\right)\frac{\delta_l^3\rho v_3}{12\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_4\frac{\delta_l^3\rho v_2}{12\omega_4\omega_1\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_2^3} + C_5\frac{\delta_l^3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} + C_6\frac{\delta_l^3\rho v_1}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_3} - \frac{cs^2\delta_l^3\rho v_3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} \; +$$

$$C_7\frac{\delta_l^3 v_1 v_2}{3\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2\partial x_3} + C_8\frac{\delta_l^3\rho v_2}{6\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2\partial x_3} + C_9\frac{\delta_l^3\rho v_1}{6\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2\partial x_3} + C_{10}\frac{\delta_l^3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_2^2\partial x_3} \; +$$

$$C_{11}\frac{\delta_l^3\rho v_2}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_2}{\partial x_2^2\partial x_3} - \frac{cs^2\delta_l^3\rho v_3}{6\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C_{12}\frac{\delta_l^3 v_1 v_3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} + C_{13}\frac{\delta_l^3\rho v_3}{12\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} + C_{14}\frac{\delta_l^3\rho v_1}{6\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_3^2} \; +$$

$$C_{15}\frac{\delta_l^3 v_2 v_3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_2\partial x_3^2} + C_{16}\frac{\delta_l^3\rho v_3}{12\omega_4\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C_{17}\frac{\delta_l^3\rho v_2}{6\omega_1^2\omega_2^2\omega_3\delta_t}\frac{\partial^3 v_3}{\partial x_2\partial x_3^2} + C_{18}\frac{\delta_l^3}{12\omega_1^2\omega_2^2\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + C_{19}\frac{\delta_l^3\rho v_3}{6\omega_1^2\omega_2^2\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} \; +$$

$$C_{20}\frac{\delta_l^4 v_3}{72\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_1^4} \; +$$

$$\left(6\omega_1 cs^2 - 4\omega_1 + 6\omega_1\omega_2 - 15\omega_1\omega_2 v_1^2 + 12\omega_2 cs^2 - 8\omega_2 + 10\omega_1 v_1^2 - 9\omega_1\omega_2 cs^2 + 20\omega_2 v_1^2\right)\frac{\delta_l^4\rho v_1 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} \; +$$

$$C_{21}\frac{\delta_l^4\rho}{24\omega_4^2\omega_1^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1^4} + \left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2\right)\frac{\delta_l^4 v_1 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} \; +$$

$$\left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2\right)\frac{\delta_l^4\rho v_2 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} + C_{22}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C_{23}\frac{\delta_l^4\rho v_1 v_2}{8\omega_4^2\omega_1\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_2} \; +$$

$$\left(2\omega_1 cs^2 - 2\omega_1 - 14\omega_2 cs^2 + 2\omega_2 + 3\omega_1 v_1^2 + 3\omega_1 v_2^2 + 6\omega_1\omega_2 cs^2 - 3\omega_2 v_1^2 - 3\omega_2 v_2^2\right)\frac{cs^2\delta_l^4 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} \; +$$

$$\left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2\right)\frac{\delta_l^4\rho v_1 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} \; +$$

$$\left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_2^2 - \omega_2 v_2^2\right)\frac{\delta_l^4\rho v_2 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} + C_{24}\frac{\delta_l^4\rho}{8\omega_4^2\omega_1^3\omega_5\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2^2} \; +$$

$$\left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2\right)\frac{\delta_l^4 v_1 v_2 v_3}{12\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + C_{25}\frac{\delta_l^4\rho v_2 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} \; +$$

$$\left(3\omega_1 cs^2 - \omega_1 - 3\omega_2 cs^2 + \omega_2 + \omega_1 v_1^2 - \omega_2 v_1^2\right)\frac{\delta_l^4\rho v_1 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} + C_{26}\frac{\delta_l^4\rho v_1 v_2}{8\omega_4^2\omega_1\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2^3} + C_{27}\frac{\delta_l^4 v_3}{72\omega_1\omega_2\delta_t}\frac{\partial^4\rho}{\partial x_2^4} \; +$$

$$\left(6\omega_1 cs^2 - 4\omega_1 - 15\omega_1\omega_2 v_2^2 + 6\omega_1\omega_2 + 12\omega_2 cs^2 - 8\omega_2 + 10\omega_1 v_2^2 - 9\omega_1\omega_2 cs^2 + 20\omega_2 v_2^2\right)\frac{\delta_l^4\rho v_2 v_3}{36\omega_1\omega_2\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} \; +$$

$$C_{28}\frac{\delta_l^4\rho}{24\omega_4^2\omega_1^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_2^4} + C_{29}\frac{\delta_l^4 v_1}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} + C_{30}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} + C_{31}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} \; +$$

$$C_{32}\frac{\delta_l^4 v_2}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} + C_{33}\frac{\delta_l^4\rho v_1 v_2}{6\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} + C_{34}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} \; +$$

$$C_{35}\frac{\delta_l^4\rho v_2 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} + C_{36}\frac{\delta_l^4 v_1}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} + C_{37}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} \; +$$

$$C_{38}\frac{\delta_l^4\rho v_1 v_2}{6\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3} + C_{39}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + C_{40}\frac{\delta_l^4 v_2}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} + C_{41}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} \; +$$

$$C_{42}\frac{\delta_l^4\rho v_2 v_3}{72\omega_4\omega_1\omega_2\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} + C_{43}\frac{\delta_l^4 v_3}{36\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} + C_{44}\frac{\delta_l^4\rho v_1 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} + C_{45}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} \; +$$

$$C_{46}\frac{\delta_l^4 v_1 v_2 v_3}{6\omega_1^3\omega_2^3\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2} + C_{47}\frac{\delta_l^4\rho v_2 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2} + C_{48}\frac{\delta_l^4\rho v_1 v_3}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} + C_{49}\frac{\delta_l^4\rho v_1 v_2}{6\omega_4\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2} \; +$$

$$+\; C_{50}\frac{\delta_l^4 v_3}{36\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} + C_{51}\frac{\delta_l^4\rho v_2 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} + C_{52}\frac{\delta_l^4\rho}{36\omega_4\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} + C_{53}\frac{\delta_l^4 v_1}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_3^3} \; +$$

$$C_{54}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + C_{55}\frac{\delta_l^4\rho v_1 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_3^3} + C_{56}\frac{\delta_l^4 v_2}{36\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} + C_{57}\frac{\delta_l^4\rho}{72\omega_4^2\omega_1^3\omega_2^3\omega_3^2\delta_t}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} \; +$$

$$C_{58}\frac{\delta_l^4 \rho v_2 v_3}{18\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} \ + \ C_{59}\frac{\delta_l^4 v_3}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 \rho}{\partial x_3^4} \ + \ C_{60}\frac{\delta_l^4 \rho}{36\omega_1^3\omega_2^3\omega_3\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

$C_1 = 2\omega_4\omega_1\omega_3 - 6v_1^2\omega_3 - 6\omega_4 v_1^2 - 2\omega_4\omega_1 v_1^2\omega_3 + 6\omega_4 - 6\omega_4\omega_1 cs^2\omega_3 - 3\omega_4\omega_1 + 3\omega_4\omega_1 v_1^2 - 6\omega_4\omega_3 - 18cs^2\omega_3 - 18\omega_4 cs^2 + 3\omega_1 v_1^2\omega_3 + 18\omega_4 cs^2\omega_3 + 9\omega_1 cs^2\omega_3 - 3\omega_1\omega_3 + 6\omega_4 v_1^2\omega_3 + 6\omega_3 + 9\omega_4\omega_1 cs^2$

$C_2 = -2\omega_4 v_2^2 + 2\omega_4 - \omega_4\omega_1 + 2v_2^2\omega_3 + 6cs^2\omega_3 + \omega_4\omega_1 v_2^2 - 6\omega_4 cs^2 - 3\omega_1 cs^2\omega_3 + \omega_1\omega_3 - 2\omega_3 - \omega_1 v_2^2\omega_3 + 3\omega_4\omega_1 cs^2$

$C_3 = 2v_1^2\omega_3 - 2\omega_4 v_1^2 + 2\omega_4 - \omega_4\omega_1 + \omega_4\omega_1 v_1^2 + 6cs^2\omega_3 - 6\omega_4 cs^2 - \omega_1 v_1^2\omega_3 - 3\omega_1 cs^2\omega_3 + \omega_1\omega_3 - 2\omega_3 + 3\omega_4\omega_1 cs^2$

$C_4 = -6\omega_4 v_2^2 + 2\omega_4\omega_1\omega_3 + 6\omega_4 - 6\omega_4\omega_1 cs^2\omega_3 - 3\omega_4\omega_1 - 6v_2^2\omega_3 - 2\omega_4\omega_1 v_2^2\omega_3 - 6\omega_4\omega_3 - 18cs^2\omega_3 + 3\omega_4\omega_1 v_2^2 - 18\omega_4 cs^2 + 6\omega_4 v_2^2\omega_3 + 18\omega_4 cs^2\omega_3 + 9\omega_1 cs^2\omega_3 - 3\omega_1\omega_3 + 6\omega_3 + 3\omega_1 v_2^2\omega_3 + 9\omega_4\omega_1 cs^2$

$C_5 = 2\omega_1^2 cs^4 + 2\omega_2^2\omega_2 cs^2 - \omega_1^2\omega_2^2 cs^4 - 2\omega_1\omega_2^2 cs^2 + 4\omega_2^2 v_1^2 + 3\omega_1\omega_2^2 v_1^4 + 12\omega_1^2 cs^2 v_1^2 - 14\omega_2^2 cs^4 + 6\omega_1\omega_2 cs^2 v_1^2 - 2\omega_1\omega_2 v_1^2 - 3\omega_1^2\omega_2 v_1^4 - 2\omega_1^2 v_1^2 - 3\omega_1\omega_2^2 v_1^2 + 2\omega_2^2 cs^2 + 3\omega_1^2\omega_2 v_1^2 + 2\omega_1^2 v_1^4 + 15\omega_1\omega_2^2 cs^2 v_1^2 + 2\omega_1\omega_2 v_1^4 - 2\omega_1^2 cs^2 - 2\omega_1^2\omega_2 cs^4 - 18\omega_2^2 cs^2 v_1^2 + 14\omega_1\omega_2^2 cs^4 - 4\omega_2^2 v_1^4 - 15\omega_1^2\omega_2 cs^2 v_1^2$

$C_6 = -9\omega_1^2\omega_2 cs^2 - 5\omega_1\omega_2^2 + 9\omega_1\omega_2^2 cs^2 - 14\omega_2^2 v_1^2 - 2\omega_1\omega_2 + 6\omega_2^2 + 6\omega_1\omega_2 v_1^2 + 8\omega_1^2 v_1^2 + 11\omega_1\omega_2^2 v_1^2 - 10\omega_2^2 cs^2 - 11\omega_1^2\omega_2 v_1^2 + 5\omega_1^2\omega_2 + 8\omega_1^2 cs^2 + 2\omega_1\omega_2 cs^2 - 4\omega_1^2$

$C_7 = \omega_2^2 v_2^2 + \omega_2^2 v_1^2 - 2\omega_1\omega_2 v_2^2 + 4\omega_1\omega_2 + \omega_1^2 v_2^2 - 2\omega_2^2 - 2\omega_1\omega_2 v_1^2 + \omega_1^2 v_1^2 + 6\omega_2^2 cs^2 + 6\omega_1^2 cs^2 - 12\omega_1\omega_2 cs^2 - 2\omega_1^2$

$C_8 = -3\omega_4\omega_1^2\omega_2^2 - 4\omega_4\omega_2^2 cs^2\omega_3 - 2\omega_4\omega_1^2\omega_2 v_2^2 + 3\omega_1^2\omega_2^2\omega_3 - 2\omega_4\omega_2^2 v_2^2\omega_3 - 4\omega_4\omega_1\omega_2^2 v_2^2 - 4\omega_4\omega_1\omega_2 cs^2\omega_3 - 3\omega_1^2\omega_2^2 v_2^2\omega_3 - \omega_4\omega_1\omega_2^2\omega_3 - 12\omega_4\omega_1\omega_2 v_2^2\omega_3 + 6\omega_4\omega_2^2 v_2^2\omega_3 - 9\omega_1^2\omega_2^2 cs^2\omega_3 + 2\omega_4\omega_1^2\omega_2 + \omega_4\omega_1^2\omega_2\omega_3 + 9\omega_4\omega_1^2\omega_2^2 cs^2 + 8\omega_4\omega_1^2 cs^2\omega_3 - \omega_4\omega_1^2\omega_2 v_2^2\omega_3 - 6\omega_4\omega_1^2\omega_2 cs^2 - 3\omega_4\omega_1^2\omega_2 cs^2\omega_3 + 2\omega_4\omega_1^2 v_2^2\omega_3 - 12\omega_4\omega_1\omega_2^2 cs^2 + 4\omega_4\omega_1\omega_2\omega_3 + 6\omega_1\omega_2^2 v_2^2\omega_3 - 6\omega_1\omega_2^2\omega_3 + \omega_4\omega_1\omega_2^2 v_2^2\omega_3 + 4\omega_4\omega_1\omega_2^2 + 6\omega_4\omega_1^2 v_1^2\omega_3 + 3\omega_4\omega_1^2\omega_2^2 v_2^2 - 4\omega_4\omega_1^2\omega_3 + 3\omega_4\omega_1\omega_2^2 cs^2\omega_3 + 18\omega_1\omega_2^2 cs^2\omega_3$

$C_9 = -4\omega_4\omega_1\omega_2^2 v_1^2 - 3\omega_4\omega_1^2\omega_2^2 - 3\omega_1^2\omega_2^2 v_1^2\omega_3 - 4\omega_4\omega_2^2 cs^2\omega_3 - 12\omega_4\omega_1\omega_2 v_2^2\omega_3 + 3\omega_1^2\omega_2^2\omega_3 + 6\omega_4\omega_2^2 v_2^2\omega_3 - 2\omega_4\omega_1^2\omega_2 v_1^2 - 4\omega_4\omega_1\omega_2 cs^2\omega_3 - \omega_4\omega_1\omega_2^2\omega_3 - 2\omega_4\omega_2^2 v_1^2\omega_3 - 9\omega_1^2\omega_2^2 cs^2\omega_3 + 2\omega_4\omega_1^2\omega_2 + \omega_4\omega_1^2\omega_2\omega_3 + 9\omega_4\omega_1^2\omega_2^2 cs^2 + 8\omega_4\omega_1^2 cs^2\omega_3 + 6\omega_1\omega_2^2 v_1^2\omega_3 - 6\omega_4\omega_1^2\omega_2 cs^2 + \omega_4\omega_1\omega_2^2 v_1^2\omega_3 - 3\omega_4\omega_1^2\omega_2 cs^2\omega_3 + 6\omega_4\omega_1^2 v_2^2\omega_3 - 12\omega_4\omega_1\omega_2^2 cs^2 + 4\omega_4\omega_1\omega_2\omega_3 + 3\omega_4\omega_1^2\omega_2^2 v_1^2 - \omega_4\omega_1\omega_2 v_1^2\omega_3 - 6\omega_1\omega_2^2\omega_3 + 4\omega_4\omega_1\omega_2^2 + 2\omega_4\omega_1^2 v_1^2\omega_3 - 4\omega_4\omega_1^2\omega_3 + 3\omega_4\omega_1\omega_2^2 cs^2\omega_3 + 18\omega_1\omega_2^2 cs^2\omega_3$

$C_{10} = 2\omega_1^2 cs^4 + 4\omega_2^2 v_2^2 + 2\omega_1^2\omega_2 cs^2 - \omega_1^2\omega_2^2 cs^4 - 2\omega_1\omega_2^2 cs^2 + 6\omega_1\omega_2 cs^2 v_2^2 - 2\omega_1\omega_2 v_2^2 - 3\omega_1^2\omega_2 v_2^4 - 2\omega_1^2 v_2^2 - 14\omega_2^2 cs^4 + 3\omega_1\omega_2 v_2^4 + 12\omega_1^2 cs^2 v_2^2 + 3\omega_1^2\omega_2 v_2^2 + 15\omega_1\omega_2^2 cs^2 v_2^2 + 2\omega_2^2 cs^2 + 2\omega_1^2 v_2^4 + 2\omega_1\omega_2 v_2^4 - 3\omega_1\omega_2^2 v_2^2 - 4\omega_2^2 v_2^4 - 2\omega_1^2 cs^2 - 2\omega_1^2\omega_2 cs^4 - 15\omega_1^2\omega_2 cs^2 v_2^2 + 14\omega_1\omega_2^2 cs^4 - 18\omega_2^2 cs^2 v_2^2$

$C_{11} = -14\omega_2^2 v_2^2 - 9\omega_1^2\omega_2 cs^2 - 5\omega_1\omega_2^2 + 9\omega_1\omega_2^2 cs^2 + 6\omega_1\omega_2 v_2^2 - 2\omega_1\omega_2 + 8\omega_1^2 v_2^2 + 6\omega_2^2 - 11\omega_1^2\omega_2 v_2^2 - 10\omega_2^2 cs^2 + 11\omega_1\omega_2^2 v_2^2 + 5\omega_1^2\omega_2 + 8\omega_1^2 cs^2 + 2\omega_1\omega_2 cs^2 - 4\omega_1^2$

$C_{12} = -9\omega_1^2\omega_2 cs^2 - 4\omega_1\omega_2 v_3^2 - 3\omega_1\omega_2^2 + 9\omega_1\omega_2^2 cs^2 + 2\omega_1^2 v_3^2 - 4\omega_2^2 v_1^2 + 2\omega_1\omega_2 + 2\omega_2^2 + 2\omega_1\omega_2 v_1^2 + 2\omega_2^2 v_3^2 + 2\omega_1^2 v_1^2 + 3\omega_1\omega_2^2 v_1^2 - 6\omega_2^2 cs^2 - 3\omega_1^2\omega_2 v_1^2 + 3\omega_1^2\omega_2 + 12\omega_1^2 cs^2 - 6\omega_1\omega_2 cs^2 - 4\omega_1^2$

$C_{13} = -6\omega_4\omega_1^2\omega_2^2 + 16\omega_4\omega_2^2 cs^2\omega_3 - 6\omega_1^2\omega_2^2\omega_3 + 2\omega_4\omega_1\omega_2^2\omega_3 v_3^2 - 12\omega_1\omega_2^2\omega_3 v_3^2 + 4\omega_4\omega_1\omega_2 cs^2\omega_3 - 8\omega_4\omega_1\omega_2^2 v_3^2 - 8\omega_4\omega_1\omega_2^2\omega_3 + 4\omega_4\omega_1^2\omega_3 v_3^2 + 12\omega_4\omega_1\omega_2 v_1^2\omega_3 - 24\omega_4\omega_2^2 v_2^2\omega_3 + 18\omega_1^2\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1^2\omega_2 v_3^2 - 11\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 2\omega_4\omega_1^2\omega_2\omega_3 v_3^2 + 4\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1^2\omega_2\omega_3 + 18\omega_4\omega_1^2\omega_2^2 cs^2 + 16\omega_4\omega_1^2 cs^2\omega_3 + 6\omega_4\omega_1^2\omega_2 v_3^2 - 12\omega_4\omega_1^2\omega_2 cs^2 + 18\omega_4\omega_1\omega_2^2 v_1^2\omega_3 + 3\omega_4\omega_1^2\omega_2^2\omega_3 - 12\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 24\omega_4\omega_1\omega_2^2 cs^2 + 6\omega_1^2\omega_2\omega_3 v_3^2 - 4\omega_4\omega_1\omega_2\omega_3 - 3\omega_4\omega_1^2\omega_2^2\omega_3 v_3^2 - 18\omega_4\omega_1^2 v_1^2\omega_3 + 12\omega_1\omega_2\omega_3 + 8\omega_4\omega_2^2\omega_3 v_3^2 + 8\omega_4\omega_1\omega_2^2 + 12\omega_4\omega_1^2 v_1^2\omega_3 - 8\omega_4\omega_1^2\omega_3 + 12\omega_4\omega_1\omega_2^2 cs^2\omega_3 - 36\omega_1\omega_2^2 cs^2\omega_3$

$C_{14} = 8\omega_1^2 cs^2\omega_3 - 6\omega_1^2\omega_2 cs^2 - 2\omega_1\omega_2^2 - 4\omega_1^2\omega_3 + 4\omega_1\omega_2\omega_3 - 4\omega_1\omega_2 cs^2\omega_3 + 6\omega_1\omega_2^2 cs^2 + 6\omega_2^2\omega_3 v_3^2 + 2\omega_1^2 v_1^2\omega_3 + 2\omega_1\omega_2^2 v_1^2 - 4\omega_2^2 cs^2\omega_3 + \omega_1\omega_2^2 v_1^2\omega_3 - 2\omega_1^2\omega_2 v_1^2 - 3\omega_1^2\omega_2 cs^2\omega_3 + 2\omega_1^2\omega_2 - \omega_1^2\omega_2 v_1^2\omega_3 + 6\omega_1^2\omega_3 v_3^2 - \omega_1\omega_2^2\omega_3 - 2\omega_2^2 v_1^2\omega_3 - 12\omega_1\omega_2\omega_3 v_3^2 + 3\omega_1\omega_2^2 cs^2\omega_3 + \omega_1^2\omega_2\omega_3$

$C_{15} = -4\omega_2^2 v_2^2 - 9\omega_1^2\omega_2 cs^2 - 4\omega_1\omega_2 v_3^2 - 3\omega_1\omega_2^2 + 9\omega_1\omega_2^2 cs^2 + 2\omega_1^2 v_3^2 + 2\omega_1\omega_2 v_2^2 + 2\omega_1\omega_2 + 2\omega_1^2 v_2^2 + 2\omega_2^2 + 2\omega_2^2 v_3^2 - 3\omega_1^2\omega_2 v_2^2 - 6\omega_2^2 cs^2 + 3\omega_1\omega_2^2 v_2^2 + 3\omega_1^2\omega_2 + 12\omega_1^2 cs^2 - 6\omega_1\omega_2 cs^2 - 4\omega_1^2$

$C_{16} = -6\omega_4\omega_1^2\omega_2^2 + 16\omega_4\omega_2^2 cs^2\omega_3 + 12\omega_4\omega_1\omega_2 v_2^2\omega_3 - 6\omega_1^2\omega_2^2\omega_3 + 2\omega_4\omega_1\omega_2^2\omega_3 v_3^2 - 24\omega_4\omega_2^2 v_2^2\omega_3 - 12\omega_1\omega_2^2\omega_3 v_3^2 + 4\omega_4\omega_1\omega_2 cs^2\omega_3 - 8\omega_4\omega_1\omega_2^2 v_3^2 - 8\omega_4\omega_1\omega_2^2\omega_3 + 4\omega_4\omega_1^2\omega_3 v_3^2 + 18\omega_1^2\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1^2\omega_2 v_3^2 - 11\omega_4\omega_1^2\omega_2 cs^2\omega_3 - 2\omega_4\omega_1^2\omega_2\omega_3 v_3^2 + 4\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1^2\omega_2\omega_3 + 18\omega_4\omega_1^2\omega_2^2 cs^2 + 16\omega_4\omega_1^2 cs^2\omega_3 - 18\omega_4\omega_1\omega_2 v_2^2\omega_3 + 6\omega_4\omega_1^2\omega_2 v_3^2 - 12\omega_4\omega_1^2\omega_2 cs^2 + 3\omega_4\omega_1^2\omega_2^2\omega_3 - 12\omega_4\omega_1^2\omega_2 cs^2\omega_3 + 12\omega_4\omega_1^2 v_2^2\omega_3 - 24\omega_4\omega_1\omega_2^2 cs^2 + 6\omega_1^2\omega_2\omega_3 v_3^2 - 4\omega_4\omega_1\omega_2\omega_3 - 3\omega_4\omega_1^2\omega_2^2\omega_3 v_3^2 + 12\omega_1\omega_2^2\omega_3 + 18\omega_4\omega_1\omega_2^2 v_2^2\omega_3 + 8\omega_4\omega_2^2\omega_3 v_3^2 + 8\omega_4\omega_1\omega_2^2 - 8\omega_4\omega_1^2\omega_3 + 12\omega_4\omega_1\omega_2^2 cs^2\omega_3 - 36\omega_1\omega_2^2 cs^2\omega_3$

$C_{17} = 8\omega_1^2 cs^2\omega_3 - 6\omega_1^2\omega_2 cs^2 - 2\omega_1\omega_2^2 - 4\omega_1^2\omega_3 + 2\omega_1^2 v_2^2\omega_3 + 4\omega_1\omega_2\omega_3 - 4\omega_1\omega_2 cs^2\omega_3 + 6\omega_1\omega_2^2 cs^2 + 6\omega_2^2\omega_3 v_3^2 - \omega_1\omega_2^2 v_2^2\omega_3 - 2\omega_1^2\omega_2 v_2^2 - 4\omega_2^2 cs^2\omega_3 + 2\omega_1\omega_2^2 v_2^2 - 2\omega_2^2 v_2^2\omega_3 - 3\omega_1^2\omega_2 cs^2\omega_3 + 2\omega_1^2\omega_2 + 6\omega_2^2\omega_3 v_3^2 + \omega_1\omega_2^2 v_2^2\omega_3 - \omega_1\omega_2^2\omega_3 - 12\omega_1\omega_2\omega_3 v_3^2 + 3\omega_1\omega_2^2 cs^2\omega_3 + \omega_1^2\omega_2\omega_3$

$C_{18} = -7\omega_1^2\omega_2^2 v_3^2 + 24\omega_1^2 cs^2 v_3^2 - 24\omega_1\omega_2^2 v_3^4 + 4\omega_1^2 cs^4 + 4\omega_1^2\omega_2 cs^2 - 16\omega_1\omega_2 v_3^2 + 48\omega_1\omega_2 cs^2 v_3^2 + \omega_1^2\omega_2 cs^4 + 8\omega_1\omega_2 cs^2 - 4\omega_1^2 v_3^2 - 12\omega_1^2\omega_2 v_3^4 + 8\omega_2^2 cs^4 + 24\omega_1^2\omega_2 cs^2 v_3^2 - 16\omega_2^2 v_3^2 - 8\omega_2^2 cs^2 + 72\omega_2^2 cs^2 v_3^2 + 16\omega_2^2 v_3^4 - 48\omega_1\omega_2^2 cs^2 v_3^2 + 24\omega_1\omega_2 v_3^2 - 4\omega_1^2 cs^2 - 4\omega_1^2\omega_2 cs^4 + 7\omega_1^2\omega_2 v_3^4 - 8\omega_1\omega_2^2 cs^4 - 96\omega_1\omega_2^2 cs^2 v_3^2 + 4\omega_1^2 v_3^4 + 12\omega_1^2\omega_2 v_3^2 + 16\omega_1\omega_2 v_3^4 - \omega_1^2\omega_2^2 cs^2$

$C_{19} = 11\omega_1^2\omega_2^2 v_3^2 - 12\omega_1^2\omega_2 cs^2 + 24\omega_1\omega_2 v_3^2 + 16\omega_1\omega_2^2 - 24\omega_1\omega_2 cs^2 + 8\omega_1^2 v_3^2 - 8\omega_1\omega_2 - 12\omega_2^2 + 28\omega_2^2 v_3^2 + 20\omega_2^2 cs^2 + 8\omega_1^2\omega_2 - 40\omega_1\omega_2^2 v_3^2 - 4\omega_1^2\omega_2^2 + 8\omega_1^2 cs^2 + 8\omega_1\omega_2 cs^2 - 20\omega_1^2\omega_2 v_3^2 + 5\omega_1^2\omega_2^2 cs^2 - 4\omega_1^2$

$$C_{20} = -3\omega_1\omega_2 cs^4 + 12\omega_2 v_1^4 + 48\omega_2 cs^2 v_1^2 - 2\omega_1 cs^2 + 6\omega_1 v_1^4 - 36\omega_1\omega_2 cs^2 v_1^2 + 9\omega_1\omega_2 v_1^2 - 4\omega_2 cs^2 - 6\omega_1 v_1^2 + 24\omega_1 cs^2 v_1^2 - 9\omega_1\omega_2 v_1^4 + 4\omega_2 cs^4 + 3\omega_1\omega_2 cs^2 - 12\omega_2 v_1^2 + 2\omega_1 cs^4$$

$$C_{21} = 12\omega_4^2\omega_1^2 v_1^2\omega_3^2 - 48\omega_4^2\omega_1 cs^4\omega_3^2 + 72\omega_4^2\omega_1^2 cs^2 v_1^2\omega_3 + 9\omega_1^3 v_1^4\omega_3^2 + 3\omega_4^2\omega_1^3 cs^4\omega_3 + 3\omega_4^2\omega_1^3 v_1^4\omega_3 + 6\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 + 18\omega_1^2 v_1^2\omega_3^2 + 12\omega_4^2\omega_1^2 cs^2\omega_3 + 27\omega_1^3 cs^2 v_1^2\omega_3^2 - 9\omega_4^3\omega_1 v_1^2 + 15\omega_4^3\omega_1 v_1^2\omega_3^2 - 36\omega_4\omega_1 cs^2 v_1^2\omega_3^2 - 108\omega_4\omega_1^2 cs^2 v_1^2\omega_3 - 12\omega_4\omega_1 cs^2\omega_3^2 + 36\omega_4\omega_1^2 v_1^4\omega_3^2 + 72\omega_4\omega_1^2 cs^2 v_1^2\omega_3^2 - 3\omega_4\omega_1^3 cs^2\omega_3^2 - 36\omega_4\omega_1^2 v_1^4\omega_3 - 54\omega_4^2\omega_1^2 cs^2 v_1^2 - 54\omega_1^2 cs^2 v_1^2\omega_3^2 - 12\omega_4\omega_1^2 cs^4\omega_3^2 + 54\omega_4\omega_1^3 cs^2 v_1^2\omega_3 - 18\omega_4\omega_1^3 v_1^2\omega_3 - 15\omega_4^3\omega_1^3 v_1^4\omega_3 - 8\omega_4^2\omega_1^2 cs^2\omega_3^2 - 36\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3 - 12\omega_4^2\omega_1^2 cs^2 v_1^2\omega_3 + 18\omega_4^2\omega_1^2 v_1^2 + 12\omega_4^2\omega_1 cs^4\omega_3 - 36\omega_4^2\omega_1^2 v_1^2\omega_3 - 3\omega_4^2\omega_1^3 cs^4\omega_3^2 - 15\omega_4\omega_1^3 v_1^4\omega_3^2 - 36\omega_4\omega_1^2 v_1^2\omega_3^2 + 36\omega_4\omega_1 cs^2 v_1^2\omega_3^2 + 12\omega_4\omega_1 cs^4\omega_3^2 + 12\omega_4\omega_1 cs^2\omega_3^2 - 18\omega_4^2\omega_1^2 v_1^4 - 12\omega_4^2\omega_1 v_1^4\omega_3^2 - 9\omega_1^3 v_1^2\omega_3^2 - 3\omega_4^2\omega_1 cs^2\omega_3 + 24\omega_4^2 cs^4\omega_3^2 - 3\omega_4^2\omega_1 v_1^4\omega_3 - 18\omega_1^2 v_1^4\omega_3^2 - 12\omega_4^2\omega_1 cs^4\omega_3^2 + 15\omega_4^2\omega_1^3 v_1^2\omega_3 + 24\omega_4^2\omega_1 cs^4\omega_3^2 + 36\omega_4^2\omega_1 v_1^4\omega_3 - 12\omega_4\omega_1 cs^2\omega_3 + \omega_4^3\omega_1 cs^2\omega_3^2 + 36\omega_4\omega_1 cs^2 v_1^2\omega_3^2 + 3\omega_4\omega_1^3 cs^4\omega_3^2 - 36\omega_4\omega_1 cs^2 v_1^2\omega_3^2 + 36\omega_4\omega_1^2 v_1^2\omega_3^2 + 12\omega_4\omega_1^2 cs^2\omega_3^2 + 9\omega_4^3\omega_1 v_1^4 + 27\omega_4^2\omega_1^3 cs^2 v_1^2 + 18\omega_4\omega_1^3 v_1^4\omega_3$$

$$C_{22} = -8\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 + 9\omega_1\omega_2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 6\omega_4\omega_1\omega_2 v_1^2\omega_3 - 9\omega_1\omega_2 v_1^2\omega_3 + 18\omega_4\omega_1 v_2^2\omega_3 + 9\omega_4\omega_1\omega_2 + 4\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 6\omega_4\omega_2 cs^2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2 - 18\omega_4\omega_2 v_2^2\omega_3$$

$$C_{23} = 6\omega_4\omega_3^2 + 6\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_2^2\omega_3^2 + 18\omega_4^2\omega_1 cs^2 + 12\omega_4^2 - 6\omega_4\omega_1 v_1^2\omega_3 + 6v_2^2\omega_3^2 + 6\omega_4\omega_1 cs^2\omega_3^2 - 18\omega_4\omega_1 cs^2\omega_3 + 6\omega_4^2 v_2^2\omega_3 - 6v_1^2\omega_3^2 - 12\omega_4\omega_3 - 36\omega_4^2 cs^2 + 18\omega_4^2 cs^2\omega_3 - 2\omega_4\omega_1\omega_3^2 - 6\omega_4^2\omega_3 - 3\omega_1 v_2^2\omega_3^2 + 3\omega_4^2\omega_1 v_1^2 - 6\omega_4^2\omega_1 + 3\omega_4^2\omega_1 v_2^2 + 36\omega_4 cs^2\omega_3 + 2\omega_4^2\omega_1\omega_3 - 6\omega_4^2 v_1^2 - 18\omega_4 cs^2\omega_3^2 + 3\omega_1 v_1^2\omega_3^2 - 6\omega_4^2\omega_1 cs^2\omega_3 + 12\omega_4 v_1^2\omega_3 - 6\omega_4^2 v_2^2 - 6\omega_4 v_2^2\omega_3^2 - 2\omega_4^2\omega_1 v_2^2\omega_3$$

$$C_{24} = 6\omega_4^2\omega_1^2\omega_5 v_1^2 - 32\omega_4^2\omega_1 cs^4\omega_3 + 6\omega_4\omega_1^3\omega_5 cs^2 v_1^2\omega_3 - 3\omega_1^3\omega_5 v_1^4\omega_3 - 9\omega_1^3\omega_5 cs^2 v_1^2\omega_3 - 6\omega_4^2\omega_1^3\omega_5 cs^2 v_1^2\omega_3 - 3\omega_4^2\omega_1^3\omega_5 v_2^4\omega_3 + 8\omega_4\omega_1^2\omega_5 cs^4\omega_3 + 3\omega_4\omega_1^3\omega_5 v_1^4\omega_3 + 6\omega_4^2\omega_1^2\omega_5 v_2^2 + 8\omega_4\omega_1\omega_5 cs^2\omega_3^2 + 2\omega_4^2\omega_1^3\omega_5 cs^4\omega_3 + 6\omega_4^2\omega_1^2\omega_5 v_1^4\omega_3 - 6\omega_4\omega_1^2\omega_5 v_2^2\omega_3 + 6\omega_1^2\omega_5 v_2^2\omega_3^2 + 3\omega_4^4\omega_1^3\omega_5 v_2^4 + 6\omega_4\omega_1^3\omega_5 cs^2 v_2^2\omega_3 - 3\omega_1^3\omega_5 v_2^4\omega_3 - 9\omega_1^3\omega_5 cs^2 v_2^2\omega_3 + 3\omega_4\omega_1^3\omega_5 v_2^4\omega_3 - 3\omega_4^3\omega_1^3\omega_5 v_1^4\omega_3 - 8\omega_4^2\omega_1^2\omega_5 cs^4\omega_3 - 6\omega_4^2\omega_1^3\omega_5 cs^2 v_2^2\omega_3 - 8\omega_4^2\omega_1\omega_5 cs^2\omega_3^2 + 3\omega_4^2\omega_1^3\omega_5 v_1^4 - 6\omega_4\omega_1^2\omega_5 v_1^4\omega_3 - 2\omega_4\omega_1^2\omega_5 cs^4\omega_3 + 6\omega_4^2\omega_1^2\omega_5 v_2^2\omega_3 - 8\omega_4^2\omega_1^3 cs^4\omega_3 + 6\omega_1^2\omega_5 v_1^4\omega_3 + 6\omega_4^2\omega_1^2\omega_5 cs^2 v_2^2\omega_3 - 8\omega_4\omega_1\omega_5 cs^2 v_2^2 + 18\omega_1^2\omega_5 cs^2 v_2^2\omega_3 - 6\omega_4\omega_1^2\omega_5 v_1^4\omega_3 + 6\omega_4\omega_1^2\omega_5 cs^2 v_1^4 + 6\omega_4\omega_1\omega_5 cs^2 v_1^4\omega_3 - 3\omega_4^2\omega_1^3\omega_5 v_2^2 - 6\omega_1^2\omega_5 v_2^2\omega_3^2 - 12\omega_4\omega_1\omega_5 cs^2 v_2^2\omega_3^2 - 18\omega_4^2\omega_1^2\omega_5 cs^2 v_1^2 + 3\omega_1^3\omega_5 v_1^2\omega_3^2 - 3\omega_4^2\omega_1^3\omega_5 v_1^2 + 12\omega_4\omega_1\omega_5 cs^2 v_2^2\omega_3^2 - 8\omega_4^2\omega_1\omega_5 cs^4\omega_3 + 3\omega_4^3\omega_1^3\omega_5 v_2^2\omega_3 - 8\omega_4^2\omega_1\omega_5 cs^2\omega_3^2 - 3\omega_4\omega_1^3\omega_5 v_1^2\omega_3 + 6\omega_4^2\omega_1^2\omega_5 cs^2 v_1^2\omega_3 + 8\omega_4^2\omega_1\omega_5 cs^4\omega_3 + 9\omega_4^2\omega_1^3\omega_5 cs^2 v_1^2 + 18\omega_1^2\omega_5 cs^2 v_1^2\omega_3 + 32\omega_4^2\omega_1 cs^4\omega_3 - 6\omega_4^2\omega_1^2\omega_5 v_1^4 + 6\omega_4\omega_1^2\omega_5 v_1^2\omega_3^2 + 2\omega_4^2\omega_1^3\omega_5 cs^2\omega_3 - 6\omega_4^2\omega_1^2\omega_5 v_2^2\omega_3 - 6\omega_4\omega_1^2\omega_5 cs^2 v_1^2\omega_3 - 6\omega_1^2\omega_5 v_1^2\omega_3^2 + 9\omega_4^2\omega_1^3\omega_5 cs^2 v_2^2 - 12\omega_4\omega_1\omega_5 cs^2 v_1^2\omega_3^2 + 16\omega_4^2\omega_5 cs^4\omega_3^2 + 12\omega_4^2\omega_1\omega_5 cs^2 v_1^2\omega_3 - 6\omega_4^2\omega_1^2\omega_5 v_2^4 + 3\omega_1^3\omega_5 v_2^2\omega_3^2 - 3\omega_4\omega_1^3\omega_5 v_2^2\omega_3 + 3\omega_4^2\omega_1^3\omega_5 v_1^2\omega_3 + 8\omega_4^2\omega_1^2\omega_5 cs^2\omega_3$$

$$C_{25} = -8\omega_4\omega_1\omega_3 + 6\omega_4\omega_1\omega_2 v_2^2\omega_3 - 9\omega_1\omega_2 v_2^2\omega_3 + 18\omega_4\omega_1 v_1^2\omega_3 + 9\omega_1\omega_2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 2\omega_4\omega_1 v_2^2\omega_3 + 9\omega_4\omega_1\omega_2 - 18\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_2^2 + 6\omega_4\omega_2 cs^2\omega_3 + 4\omega_4\omega_2 v_2^2\omega_3$$

$$C_{26} = 6\omega_4\omega_3^2 + 6\omega_4\omega_1\omega_3 + 6\omega_4^2 v_1^2\omega_3 + 18\omega_4^2\omega_1 cs^2 + 12\omega_4^2 - 6v_2^2\omega_3^2 + 6\omega_4\omega_1 cs^2\omega_3^2 - 18\omega_4\omega_1 cs^2\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 - 6\omega_4\omega_1 v_2^2\omega_3 + 6v_1^2\omega_3^2 - 12\omega_4\omega_3 - 36\omega_4^2 cs^2 + 18\omega_4^2 cs^2\omega_3 - 2\omega_4\omega_1\omega_3^2 - 6\omega_4^2\omega_3 + 3\omega_1 v_2^2\omega_3^2 + 3\omega_4^2\omega_1 v_1^2 + 12\omega_4 v_2^2\omega_3 - 6\omega_4 v_1^2\omega_3^2 - 6\omega_4^2\omega_1 + 3\omega_4^2\omega_1 v_2^2 + 36\omega_4 cs^2\omega_3 - 2\omega_4^2\omega_1 v_1^2\omega_3 + 2\omega_4\omega_1\omega_3 - 6\omega_4^2 v_1^2 - 18\omega_4 cs^2\omega_3^2 - 3\omega_1 v_1^2\omega_3^2 - 6\omega_4^2\omega_1 cs^2\omega_3 - 6\omega_4^2 v_2^2$$

$$C_{27} = -3\omega_1\omega_2 cs^4 + 12\omega_2 v_2^4 - 2\omega_1 cs^2 + 48\omega_2 cs^2 v_2^2 - 36\omega_1\omega_2 cs^2 v_2^2 + 9\omega_1\omega_2 v_2^2 - 4\omega_2 cs^2 + 6\omega_1 v_2^4 - 9\omega_1\omega_2 v_2^4 + 24\omega_1 cs^2 v_2^2 - 6\omega_1 v_2^2 + 4\omega_2 cs^4 + 3\omega_1\omega_2 cs^2 + 2\omega_1 cs^4 - 12\omega_2 v_2^2$$

$$C_{28} = -48\omega_4^2\omega_1 cs^4\omega_3^2 + 72\omega_4\omega_1^2 cs^2 v_2^2\omega_3^2 - 9\omega_4^2\omega_1^3 v_2^2 + 3\omega_4^2\omega_1^3 cs^4\omega_3 - 54\omega_1^2 cs^2 v_2^2\omega_3^2 - 36\omega_4\omega_1^2 v_2^4\omega_3 + 54\omega_4\omega_1^3 cs^2 v_2^2\omega_3 - 18\omega_4\omega_1^3 v_2^2\omega_3 + 12\omega_4^2\omega_1^2 cs^2\omega_3 - 15\omega_4^2\omega_1^3 v_2^4\omega_3 - 36\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3 - 36\omega_4\omega_1^2 v_2^2\omega_3 - 12\omega_4^2\omega_1 cs^2 v_2^2\omega_3^2 - 12\omega_4\omega_1 cs^2\omega_3^2 - 3\omega_4\omega_1^3 cs^2\omega_3^2 + 72\omega_4\omega_1^2 cs^2 v_2^2\omega_3^2 + 12\omega_4^2\omega_1 v_2^2\omega_3^2 + 9\omega_1^3 v_2^4\omega_3^2 + 3\omega_4^2\omega_1^3 v_2^4\omega_3 + 18\omega_4^2\omega_1^2 v_2^2 - 12\omega_4^2\omega_1 cs^4\omega_3 + 18\omega_1^2 v_2^2\omega_3^2 + 6\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3 + 27\omega_1^3 cs^2 v_2^2\omega_3^2 + 15\omega_4\omega_1^3 v_2^2\omega_3^2 - 36\omega_4\omega_1^3 cs^2 v_2^2\omega_3 - 54\omega_4^2\omega_1^2 cs^2 v_2^2 - 8\omega_4^2\omega_1^2 cs^2\omega_3^2 + 12\omega_4^2\omega_1 cs^4\omega_3 - 108\omega_4\omega_1^2 cs^2 v_2^2\omega_3 - 3\omega_4^2\omega_1^3 cs^4\omega_3^2 + 36\omega_4^2\omega_1^2 v_2^4\omega_3 - 18\omega_4^2\omega_1^2 v_2^4 + 15\omega_4^2\omega_1^3 v_2^2\omega_3 + 36\omega_4^2\omega_1^2 v_2^4\omega_3 + 12\omega_4\omega_1 cs^4\omega_3^2 + 36\omega_4\omega_1 cs^2 v_2^2\omega_3^2 + 12\omega_4^2\omega_1 cs^2\omega_3 - 3\omega_4^2\omega_1 cs^2\omega_3 + 24\omega_4^2 cs^4\omega_3^2 + 36\omega_4\omega_1^2 v_2^2\omega_3^2 - 36\omega_4\omega_1 cs^2 v_2^2\omega_3^2 + 18\omega_4\omega_1^3 v_2^4\omega_3 - 12\omega_4^2\omega_1 cs^4\omega_3 - 15\omega_4\omega_1^3 v_2^4\omega_3^2 + 24\omega_4^2\omega_1 cs^4\omega_3 - 12\omega_4^2\omega_1 cs^2\omega_3 + 9\omega_4^3\omega_1 v_2^4 + \omega_4^3\omega_1 cs^2\omega_3^2 + 27\omega_4^2\omega_1^3 cs^2 v_2^2 + 36\omega_4\omega_1 cs^2 v_2^2\omega_3^2 - 36\omega_4\omega_1^2 v_2^2\omega_3^2 + 3\omega_4\omega_1^3 cs^4\omega_3^2 - 12\omega_4^2\omega_1^2 v_2^2\omega_3^2 - 9\omega_1^3 v_2^2\omega_3^2 - 3\omega_4^2\omega_1^3 v_2^2\omega_3^2 + 12\omega_4\omega_1 cs^2\omega_3^2 - 18\omega_1^2 v_2^2\omega_3^2$$

$$C_{29} = -368\omega_4^2\omega_1\omega_3^2 cs^2\omega_3^2 + 18\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 v_3^2 - 6\omega_4\omega_1^3\omega_2^2\omega_3 v_3^2 - 108\omega_1^2\omega_3^3 cs^4\omega_3^2 + 108\omega_4\omega_1^2\omega_2^2 cs^4\omega_3^2 - 18\omega_4\omega_1^3\omega_2^2 cs^2 - 784\omega_4^2\omega_2^3 cs^2 v_1^2\omega_3^2 + 8\omega_4^4\omega_1^3\omega_3^2 - 6\omega_4^2\omega_1^3\omega_2^2\omega_3 v_3^2 + 48\omega_4^2\omega_1^3 v_1^4\omega_3^2 - 144\omega_4^2\omega_1\omega_2^2 cs^4\omega_3^2 + 320\omega_4^2\omega_1 cs^2 v_1^2\omega_3^2 - 27\omega_4^2\omega_1^3\omega_3 cs^4\omega_3^2 - 20\omega_4^3\omega_1^3\omega_2\omega_3^2 - 9\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3^2 + 120\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3^2 - 276\omega_4^3\omega_1^2\omega_2 cs^4\omega_3^2 - 14\omega_4^2\omega_1^2\omega_3^2\omega_3^2 + 52\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 + 394\omega_4^3\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 - 92\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3^2 + 36\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 - 9\omega_4^3\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3^2 - 342\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 + 18\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3^2 + 160\omega_4^2\omega_1^2\omega_3 cs^2 v_1^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3^2 - 132\omega_4^2\omega_1^2\omega_2^2 v_1^4\omega_3^2 + 104\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3^2 + 6\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3^2 - 118\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 + 216\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3^2 - 16\omega_4^2\omega_1^2\omega_3^2\omega_3 + 208\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 - 78\omega_4^2\omega_1^3\omega_2^2 v_1^4\omega_3^2 + 18\omega_4^3\omega_1^2\omega_2 cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 - 40\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 + 48\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3^2 - 27\omega_4\omega_1^3\omega_3 cs^4\omega_3^2 + 54\omega_1^3\omega_2^2 cs^4\omega_3^2 + 448\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 - 256\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3^2 - 108\omega_4^2\omega_1^2\omega_3^2 cs^4 + 56\omega_4^2\omega_1\omega_3^2 cs^2\omega_3 - 8\omega_4^2\omega_1^2\omega_3^2\omega_3^2 + 144\omega_4^3\omega_1 cs^4\omega_3^2 - 24\omega_4^2\omega_1\omega_2^2 v_1^4\omega_3^2 + 9\omega_4^3\omega_1^3\omega_3^2 cs^2\omega_3 + 40\omega_4^2\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 + 12\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 + 78\omega_4^3\omega_1^3\omega_2 v_1^4\omega_3^2 - 136\omega_4^2\omega_1^2 v_2 v_1^2\omega_3^2 + 208\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 108\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 + 16\omega_4^2\omega_1^2\omega_2\omega_3^2 + 184\omega_4^4\omega_1^3\omega_2 cs^2\omega_3^2 - 460\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 - 144\omega_4^2\omega_1^3 v_1^4\omega_3^2 + 588\omega_4\omega_1\omega_2^3 cs^4\omega_3^2 + 36\omega_1^2\omega_3^2 cs^2\omega_3^2 - 36\omega_4\omega_1^2\omega_2^3 cs^2\omega_3^2 + 1232\omega_4^2\omega_1\omega_2^3 cs^2 v_1^2\omega_3^2 - 18\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3^2 v_3^2 - 712\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3^2 - 56\omega_4^2\omega_1^3 v_1^2\omega_3^2 + 56\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 - 8\omega_4\omega_1\omega_2^2\omega_3^2 - 36\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2 + 36\omega_4^2\omega_1^2\omega_2 cs^2 + 14\omega_4^3\omega_1^3\omega_2^2\omega_3^2 + 16\omega_4^3\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 - 56\omega_4^2\omega_1\omega_2^2 cs^2 v_1^2\omega_3^2 + 9\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 - 18\omega_1^3\omega_2^2 cs^2\omega_3^2 + 228\omega_4^2\omega_1\omega_3^2 v_1^4\omega_3^2 - 168\omega_4^2\omega_1\omega_2 cs^4\omega_3^2 + 18\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2 + 6\omega_4^3\omega_1^3\omega_2^2\omega_3^2 v_3^4 - 56\omega_4^2\omega_1\omega_2^2 cs^2 v_1^2\omega_3^2 - 104\omega_4^2\omega_1^2 cs^2\omega_3^2 + 54\omega_4^3\omega_1^3\omega_2^2 cs^4 + 32\omega_4^2\omega_1\omega_2^2 v_1^2\omega_3^2 + 6\omega_4^2\omega_1^2\omega_2^3\omega_3^2 v_3^2 - 96\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3^2 + 144\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3^2 - 36\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3^2 - 88\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 + 28\omega_4^2\omega_1\omega_3^2\omega_3^2 + 152\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 + 72\omega_4^2\omega_1^3\omega_2^3 cs^2 v_1^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_2^3 cs^2\omega_3^2 - 288\omega_4^2\omega_2^3 cs^4\omega_3^2 + 92\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3^2 - 412\omega_4^2\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3^2 - 6\omega_4^2\omega_1^3\omega_2^3 cs^2\omega_3^2 - 16\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 + 36\omega_4^2\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3^2 + 120\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3^2$$

$$C_{30} = \omega_4\omega_1^3\omega_2^2\omega_3 v_3^4 - 240\omega_4\omega_1^3\omega_2^2 v_1^4\omega_3 + 8\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 - 24\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 + 84\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3 + 14\omega_4\omega_1\omega_3^2\omega_3 + \omega_4^2\omega_1^2\omega_2^2\omega_3 v_3^2 - 3\omega_4\omega_1^3\omega_3^2 cs^4\omega_3 + 24\omega_4\omega_1\omega_3^2 cs^2 v_1^2 - 138\omega_4^2\omega_1^2\omega_2^3 v_1^4\omega_3 + 9\omega_1^3\omega_2^2 cs^4\omega_3 - 18\omega_4\omega_1^2\omega_2^2 cs^2 - 68\omega_4^2\omega_2^3 cs^4\omega_3 + 18\omega_4^2\omega_1^2\omega_2^2 cs^2 + 7\omega_4\omega_1^3\omega_2^2\omega_3 - 222\omega_4\omega_1\omega_2^3 v_1^2\omega_3 - 8\omega_4^3\omega_1\omega_2 cs^2 - 3\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 - 20\omega_4\omega_1^3 cs^2\omega_3 + 8\omega_4\omega_1\omega_2^2 cs^4 + 60\omega_4\omega_1^2\omega_2^2 cs^2 v_1^2 - 24\omega_4\omega_1\omega_2^2 v_1^4\omega_3 + 153\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 - 54\omega_4\omega_1\omega_2^3 cs^2\omega_3 + 9\omega_4\omega_1^3\omega_2^3 cs^4 + 27\omega_1^3\omega_2^3 cs^2 v_1^2\omega_3 - 312\omega_4\omega_2^3 cs^2 v_1^2\omega_3 - 36\omega_1\omega_2^2 cs^2\omega_3 - 4\omega_4\omega_1\omega_2^2\omega_3 - 28\omega_4\omega_1\omega_2^2 cs^4\omega_3 - 54\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2 + 144\omega_4\omega_1^3 cs^2 v_1^2\omega_3 -$$

$60\omega_4\omega_1^3 v_2^2\omega_3 - 32\omega_4\omega_1^3\omega_2 cs^4\omega_3 + 192\omega_4\omega_1^2 v_2 v_1^4\omega_3 - 81\omega_4\omega_1^3\omega_2^2 v_1^2\omega_3 - 6\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 - 264\omega_4\omega_2^3 v_1^4\omega_3 - 36\omega_1^2\omega_3^3 cs^4\omega_3 + 8\omega_4\omega_1^2\omega_2\omega_3 +$
$120\omega_4\omega_1^2\omega_2 cs^2 v_1^2\omega_3 - 29\omega_4\omega_1^2\omega_2^2 cs^4\omega_3 - 20\omega_4\omega_1^2\omega_2^2 cs^2 + 3\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 + 408\omega_4\omega_1\omega_2^3 v_1^4\omega_3 - 54\omega_4\omega_1^2\omega_3^2 cs^2 v_1^2 - 153\omega_4\omega_1^2\omega_3^3 cs^2 v_1^2\omega_3 +$
$16\omega_4\omega_1^3 cs^4\omega_3 - 108\omega_1^2\omega_3^3 cs^2 v_1^2\omega_3 - 9\omega_4\omega_1^3\omega_3^2 cs^2 + 24\omega_4\omega_1\omega_2 cs^2 v_1^2 + 12\omega_4\omega_1\omega_2^3 v_1^2\omega_3 - 4\omega_4\omega_1^2\omega_2^3\omega_3 + 108\omega_1\omega_2^3 cs^2 v_1^2\omega_3 + 17\omega_4\omega_1^3\omega_2^2 cs^4\omega_3 -$
$288\omega_4\omega_1^3\omega_2 cs^2 v_1^2\omega_3 - 168\omega_4\omega_1^2\omega_2^2 v_1^4\omega_3 + 138\omega_4\omega_1^3\omega_2 v_1^2\omega_3 - 16\omega_4\omega_1^2\omega_2 cs^2\omega_3 + 20\omega_4\omega_1^2\omega_2^2 cs^4 + 4\omega_4\omega_1^3\omega_3 + 81\omega_4\omega_1^2\omega_3^3 v_1^2\omega_3 - 9\omega_1^3\omega_3^2 cs^2\omega_3 +$
$40\omega_4\omega_1^3 cs^2\omega_3 + 432\omega_4\omega_1\omega_3^3 cs^2 v_1^2\omega_3 - 7\omega_4\omega_1^2\omega_3^3\omega_3 + 18\omega_4\omega_1^3\omega_2^2 cs^2 + 138\omega_4\omega_1^3\omega_2^2 v_1^4\omega_3 + 10\omega_4\omega_1^2\omega_2^2 cs^4\omega_3 + 42\omega_4\omega_1^3\omega_2 cs^2\omega_3 - 96\omega_4\omega_1^2\omega_2 v_1^2\omega_3 -$
$10\omega_4\omega_1^3\omega_2\omega_3 - 60\omega_4\omega_1\omega_2^2 cs^2 v_1^2\omega_3 - \omega_4\omega_1^3\omega_2^3\omega_3 v_3^2 + 36\omega_1^2\omega_3^3 cs^2\omega_3 + 144\omega_4\omega_2^3 v_1^2\omega_3 + 24\omega_4\omega_1^2\omega_3^2 cs^2\omega_3 - \omega_4\omega_1^3\omega_3^3\omega_3 v_3^4 - 90\omega_4\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 +$
$94\omega_4\omega_1\omega_3^2 cs^4\omega_3 + 27\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2 - 8\omega_4\omega_1\omega_3^2 cs^2 + 36\omega_1\omega_3^2 cs^4\omega_3 - 18\omega_4\omega_1^2\omega_3^2 cs^4 - 8\omega_4\omega_2^3\omega_3 + 32\omega_4\omega_1\omega_2^2 cs^2\omega_3 + 96\omega_4\omega_1^3 v_1^4\omega_3 + 8\omega_4\omega_1^3\omega_2 cs^4$

$C_{31} = -8\omega_4\omega_1\omega_3 - 18\omega_4\omega_2\omega_3 v_3^2 + 2\omega_4\omega_1 v_1^2\omega_3 + 9\omega_1\omega_2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 6\omega_4\omega_1\omega_2 v_1^2\omega_3 - 9\omega_1\omega_2 v_1^2\omega_3 + 9\omega_4\omega_1\omega_2 + 18\omega_4\omega_1\omega_3 v_3^2 + 4\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_1\omega_2\omega_3 + 6\omega_4\omega_2 cs^2\omega_3 - 9\omega_4\omega_1\omega_2 v_1$

$C_{32} = 64\omega_4^2\omega_1\omega_3^3 cs^2\omega_3^2 - 16\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3^2 + 324\omega_1^2\omega_2^3 cs^4\omega_3^2 - 324\omega_4\omega_1^2\omega_3^3 cs^4\omega_3^2 - 54\omega_4^2\omega_1^3\omega_3^3 cs^2 + 432\omega_4^2\omega_3^3 cs^2 v_1^2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 + 48\omega_4^2\omega_1^3 v_1^4\omega_3^2 -$
$216\omega_4^2\omega_1\omega_2^3 cs^4\omega_3^2 + 432\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3^2 - 81\omega_4\omega_1^3\omega_2^2 cs^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_3^2 - 60\omega_4^2\omega_1^3\omega_2 v_1^2 v_2^2\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3^2 + 8\omega_4\omega_1\omega_2^3 v_2^2\omega_3^2 -$
$72\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3^2 - 168\omega_4\omega_1^3\omega_2 cs^4\omega_3^2 - 176\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 - 60\omega_4^2\omega_1\omega_3^3 v_1^2 v_2^2\omega_3^2 - 30\omega_4^2\omega_1^2\omega_3^3 cs^4\omega_3^2 - 96\omega_4^2\omega_3^3 v_1^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 -$
$36\omega_4^2\omega_1^3\omega_2 v_1^4\omega_3 - 192\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3^2 - 10\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 24\omega_4^3\omega_1^3\omega_2 cs^2 v_2^2 + 324\omega_4^2\omega_1^3\omega_3^3 cs^4\omega_3^2 + 8\omega_4^2\omega_2^3\omega_3^2 + 32\omega_4^2\omega_3^2 cs^2 v_2^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_2^2 cs^2 -$
$104\omega_4^2\omega_3^3 cs^2\omega_3^2 - 96\omega_4^2\omega_1\omega_2 v_1^2 v_2^2\omega_3^2 + 32\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3^2 - 64\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 - 24\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 27\omega_4\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3^2 + 81\omega_4\omega_1^3\omega_2^2 cs^4\omega_3^2 +$
$10\omega_4^2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3^2 + 120\omega_4^2\omega_1^2 v_1^2 v_2^2\omega_3^2 - 162\omega_4^2\omega_3^3 cs^4\omega_3^2 - 432\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 + 96\omega_4^2\omega_1\omega_2 v_2^2 v_1^2\omega_3 - 252\omega_4^2\omega_1^4 cs^4\omega_3^2 + 56\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3 +$
$16\omega_4^2\omega_1^2\omega_2^2\omega_3^2 - 27\omega_4^3\omega_1^3 cs^2 v_2^2\omega_3^2 + 144\omega_4\omega_1^3 cs^4\omega_3^2 - 8\omega_4^2\omega_3^3 v_2^2\omega_3^2 - 54\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_2 cs^4 - 56\omega_4^2\omega_1\omega_2 cs^2 v_2^2\omega_3^2 - 8\omega_4^2\omega_1\omega_2 cs^2 v_2^2\omega_3^2 +$
$48\omega_4^2\omega_1^3 v_1^2 v_2^2\omega_3^2 + 27\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 + 192\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3^2 + 96\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 + 112\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2\omega_3\omega_3^2 + 72\omega_4^2\omega_3^3 v_1^2 v_2^2\omega_3^2 + 10\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3^2 +$
$8\omega_4^2\omega_1\omega_2^2 v_2^2\omega_3^2 + 24\omega_4^2\omega_3^2 v_1^4\omega_3^2 - 56\omega_4^2\omega_1\omega_3^3 cs^2 v_2^2\omega_3^2 - 84\omega_4^2\omega_1^2\omega_3^3 cs^2 v_2^2 - 24\omega_4\omega_1\omega_3^3 cs^4\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 - 108\omega_1^2\omega_3^3 cs^2\omega_3^2 + 108\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3^2 +$
$108\omega_4\omega_1^2\omega_3^3 cs^2\omega_3^2 - 432\omega_4^2\omega_1\omega_3^3 cs^2 v_1^2\omega_3^2 + 108\omega_4^2\omega_1^3\omega_3^3 cs^2 v_2^2\omega_3^2 + 32\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3^2 - 432\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3^2 - 96\omega_4^2\omega_1^3 v_1^4\omega_3^2 + 128\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 -$
$8\omega_4^2\omega_1\omega_2\omega_3^2 - 108\omega_4^2\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3^2 + 84\omega_4^2\omega_1^2\omega_3^3 cs^2 + 64\omega_4^2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 - 432\omega_4^2\omega_1\omega_2^2 cs^2 v_1^2\omega_3 - 27\omega_4\omega_1^3\omega_3^2 cs^2\omega_3^2 + 54\omega_1^3\omega_3^2 cs^2\omega_3^2 +$
$8\omega_4^2\omega_1\omega_2 v_2^2\omega_3^2 - 36\omega_4^2\omega_1\omega_2^3 v_1^4\omega_3^2 - 168\omega_4^2\omega_1\omega_2^2 cs^4\omega_3^2 - 104\omega_4^2\omega_1^2 cs^2\omega_3^2 + 162\omega_4^2\omega_1^3\omega_3^3 cs^4 + 96\omega_4^2\omega_1 v_1^2 v_2^2\omega_3^2 - 10\omega_4^2\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2 v_1^4\omega_3^2 +$
$30\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 + 80\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_1\omega_3^3\omega_3^2 + 96\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3 - 108\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3 + 8\omega_4^2\omega_1\omega_3^3 cs^2 v_2^2\omega_3^2 - 40\omega_4^2\omega_1\omega_2 cs^2 v_2^2\omega_3^2 -$
$8\omega_4^2\omega_1^3 v_2^2\omega_3^2 + 54\omega_4^2\omega_1^3\omega_3^3 cs^2 v_2^2 - 24\omega_4^2\omega_1^2\omega_2 v_1^2 v_2^2\omega_3^2 + 144\omega_4^2\omega_3^3 cs^4\omega_3^2 + 864\omega_4^2\omega_1^2\omega_2^2 cs^2 v_1^2\omega_3 + 8\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 192\omega_4^2\omega_1^2\omega_2 cs^4\omega_3$

$C_{33} = 26\omega_1^2\omega_2^2 v_1^2\omega_3 + 2\omega_1\omega_2^3 + 4\omega_3^3 v_2^2\omega_3 - 20\omega_1^2\omega_2^2\omega_3 - 13\omega_1\omega_3^2 v_1^2\omega_3 - 10\omega_2^3\omega_3 - 2\omega_1^3\omega_2 v_2^2 + 26\omega_3^3 cs^2\omega_3 + 10\omega_1^2\omega_2\omega_3 + 6\omega_1^2\omega_2^2 v_2^2\omega_3 - 24\omega_1\omega_3^2 cs^2\omega_3 + 10\omega_3^3 v_1^2\omega_3 + 48\omega_1^2\omega_2^2 cs^2\omega_3 - 3\omega_1\omega_2^3 v_2^2\omega_3 + 4\omega_1^2\omega_2^2 v_2^2 - 6\omega_1\omega_3^2 cs^2 - 12\omega_1^3\omega_3 - 4\omega_1^2\omega_2 v_2^2\omega_3 + 10\omega_1\omega_2^3\omega_3 - 4\omega_1\omega_2^2 v_1^2\omega_3 + 4\omega_1^3 v_2^2\omega_3 - 6\omega_1^3\omega_2 cs^2 - 13\omega_1^3\omega_2 v_1^2\omega_3 - 30\omega_1^2\omega_2 cs^2\omega_3 + 28\omega_3^3 cs^2\omega_3 - 24\omega_3^3\omega_2 cs^2\omega_3 - 22\omega_1^2\omega_2 v_1^2\omega_3 - 4\omega_1^2\omega_2^2 - 4\omega_1\omega_2^2 v_2^2\omega_3 + 8\omega_1\omega_2^2\omega_3 + 16\omega_1^3 v_1^2\omega_3 - 3\omega_1^3\omega_2 v_2^2\omega_3 + 2\omega_1^3\omega_2 - 24\omega_1\omega_2^2 cs^2\omega_3 + 12\omega_1^2\omega_2^2 cs^2 - 2\omega_1\omega_2^3 v_2^2 + 14\omega_1^2\omega_2\omega_3$

$C_{34} = -96\omega_4^2\omega_5\omega_3^3 v_1^4\omega_3^2 + 108\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 48\omega_4\omega_1\omega_5\omega_3^3 v_1^2\omega_3^2 + 8\omega_4^2\omega_5\omega_3^3\omega_2\omega_3^2 + 108\omega_4\omega_1^3\omega_5\omega_2^2 cs^2 v_1^2\omega_3 + 24\omega_4^2\omega_1^2\omega_5\omega_2 v_2^2\omega_3^2 -$
$8\omega_4\omega_1\omega_5\omega_3^3\omega_2\omega_3^2 - 36\omega_4\omega_1^3\omega_5\omega_2^2 v_1^4 + 180\omega_4\omega_1\omega_5\omega_3^3 cs^2 v_1^2\omega_3 + 288\omega_4\omega_1\omega_5\omega_3^3 cs^2\omega_3^2 - 24\omega_4^2\omega_1\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 108\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2 v_1^2 +$
$24\omega_4^2\omega_1\omega_5\omega_2^2 v_1^4\omega_3 - 60\omega_4^2\omega_1^2\omega_5\omega_3^3 cs^2 v_1^2\omega_3 - 160\omega_4\omega_1\omega_5\omega_3^3 cs^2\omega_3 - 12\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3 + 2\omega_4^2\omega_1^2\omega_5\omega_2^2\omega_3 v_3^2 - 8\omega_4^2\omega_1^3\omega_5\omega_2\omega_2\omega_3 -$
$36\omega_4^2\omega_1^2\omega_5\omega_2^2 v_1^4\omega_3 - 6\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 + 64\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3 - 36\omega_4\omega_1^2\omega_5\omega_3^3 v_1^2\omega_3 + 9\omega_4^2\omega_1^3\omega_5\omega_2^2 v_3^2 - 162\omega_4\omega_1^3\omega_5\omega_3^3 cs^2 v_2^2\omega_3 +$
$16\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 + 54\omega_4\omega_1^3\omega_5\omega_3^3 v_1^4\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 + 216\omega_4^2\omega_1^2\omega_5\omega_3^3 cs^2\omega_3 - 468\omega_4^2\omega_1^2\omega_5\omega_3^3 cs^2 v_2^2\omega_3 +$
$24\omega_4^2\omega_1^3\omega_5 cs^2 v_2^2\omega_3 + 48\omega_4^2\omega_1^3\omega_5 v_1 v_1^2\omega_3 + 132\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_2^2\omega_3 - 6\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2\omega_3 v_3^2 + 18\omega_4^2\omega_1^2\omega_5\omega_2^2 v_1^2\omega_3 - 54\omega_1^3\omega_5\omega_3^3 v_1^4\omega_3 - 4\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2\omega_3 -$
$72\omega_4^2\omega_1^3\omega_5\omega_2 v_1^4\omega_3^2 - 120\omega_4\omega_1\omega_5\omega_3^3 cs^2 v_2^2\omega_3^2 + 288\omega_4^2\omega_1^2\omega_3^3 cs^4\omega_3^2 - 72\omega_4^2\omega_1\omega_5\omega_3^3 v_1^4 - 36\omega_4\omega_1^3\omega_5\omega_2 v_1^2\omega_3^2 - 216\omega_4^2\omega_5\omega_3^3 cs^2 v_1^2\omega_3^2 -$
$288\omega_4^2\omega_5\omega_3^3 cs^2\omega_3^2 - 54\omega_4^2\omega_1^3\omega_5\omega_2 v_1^4\omega_3 + 112\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^4\omega_3 + 264\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_2^2\omega_3 + 24\omega_4^2\omega_1\omega_5\omega_2^2 v_2^2\omega_3^2 + 32\omega_4^2\omega_1^3\omega_5 cs^4\omega_3^2 -$
$24\omega_4^2\omega_1^3\omega_5\omega_2 v_1^4\omega_3 - 72\omega_4\omega_1^3\omega_5\omega_3^3 cs^4\omega_3 - 36\omega_4\omega_1^2\omega_5\omega_2 v_1^4\omega_3 + 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 - 36\omega_4^2\omega_1\omega_5\omega_2 v_1^2\omega_3 + 336\omega_4\omega_1\omega_5\omega_3^3 cs^2 v_2^2\omega_3 -$
$108\omega_4^2\omega_1\omega_5\omega_2 v_1^2\omega_3 + 56\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^4\omega_3 + 27\omega_4\omega_1^3\omega_5\omega_2 cs^2\omega_3^2 v_3^2 + 36\omega_4\omega_1\omega_5\omega_2^2 v_1^2\omega_3 + 144\omega_4\omega_1^2\omega_5\omega_3^3 v_1^2\omega_3 + 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 +$
$12\omega_4^2\omega_1^2\omega_5\omega_2 v_1^4\omega_3 + 54\omega_4^2\omega_1^3\omega_5\omega_2 v_1^4 - 8\omega_4^2\omega_1\omega_5\omega_2^2\omega_3 - 168\omega_4\omega_1\omega_5\omega_2^2 cs^2 v_2^2\omega_3 - 72\omega_4^2\omega_1^3\omega_3^3 cs^4\omega_3 + 4\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2\omega_3 - 18\omega_4^2\omega_1^2\omega_5\omega_2^2 v_1^2\omega_3 -$
$28\omega_4^2\omega_1^3\omega_5 cs^4\omega_3 - 348\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 - 162\omega_1^3\omega_5\omega_3^3 cs^2 v_1^2\omega_3 - 6\omega_4^2\omega_1^3\omega_5\omega_3^3 cs^2 v_2^2\omega_3 - 36\omega_4\omega_1\omega_5\omega_3^3 v_1^2\omega_3 - 27\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 v_3^2 +$
$108\omega_4\omega_3^3\omega_5\omega_3^3 cs^2 v_1^2\omega_3 + 152\omega_4^2\omega_5\omega_3^3 cs^4\omega_3 + 36\omega_4\omega_1\omega_5\omega_3^3 cs^2\omega_3 - 72\omega_4^2\omega_1^2\omega_5\omega_3^3 cs^2 v_1^2\omega_3 + 264\omega_4\omega_1^3\omega_5 cs^2 v_1^2\omega_3 + 48\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3 +$
$9\omega_4\omega_1^3\omega_5\omega_2^2\omega_3 v_3^2 - 2\omega_4^2\omega_1^3\omega_5\omega_2^2 v_3^2 - 8\omega_4^2\omega_1^2\omega_5\omega_2\omega_3 - 72\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2 v_2^2\omega_3 + 48\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 12\omega_4^2\omega_1\omega_5\omega_3^3 v_1^2\omega_3 -$
$108\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2 v_1^2\omega_3 + 240\omega_4^2\omega_5\omega_3^3 cs^2 v_2^2\omega_3 - 216\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_1^2 + 300\omega_4^2\omega_1\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 56\omega_4^2\omega_1\omega_5\omega_2^2 cs^4\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2^2 v_1^4\omega_3 -$
$56\omega_4^2\omega_1^3\omega_5 cs^4\omega_3 - 84\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3 + 6\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2 v_2^2\omega_3 - 54\omega_4^2\omega_1^3\omega_5\omega_2^2 v_1^2 + 72\omega_4^2\omega_1^3\omega_5\omega_2 v_1^4\omega_3 - 216\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3 -$
$54\omega_4\omega_1^3\omega_5\omega_2 v_1^2\omega_3 - 16\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 - 96\omega_4^2\omega_1^3\omega_5 v_1^2\omega_3 - 288\omega_4^2\omega_1^2\omega_5\omega_2^2 v_1^2 v_2^2\omega_3 + 8\omega_4^2\omega_1^3\omega_5\omega_3 + 648\omega_4\omega_1^2\omega_5\omega_3^3 cs^2 v_2^2\omega_3 +$
$16\omega_4^2\omega_1^2\omega_5\omega_2^2\omega_3 + 132\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 - 18\omega_4^2\omega_1^2\omega_5\omega_2 v_1^4\omega_3 + 54\omega_1^3\omega_5\omega_2 v_1^2\omega_3 + 4\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 + 162\omega_4^2\omega_1^3\omega_5\omega_3^3 cs^2 v_2^2\omega_3 +$
$54\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 - 112\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2^2 v_1^4\omega_3 + 288\omega_4\omega_1^3\omega_5\omega_3^3 cs^4\omega_3 - 9\omega_4\omega_1^3\omega_5\omega_2^2\omega_3 v_3^2 + 108\omega_4\omega_1^2\omega_5\omega_3^3 cs^2 v_1^2\omega_3 +$
$216\omega_4^2\omega_5\omega_3^3 v_1^2 v_2^2\omega_3 + 2\omega_4^2\omega_1^3\omega_5\omega_2^2\omega_3 v_3^2 - 288\omega_4\omega_1\omega_3^3 cs^4\omega_3 + 108\omega_4^2\omega_1\omega_5\omega_2^2 v_1^4\omega_3 + 24\omega_4^2\omega_5\omega_3^3 v_1^2\omega_3 + 162\omega_4^2\omega_1^3\omega_5\omega_3^3 cs^2 v_1^2 -$
$96\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_2^2\omega_3 - 288\omega_4\omega_1\omega_5\omega_3^3 cs^4\omega_3 + 72\omega_4\omega_1\omega_5\omega_2 v_1^2\omega_3 + 180\omega_4\omega_1^3\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 108\omega_4\omega_1\omega_5\omega_3^3 cs^2 v_1^2\omega_3 + 160\omega_4\omega_1\omega_5\omega_2^2 cs^4\omega_3 -$
$108\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_1^2\omega_3 + 36\omega_4\omega_1\omega_5\omega_3^3 v_1^4\omega_3 + 60\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 - 180\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2 v_2^2\omega_3 - 48\omega_4^2\omega_1^2\omega_5\omega_2 v_2^2\omega_3 + 8\omega_4^2\omega_1\omega_5\omega_3^3 cs^4\omega_3 -$
$24\omega_4^2\omega_1^3\omega_5 v_2^2\omega_3 - 88\omega_4^2\omega_5\omega_3^3 cs^2\omega_3 - 2\omega_4^2\omega_1^2\omega_5\omega_2^2\omega_3 v_3^4 + 24\omega_4^2\omega_1\omega_5\omega_2 v_2^2\omega_3 - 216\omega_4^2\omega_1\omega_5\omega_3^3 cs^2 v_1^2\omega_3 + 12\omega_4^2\omega_1\omega_5\omega_2 v_1^4\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2 v_1^2 +$
$64\omega_4^2\omega_1\omega_5\omega_2 cs^2 v_1^2\omega_3 - 108\omega_4^2\omega_1\omega_5\omega_3^3 cs^2 v_1^2\omega_3 - 24\omega_4^2\omega_5\omega_3^3 v_2^2\omega_3 - 40\omega_4^2\omega_1\omega_5 cs^2 v_1^2\omega_3 - 180\omega_4^2\omega_1\omega_5\omega_3^3 v_1^2 v_2^2\omega_3 - 72\omega_4^2\omega_1\omega_5\omega_2^2 cs^4\omega_3 +$
$36\omega_4^2\omega_1^3\omega_5 v_1^4\omega_3 + 72\omega_4\omega_1\omega_5\omega_3^3 cs^2\omega_3 + 24\omega_4^2\omega_1\omega_5\omega_2 v_1^2\omega_3 + 36\omega_4\omega_1^2\omega_5\omega_3^3 v_1^2\omega_3 + 324\omega_4^2\omega_1\omega_5\omega_3^3 cs^2 v_1^2\omega_3 + 6\omega_4^2\omega_1^3\omega_5\omega_3^3 cs^2 v_2^2 +$
$360\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2 v_2^2\omega_3 + 72\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2 - 24\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3 + 24\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3 - 36\omega_4\omega_1^3\omega_5\omega_2 v_1^4\omega_3 + 108\omega_1^2\omega_5\omega_2 v_1^4\omega_3 -$
$72\omega_4^2\omega_1^2\omega_5\omega_2 cs^2\omega_3 - 72\omega_4\omega_1^3\omega_5\omega_2 cs^2\omega_3 - 648\omega_4\omega_1\omega_5\omega_3^3 cs^2 v_2^2\omega_3 - 12\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3 - 9\omega_4^2\omega_1^3\omega_5\omega_2\omega_3 v_3^4 - 144\omega_4\omega_1^2\omega_5\omega_3^3 v_1^4\omega_3 +$
$144\omega_4^2\omega_1\omega_5 v_1^2 v_2^2\omega_3 - 180\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3 + 24\omega_4^2\omega_1\omega_5\omega_2 v_2^2\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2 cs^2\omega_3 - 28\omega_4^2\omega_1^2\omega_5\omega_3^3 cs^4\omega_3 + 18\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2\omega_3$

$C_{35} = -2\omega_4\omega_1\omega_3 + 9\omega_1\omega_2 v_2^2\omega_3 - 9\omega_1\omega_2\omega_3 + 27\omega_1\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4\omega_1 cs^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 2\omega_4\omega_1 v_2^2\omega_3 + 9\omega_4\omega_1\omega_2 - 9\omega_4\omega_1\omega_2 v_2^2 - 6\omega_4\omega_2 cs^2\omega_3 - 2\omega_4\omega_2 v_2^2\omega_3$

$C_{36} = 64\omega_4^2\omega_1\omega_2^3 cs^2\omega_3^2 - 192\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3^2 + 324\omega_1^2\omega_2^3 cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3^2 - 324\omega_4\omega_1^2\omega_2^3 cs^4\omega_3^2 - 54\omega_4^2\omega_1^3\omega_2 cs^2 + 32\omega_4^2\omega_2^3 cs^2 v_1^2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 -$

$216\omega_4^2\omega_1\omega_2 cs^4\omega_3^2 + 32\omega_4^2\omega_3^3 cs^2 v_1^2\omega_3 - 81\omega_4^2\omega_1^3\omega_3^2 cs^4\omega_3 - 8\omega_4^2\omega_3^3\omega_2\omega_3^2 + 27\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3 - 60\omega_4^2\omega_1^3\omega_2 v_1^2 v_2^2\omega_3 - 432\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3^2 +$
$96\omega_4\omega_1\omega_3^3 v_2^2\omega_3 - 168\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 - 176\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 + 10\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 - 27\omega_4\omega_1^3\omega_3^2 cs^2 v_1^2\omega_3 - 60\omega_4\omega_1\omega_3^3 v_1^2 v_2^2\omega_3 - 30\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3 -$
$54\omega_4^2\omega_3^3 cs^2 v_1^2\omega_3^2 - 8\omega_4^2\omega_3^3 v_1^2\omega_3 - 72\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 - 16\omega_4^2\omega_2^2 v_1^2\omega_3 - 10\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 + 324\omega_4^2\omega_1^2\omega_2 cs^4\omega_3 + 8\omega_4^2\omega_3^3\omega_3^2 + 432\omega_4^2\omega_3^3 cs^2 v_2^2\omega_3^2 +$
$24\omega_4^2\omega_3^3\omega_2 cs^2 - 104\omega_4^2\omega_3^2 cs^2\omega_3^2 + 48\omega_4^2\omega_1^3 v_1^4\omega_3^2 - 96\omega_4^2\omega_1\omega_3^2 v_1^2 v_2^2\omega_3 + 432\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3^2 - 64\omega_4^2\omega_1^2\omega_2 cs^2\omega_3 - 24\omega_4^2\omega_3^3\omega_2 cs^4\omega_3 + 81\omega_4\omega_1^3\omega_3^2 cs^4\omega_3^2 -$
$24\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2 + 120\omega_4^2\omega_1^2\omega_2 v_1^2 v_2^2\omega_3 - 72\omega_4^2\omega_1\omega_2\omega_2 v_2^4\omega_3 - 162\omega_3^3\omega_3^2 cs^4\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 + 8\omega_4^2\omega_1\omega_3^3 v_1^2\omega_3 - 252\omega_4^2\omega_1^2\omega_3^2 cs^4 +$
$56\omega_4^2\omega_1\omega_3^3 cs^2\omega_3 + 16\omega_4^2\omega_1^2\omega_2^2\omega_3^2 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2 - 96\omega_4^2\omega_3^3 v_2^2\omega_3^2 - 72\omega_4^2\omega_1^3\omega_2 cs^4 - 432\omega_4^2\omega_1\omega_2 cs^2 v_2^2\omega_3^2 + 48\omega_4^2\omega_1^3 v_1^2 v_2^2\omega_3^2 + 27\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3 +$
$64\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 - 36\omega_4^2\omega_1\omega_3^3 v_2^4\omega_3^2 + 192\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 + 8\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3 + 112\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_1\omega_2\omega_3^2 + 72\omega_4^2\omega_3^3 v_1^2 v_2^2\omega_3 + 10\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 -$
$10\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 + 96\omega_4^2\omega_1\omega_2^2 v_2^2\omega_3 - 24\omega_4^2\omega_1\omega_3^2 cs^4\omega_3^2 + 96\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 - 108\omega_1^2\omega_3^3 cs^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_2 v_2^4\omega_3^2 + 108\omega_4\omega_1^2\omega_3^2 cs^2\omega_3^2 +$
$8\omega_4^2\omega_1\omega_2 cs^2 v_1^2\omega_3 + 864\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3^2 - 40\omega_4^2\omega_3^3\omega_2 cs^2 v_1^2\omega_3 - 8\omega_4^2\omega_1^3 v_1^2\omega_3^2 + 128\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_1\omega_2^2\omega_3^2 - 84\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2 +$
$84\omega_4^2\omega_1^2\omega_3^2 cs^2 - 8\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 - 56\omega_4^2\omega_1\omega_2^2 cs^2 v_1^2\omega_3 - 27\omega_4\omega_1^3\omega_3^2 cs^2\omega_3 + 54\omega_4^3\omega_3^2 cs^2\omega_3^2 + 96\omega_4^2\omega_1^2\omega_2\omega_2^2\omega_3 - 168\omega_4^2\omega_1\omega_3^2 cs^4\omega_3 +$
$54\omega_4^2\omega_1^3\omega_3^2 cs^2 v_1^2 + 24\omega_4^2\omega_3^3 v_2^4\omega_3^2 - 56\omega_4^2\omega_1\omega_3^3 cs^2 v_1^2\omega_3 - 104\omega_4^2\omega_3^3 cs^2\omega_3^2 + 162\omega_4^2\omega_1^3\omega_3^2 cs^4 + 8\omega_4^2\omega_1\omega_2 v_1^2\omega_3^2 + 30\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 + 108\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3^2 +$
$80\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 - 8\omega_4^2\omega_1\omega_3^3\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 + 108\omega_4^2\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 - 108\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3 - 432\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 - 432\omega_4^2\omega_3^3\omega_2 cs^2 v_2^2\omega_3 -$
$96\omega_4^2\omega_1^3 v_2^2\omega_3^2 - 24\omega_4^2\omega_1\omega_2 v_1^2 v_2^2\omega_3 + 144\omega_4^2\omega_3^2 cs^4\omega_3^2 + 32\omega_4^2\omega_1^2\omega_2 cs^2 v_1^2\omega_3 + 8\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 - 108\omega_4\omega_1^2\omega_3^2 cs^2 v_1^2\omega_3 + 192\omega_4^2\omega_1^2\omega_2 cs^4\omega_3$

$C_{37} = -36\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 - 36\omega_4\omega_1^2\omega_5\omega_2^2 v_2^4\omega_3 - 24\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3 + 264\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3 + 24\omega_4^2\omega_1\omega_5\omega_2^3 v_1^2\omega_3 + 8\omega_4^2\omega_5\omega_2^3\omega_3^2 +$
$36\omega_4\omega_1^3\omega_5\omega_2 v_2^2\omega_3 - 108\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 - 8\omega_4^2\omega_1\omega_5\omega_2^3\omega_3^2 + 336\omega_4^2\omega_1\omega_5\omega_2^3 cs^2 v_1^2\omega_3 + 288\omega_4\omega_1\omega_5\omega_2^2 cs^2\omega_3^2 - 168\omega_4^2\omega_1\omega_5\omega_2^2 cs^2 v_1^2\omega_3 +$
$12\omega_4^2\omega_1^2\omega_5\omega_2 v_2^2 v_2^4\omega_3 + 144\omega_4\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 - 72\omega_4^2\omega_1^2\omega_5\omega_2 v_2^4 - 162\omega_1^2\omega_5\omega_2^2 cs^2 v_2^2\omega_3 - 6\omega_4\omega_1^2\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 160\omega_4\omega_1\omega_5\omega_2^2 cs^2\omega_3 -$
$348\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3 - 18\omega_4^2\omega_1^2\omega_5\omega_2^2 v_2^2\omega_3 + 2\omega_4^2\omega_1^2\omega_5\omega_2^2\omega_3 - 8\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 - 6\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 + 64\omega_4^2\omega_1\omega_5\omega_2 cs^2\omega_3 + 9\omega_4^2\omega_1^3\omega_5\omega_2^3\omega_3 v_3^2 +$
$108\omega_4\omega_3^3\omega_5 cs^2 v_2^2\omega_3^2 - 36\omega_4\omega_1\omega_5\omega_2^3 v_2^2\omega_3 + 16\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 + 48\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 + 216\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^2\omega_3 - 72\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^2 v_2^2\omega_3 +$
$264\omega_4^2\omega_1^3\omega_5 cs^2 v_2^2\omega_3^2 - 36\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4 + 48\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_2^2\omega_3 - 108\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2 - 6\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^2\omega_3^2 v_3^2 - 12\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3 -$
$4\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2\omega_3^2 + 300\omega_4^2\omega_1\omega_5\omega_2^3 cs^2 v_2^2\omega_3 + 288\omega_4^2\omega_1^2\omega_5^2 cs^4\omega_3^2 - 108\omega_4\omega_1^3\omega_5\omega_2^2 cs^2 v_2^2\omega_3 + 240\omega_4^2\omega_5\omega_2^3 cs^2 v_1^2\omega_3 - 288\omega_4\omega_1^2\omega_5\omega_2^3 cs^2\omega_3^2 +$
$112\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3 + 108\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^2 v_2^2\omega_3 - 48\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3 + 32\omega_4^2\omega_1^3\omega_5 cs\omega_3^2 - 96\omega_4^2\omega_5\omega_2^3 v_2^2\omega_3 - 72\omega_4\omega_1^3\omega_5\omega_2^3 cs^4\omega_3^2 +$
$72\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2\omega_3 + 180\omega_4^2\omega_1\omega_5\omega_2^3 cs^2 v_2^2\omega_3 + 56\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^4\omega_3 + 108\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3 + 24\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 + 27\omega_4\omega_1^3\omega_5\omega_2^3 cs^2\omega_3^2 v_3^2 +$
$72\omega_4^2\omega_1^3\omega_5\omega_2^3 cs^4\omega_3 + 24\omega_4^2\omega_1\omega_5\omega_2^2 v_2^4\omega_3 - 8\omega_4^2\omega_1\omega_5\omega_2^3\omega_3^2 - 24\omega_4^2\omega_1\omega_5\omega_2^2 cs^2 v_2^2\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 + 4\omega_4^2\omega_1^3\omega_5\omega_2^3 cs^2\omega_3 - 28\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3^2 -$
$12\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 - 216\omega_4^2\omega_1^3\omega_5^2 cs^2 v_2^2 - 60\omega_4^2\omega_5\omega_2^2 cs^2 v_2^2\omega_3 - 27\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 v_3^2 - 162\omega_4\omega_1^2\omega_5\omega_2^3 cs^2 v_1^2\omega_3 - 36\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3 -$
$36\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3 + 152\omega_4^2\omega_5\omega_2^3 cs^4\omega_3^2 + 48\omega_4^2\omega_1^3\omega_5 v_2^2\omega_3 + 36\omega_4^2\omega_1\omega_5\omega_2^3 cs^2\omega_3^2 - 468\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 + 24\omega_4^2\omega_1^2\omega_5 cs^2 v_1^2\omega_3 -$
$72\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3 + 54\omega_4\omega_1^3\omega_5\omega_2^3 v_2^4\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3 + 9\omega_4\omega_1\omega_5\omega_2^3\omega_2^2 v_3^4 - 54\omega_1^3\omega_5\omega_2^3 v_2^4\omega_3 - 2\omega_4^2\omega_1^3\omega_5\omega_2\omega_2^3 v_3^2 -$
$8\omega_4^2\omega_1^2\omega_5\omega_2\omega_3^2 + 18\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2 v_2^2\omega_3 + 132\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2 v_1^2\omega_3 + 54\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^4 - 54\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^4\omega_3 - 216\omega_4^2\omega_5\omega_2^3 cs^2 v_2^2\omega_3 -$
$36\omega_4\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3 - 120\omega_4^2\omega_1\omega_5\omega_2^3 cs^2 v_1^2\omega_3 - 56\omega_4^2\omega_1\omega_5\omega_2^2 cs^4\omega_3 - 56\omega_4^2\omega_1^2\omega_5\omega_2 cs^4\omega_3 - 48\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_1^2\omega_3 + 162\omega_4^2\omega_1^3\omega_5\omega_2^3 cs^2 v_2^2 +$
$60\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_2^2\omega_3 + 36\omega_4\omega_1\omega_5\omega_2^3 v_2^4\omega_3 - 216\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^4\omega_3 - 16\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 - 24\omega_4^2\omega_1^3\omega_5 v_1^2\omega_3 - 288\omega_4^2\omega_1\omega_5\omega_2 v_1^2 v_2^2\omega_3 +$
$12\omega_4^2\omega_1\omega_5\omega_2^3 v_2^4\omega_3 + 8\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^2 - 216\omega_4^2\omega_1\omega_5\omega_2^3 cs^2 v_2^2\omega_3 + 16\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3 + 24\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2\omega_3 + 4\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^4\omega_3 - 108\omega_4^2\omega_1^3\omega_5\omega_2^3 cs^2 v_2^2\omega_3 -$
$112\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2\omega_3 + 288\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^4\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2^2 v_2^2\omega_3 - 9\omega_4\omega_1^3\omega_5\omega_2^3\omega_3 v_3^2 + 24\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3 + 216\omega_4^2\omega_5\omega_2^3 v_1^2 v_2^2\omega_3 + 2\omega_4^2\omega_1^3\omega_5\omega_2\omega_2^3 v_3^4 +$
$36\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^4\omega_3 - 288\omega_4\omega_1\omega_2^2 cs^4\omega_3 - 54\omega_4^2\omega_1^3\omega_5\omega_2\omega_2^2 - 24\omega_4^2\omega_5\omega_2^3 v_1^2\omega_3 + 108\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_5\omega_2^2 v_2^2\omega_3 - 24\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_2^2\omega_3 +$
$24\omega_4^2\omega_1^2\omega_5\omega_2^3\omega_3 - 288\omega_4\omega_1\omega_5\omega_2^3 cs^4\omega_3 + 324\omega_4^2\omega_5\omega_2^3\omega_3 cs^2 v_2^2\omega_3 + 24\omega_4\omega_1\omega_5\omega_2^3 v_1^2\omega_3 - 180\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 144\omega_4\omega_1^3\omega_5\omega_2^3 v_2^4\omega_3^2 -$
$648\omega_4\omega_1\omega_5\omega_2^3 cs^2 v_1^2\omega_3 - 12\omega_4^2\omega_1^2\omega_5\omega_2^2 v_2^2\omega_3 + 160\omega_4^2\omega_1\omega_5\omega_2^3 cs^4\omega_3 + 18\omega_4^2\omega_1^3\omega_5\omega_2^2 v_2^4\omega_3 + 6\omega_4^2\omega_5\omega_2^2 cs^2 v_1^2\omega_3 - 180\omega_4^2\omega_1^3\omega_5\omega_2 v_1^2 v_2^2\omega_3 -$
$84\omega_4^2\omega_1^2\omega_5\omega_2^2 v_2^2\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2^2 v_2^4\omega_3 + 8\omega_4^2\omega_1\omega_5\omega_2^3 cs^4\omega_3 + 72\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2 - 96\omega_4\omega_1^3\omega_5 v_2^2\omega_3 - 88\omega_4^2\omega_5\omega_2^3 cs^2\omega_3 - 54\omega_4\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3 -$
$2\omega_4^2\omega_1^3\omega_5\omega_2\omega_3^3 v_3^4 + 72\omega_4^2\omega_1^3\omega_5\omega_2 v_2^4\omega_3 + 54\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3 - 18\omega_4^2\omega_1^2\omega_5\omega_2^3 v_2^2\omega_3 + 132\omega_4^2\omega_1^3\omega_5\omega_2 v_2^2\omega_3 + 648\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^2 v_1^2\omega_3 + 36\omega_4\omega_1^3\omega_5\omega_2^2 v_2^4\omega_3 +$
$54\omega_4^2\omega_1^3\omega_5\omega_2^3 v_2^2\omega_3 + 64\omega_4^2\omega_1\omega_5\omega_2^2 cs^2\omega_3 + 162\omega_4^2\omega_1^3\omega_5\omega_2^3 cs^2 v_1^2\omega_3 + 24\omega_4^2\omega_5\omega_2^3 v_2^2\omega_3 - 40\omega_4^2\omega_1^3\omega_5 cs^2\omega_3 - 180\omega_4^2\omega_1\omega_5\omega_2^3 v_1^2 v_2^2\omega_3 +$
$108\omega_4^2\omega_1\omega_5\omega_2^3 v_2^4\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2 cs^4\omega_3 + 72\omega_4\omega_1^3\omega_5\omega_2^3 cs^2\omega_3 + 108\omega_4^2\omega_1^3\omega_5\omega_2^3 cs^2 v_2^2\omega_3 + 6\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2\omega_3^2 v_3^2 + 360\omega_4^2\omega_1^2\omega_5\omega_2 v_1^2 v_2^2\omega_3 -$
$96\omega_4^2\omega_1^3\omega_5\omega_2 cs^2 v_1^2\omega_3 - 72\omega_4^2\omega_1^2\omega_5\omega_2^2 cs^2\omega_3 - 72\omega_4^2\omega_1^3\omega_5\omega_2^3 cs^2\omega_3 - 108\omega_4\omega_1\omega_5\omega_2^3 cs^2 v_2^2\omega_3 - 9\omega_4^2\omega_1^3\omega_5\omega_2\omega_3\omega_3 v_3^4 + 144\omega_4^2\omega_1^3\omega_5 v_1^2 v_2^2\omega_3 +$
$180\omega_4^2\omega_1^3\omega_5\omega_2^2 cs^2 v_2^2\omega_3 + 72\omega_4^2\omega_1\omega_5\omega_2^3 v_2^2\omega_3 - 108\omega_4^2\omega_1^2\omega_5\omega_2 cs^2 v_2^2\omega_3 + 36\omega_4^2\omega_1^3\omega_5\omega_2 cs^2\omega_3 - 28\omega_4^2\omega_1^2\omega_5\omega_2^3 cs^4\omega_3 + 36\omega_4^2\omega_1^3\omega_5\omega_2\omega_2 v_2^2$

$C_{38} = 6\omega_1^2\omega_2^2 v_1^2\omega_3 + 2\omega_1\omega_2^3 + 10\omega_3^2 v_2^2\omega_3 - 20\omega_1^2\omega_2^2\omega_3 - 2\omega_1^3\omega_2 v_1^2 - 3\omega_1\omega_3^3 v_1^2\omega_3 - 10\omega_3^2\omega_3 + 26\omega_3^2 cs^2\omega_3 + 10\omega_1^3\omega_2\omega_3 + 26\omega_1^2\omega_2^2 v_2^2\omega_3 -$
$24\omega_1\omega_3^3 cs^2\omega_3 + 4\omega_1^2\omega_2^2 v_1^2 + 4\omega_2^3 v_1^2\omega_3 + 48\omega_1^2\omega_2^2 cs^2\omega_3 - 13\omega_1\omega_3^3 v_2^2\omega_3 - 6\omega_1\omega_2^3 cs^2 - 12\omega_1^3\omega_3 - 22\omega_1^2\omega_2 v_2^2\omega_3 + 10\omega_1\omega_3^3\omega_3 - 4\omega_1\omega_3^2 v_1^2\omega_3 +$
$16\omega_1^3 v_2^2\omega_3 - 6\omega_1^3\omega_2 cs^2 - 3\omega_1^3\omega_2 v_1^2\omega_3 - 30\omega_1^2\omega_2 cs^2\omega_3 + 28\omega_1^3 cs^2\omega_3 - 24\omega_1^3\omega_2 cs^2\omega_3 - 4\omega_1^2\omega_2 v_1^2\omega_3 - 4\omega_1^2\omega_2^2 - 4\omega_1\omega_2^2 v_2^2\omega_3 + 8\omega_1\omega_2^2\omega_3 -$
$2\omega_1\omega_3^3 v_1^2 + 4\omega_1^3 v_1^2\omega_3 - 13\omega_1^3\omega_2 v_2^2\omega_3 + 2\omega_1^3\omega_2 - 24\omega_1\omega_2 cs^2\omega_3 + 12\omega_1^2\omega_2^2 cs^2 + 14\omega_1^2\omega_2\omega_3$

$C_{39} = -2\omega_4\omega_1\omega_3 + 2\omega_4\omega_1 v_1^2\omega_3 - 9\omega_1\omega_2\omega_3 + 27\omega_1\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 6\omega_4\omega_1 cs^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 9\omega_1\omega_2 v_1^2\omega_3 + 9\omega_4\omega_1\omega_2 -$
$2\omega_4\omega_2 v_1^2\omega_3 - 6\omega_4\omega_2 cs^2\omega_3 - 9\omega_4\omega_1\omega_2 v_1^2$

$C_{40} = -368\omega_4^2\omega_1\omega_2^3 cs^2\omega_3^2 + 18\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 v_3^2 + 104\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 - 6\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^2 + 6\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 108\omega_1^2\omega_3^3 cs^4\omega_3^2 -$
$132\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3 + 108\omega_4^2\omega_1^2\omega_2^3 cs^4\omega_3 - 18\omega_4^2\omega_1^3\omega_2^2 cs^2 + 8\omega_4^2\omega_1^3\omega_3^2 - 6\omega_4^2\omega_2^2\omega_3^2 v_3^4 - 78\omega_4^2\omega_1^2\omega_3^2 v_2^4\omega_3 - 144\omega_4\omega_1\omega_2^2 cs^4\omega_3^2 -$
$36\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 - 27\omega_4^2\omega_1^3\omega_3^2 cs^4\omega_3 - 20\omega_4^2\omega_1^3\omega_2\omega_3 + 448\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3 - 256\omega_4\omega_1\omega_3^3 v_2^2\omega_3 - 276\omega_4^2\omega_1\omega_2 cs^4\omega_3 - 14\omega_4^2\omega_1^2\omega_3\omega_3 +$
$52\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 + 36\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 - 342\omega_4^2\omega_1^2\omega_2 cs^4\omega_3 - 24\omega_4^2\omega_1\omega_2 v_2^2\omega_3 + 72\omega_4^2\omega_1^2\omega_2 cs^4\omega_3 - 118\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 216\omega_4^2\omega_1^3\omega_3^2 cs^4\omega_3 -$
$16\omega_4^2\omega_1^3\omega_3^2 - 784\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 + 208\omega_4^2\omega_1^3 cs^2\omega_3^2 + 48\omega_4^2\omega_1^3 v_2^4\omega_3 + 18\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 + 320\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3 - 40\omega_4^2\omega_1^2 cs^4\omega_3 + 48\omega_4^2\omega_1\omega_2 cs^4\omega_3 -$
$9\omega_4\omega_1^3\omega_2\omega_3 - 27\omega_4\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 + 394\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 - 92\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 + 120\omega_4^2\omega_1^3\omega_2 v_2^4\omega_3 + 54\omega_4^2\omega_1^3 cs^4\omega_3 - 108\omega_4^2\omega_1\omega_3^3 cs^4 +$
$56\omega_4^2\omega_1\omega_3^2 cs^2\omega_3 - 8\omega_4^2\omega_1^2\omega_2^2\omega_3 - 9\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2\omega_3 + 144\omega_4^2\omega_1^3 cs^4\omega_3^2 + 160\omega_4^2\omega_1^2\omega_2^2\omega_3 + 18\omega_1^2\omega_3^3 cs^2 v_2^2\omega_3 - 56\omega_4^2\omega_1\omega_2^2 cs^2 v_2^2\omega_3 +$
$16\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 + 9\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3 + 228\omega_4^2\omega_1\omega_3^2 v_2^4\omega_3 + 12\omega_4^2\omega_1^2\omega_2^2 cs^4\omega_3 + 208\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 - 108\omega_4^2\omega_1^3\omega_3^2 cs^4\omega_3 + 16\omega_4^2\omega_1^2\omega_2\omega_2 +$
$184\omega_4^2\omega_1\omega_3^2 cs^2\omega_3 + 32\omega_4^2\omega_1\omega_2 v_2^2\omega_3 - 56\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 - 36\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2 + 588\omega_4^2\omega_1\omega_3 cs^4\omega_3^2 + 152\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 + 36\omega_4^2\omega_3^2 cs^2\omega_3^2 -$
$36\omega_4^2\omega_1^2 cs^2 v_2^2\omega_3 - 96\omega_4^2\omega_1^2\omega_2 v_2^4\omega_3 - 36\omega_4\omega_1^2\omega_3^2 cs^2\omega_3 + 72\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 - 18\omega_4^2\omega_1^2\omega_3^2 cs^2\omega_3^2 v_3^2 + 92\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 - 412\omega_4^2\omega_1^2 cs^2 v_2^2\omega_3 +$
$56\omega_4^2\omega_1\omega_2 cs^2\omega_3 - 8\omega_4^2\omega_1\omega_2^2\omega_3 + 36\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 + 36\omega_4^2\omega_1^2\omega_3^2 cs^2 + 40\omega_4^2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 + 14\omega_4^2\omega_1^3\omega_2^2\omega_3 + 9\omega_4\omega_1^3\omega_3^2 cs^2\omega_3 -$
$18\omega_1^3\omega_2^2 cs^2\omega_3 - 136\omega_4^2\omega_1\omega_2 v_2^2\omega_3 + 78\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3 - 168\omega_4^2\omega_1\omega_3^3 cs^4\omega_3 + 6\omega_4^2\omega_1^3\omega_2^2\omega_3 v_3^4 - 144\omega_4^2\omega_3 v_2^4\omega_3 - 104\omega_4^2\omega_1^3 cs^2\omega_3 + 54\omega_4^2\omega_1^3\omega_3^2 cs^4 -$
$460\omega_4^2\omega_1\omega_3^2 cs^2 v_2^2\omega_3 + 6\omega_4^2\omega_1^3\omega_3^3\omega_3 v_3^2 + 144\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 - 88\omega_4^2\omega_1 cs^2\omega_3 + 28\omega_4\omega_1\omega_3^3\omega_3 - 72\omega_4^2\omega_1^2 cs^2\omega_3 + 1232\omega_4\omega_1\omega_3^2 cs^2 v_2^2\omega_3 -$
$712\omega_4^2\omega_1\omega_2 cs^2 v_2^2\omega_3 - 56\omega_4^2\omega_1^3 v_2^2\omega_3 + 18\omega_4^2\omega_1^3\omega_3^2 cs^2 v_2^2 - 288\omega_4^2\omega_2 cs^4\omega_3 - 6\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 - 16\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 120\omega_4^2\omega_1^2\omega_2 cs^4\omega_3$

$C_{41} = \omega_4\omega_1^3\omega_2^2\omega_3 v_3^4 + 8\omega_4\omega_1^2\omega_2 cs^4\omega_3 - 24\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 + 14\omega_4\omega_1\omega_2^3\omega_3 + \omega_4\omega_1^2\omega_2^3\omega_3 v_3^3 - 312\omega_4\omega_2^3 cs^2 v_2^2\omega_3 + 27\omega_1^3\omega_2^3 cs^2 v_2^2\omega_3 - 3\omega_4\omega_1^3\omega_2^3 cs^4\omega_3 + 9\omega_1^3\omega_2^3 cs^4\omega_3 - 18\omega_4\omega_1^3\omega_2^2 cs^4 - 68\omega_4\omega_2^3 cs^4\omega_3 + 144\omega_4\omega_1^3 cs^2 v_2^2\omega_3 - 60\omega_4\omega_1^2 v_2^4\omega_3 + 60\omega_4\omega_2^2\omega_2 cs^2 v_2^2\omega_3 + 18\omega_4\omega_1^2\omega_2^3 cs^2 - 81\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 + 7\omega_4\omega_1\omega_2^3\omega_3 + 192\omega_4\omega_1^2\omega_2 v_1^4\omega_3 - 8\omega_4\omega_1^3\omega_2\omega_2 cs^2 - 3\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 v_3^3 - 20\omega_4\omega_1^3 cs^2\omega_3 - 264\omega_4\omega_2^3 v_3^4\omega_3 + 24\omega_4\omega_1\omega_2^3 cs^2 v_2^2 + 8\omega_4\omega_1\omega_2^3 cs^4 + 120\omega_4\omega_1^2\omega_2 cs^2 v_2^2\omega_3 - 54\omega_4\omega_1\omega_2^3 cs^2\omega_3 + 9\omega_4\omega_1^3\omega_2^2 cs^4 + 84\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3 - 240\omega_4\omega_1^3\omega_2 v_3^4\omega_3 - 36\omega_1\omega_2^3 cs^2\omega_3 - 138\omega_4\omega_1^2\omega_2^3 v_2^4\omega_3 - 4\omega_4\omega_1\omega_2^2\omega_3 - 28\omega_4\omega_1\omega_2^2 cs^4\omega_3 - 222\omega_4\omega_1\omega_2^3 v_2^2\omega_3 - 32\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 6\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 - 36\omega_2^3\omega_3 cs^4\omega_3 - 54\omega_4\omega_1\omega_2^3 cs^2 v_2^2 + 8\omega_4\omega_1^2\omega_2\omega_3 - 29\omega_4\omega_1^2\omega_2^3 cs^4\omega_3 - 20\omega_4\omega_1^2\omega_2^2 cs^2 + 153\omega_4\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 - 24\omega_4\omega_1\omega_2^2 v_2^4\omega_3 + 3\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 v_3^3 - 96\omega_4\omega_1^2\omega_2 v_2^2\omega_3 + 138\omega_4\omega_1^3\omega_2^2 v_2^2\omega_3 + 144\omega_4\omega_2^3 v_2^2\omega_3 + 16\omega_4\omega_1^3 cs^4\omega_3 - 9\omega_4\omega_1^3\omega_2^2 cs^2 - 60\omega_4\omega_1\omega_2^2 cs^2 v_2^2\omega_3 - 4\omega_4\omega_1^2\omega_2^3\omega_3 + 17\omega_4\omega_1^3\omega_2^2 cs^4\omega_3 - 16\omega_4\omega_1^2\omega_2\omega_3 cs^2\omega_3 - 90\omega_4\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 - 54\omega_4\omega_1^2\omega_2^3 cs^2 v_2^2 + 20\omega_4\omega_1^2\omega_2^2 cs^4 + 4\omega_4\omega_1^3\omega_3 + 96\omega_4\omega_1 v_1^4\omega_3 - 9\omega_1^3\omega_2^3 cs^2\omega_3 + 24\omega_4\omega_1^3\omega_2 cs^2 v_2^2 + 40\omega_4\omega_2^3 cs^2\omega_3 + 27\omega_4\omega_1^3\omega_2^3 cs^2 v_2^2 - 7\omega_4\omega_1^2\omega_2^3\omega_3 + 18\omega_4\omega_1^3\omega_2^2 cs^2 - 153\omega_4\omega_1^2\omega_2^3 cs^2 v_2^2\omega_3 + 408\omega_4\omega_1\omega_2^3 v_2^4\omega_3 + 10\omega_4\omega_1^2\omega_2^2 cs^4\omega_3 + 42\omega_4\omega_1^3\omega_2 cs^2\omega_3 - 10\omega_4\omega_1^3\omega_2\omega_3 - \omega_4\omega_1^3\omega_2^2\omega_3 v_3^3 - 108\omega_1^2\omega_2^3 cs^2 v_2^2\omega_3 + 36\omega_1^2\omega_2^3 cs^2\omega_3 + 24\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 - \omega_4\omega_1^2\omega_2^3\omega_3 v_3^4 + 12\omega_4\omega_1\omega_2^3 v_2^2\omega_3 + 94\omega_4\omega_1\omega_2^3 cs^4\omega_3 + 138\omega_4\omega_1^3\omega_2 v_2^2\omega_3 - 168\omega_4\omega_1^2 v_2^2\omega_3 + 108\omega_1\omega_2^3 cs^2 v_2^2\omega_3 - 288\omega_4\omega_1\omega_2 cs^2 v_2^2\omega_3 - 8\omega_4\omega_1\omega_2^3 cs^2 + 36\omega_1\omega_2^3 cs^4\omega_3 + 81\omega_4\omega_1^2\omega_2^3 v_2^2\omega_3 - 18\omega_4\omega_1^2\omega_2^3 cs^4 - 8\omega_4\omega_2^3\omega_3 + 32\omega_4\omega_1\omega_2^3 cs^2\omega_3 + 432\omega_4\omega_1\omega_2^3 cs^2 v_2^2\omega_3 + 8\omega_4\omega_1^3\omega_2 cs^4$

$C_{42} = -8\omega_4\omega_1\omega_3 + 6\omega_4\omega_1\omega_2 v_2^2\omega_3 - 18\omega_4\omega_2\omega_3 v_3^2 - 9\omega_1\omega_2 v_2^2\omega_3 + 9\omega_1\omega_2\omega_3 - 27\omega_1\omega_2 cs^2\omega_3 + 18\omega_4\omega_1\omega_2 cs^2\omega_3 + 2\omega_4\omega_2\omega_3 + 12\omega_4\omega_1 cs^2\omega_3 - 27\omega_4\omega_1\omega_2 cs^2 + 2\omega_4\omega_1 v_2^2\omega_3 + 9\omega_4\omega_1\omega_2 + 18\omega_4\omega_1\omega_3 v_3^2 - 6\omega_4\omega_1\omega_2\omega_3 - 9\omega_4\omega_1\omega_2 v_2^2 + 6\omega_4\omega_2 cs^2\omega_3 + 4\omega_4\omega_2 v_2^2\omega_3$

$C_{43} = -58\omega_4^2\omega_1\omega_2^3 cs^2\omega_3^2 + 8\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 60\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3^2 v_3^2 - 108\omega_1^2\omega_2^3 cs^4\omega_3^2 + 108\omega_4\omega_1^2\omega_2 cs^4\omega_3^2 - 18\omega_4^2\omega_1^3\omega_2^3 cs^2 - 216\omega_4^2\omega_2^3 cs^2 v_1^2\omega_3^2 - 9\omega_4\omega_1^3\omega_2^3 cs^2\omega_3^2 v_3^2 + 4\omega_4^2\omega_1^3\omega_3^2 + 18\omega_1^3\omega_2^3 cs^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1^3 v_1^4\omega_3^2 - 72\omega_4^2\omega_1\omega_2^2 cs^4\omega_3^2 - 4\omega_4^2\omega_2^3\omega_3^2 v_3^2 + 216\omega_4^2\omega_1^3 cs^2 v_1^2\omega_3^2 - 12\omega_4^2\omega_1^3\omega_2 cs^2 v_3^2 + 16\omega_4^2\omega_2^3 cs^2\omega_3^2 v_3^2 - 27\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 - 4\omega_4^2\omega_1^3\omega_2\omega_3 - 102\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 - 16\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 + 138\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3^2 - 27\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3 - 48\omega_4^2\omega_1\omega_2^2 v_1^2\omega_3^2 v_3^2 + 16\omega_4^2\omega_1^3 cs^2\omega_3^2 v_3^2 + 32\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 - 119\omega_4^2\omega_1^2\omega_2^3 cs^4\omega_3^2 + 24\omega_4^2\omega_2^3 v_1^2\omega_3^2 - 36\omega_4^2\omega_1\omega_2 v_1^4\omega_3^2 - 24\omega_4^2\omega_1^2\omega_2^2 v_1^2\omega_3^2 - 25\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 - 30\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 v_3^2 - 4\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 + 4\omega_4^2\omega_1\omega_2^3\omega_3^2 v_3^2 + 108\omega_4^2\omega_1^2\omega_2^3 cs^4\omega_3^2 + 4\omega_4^2\omega_1^3\omega_2^3 + 12\omega_4^2\omega_1^3\omega_2^2 cs^2 + 20\omega_4^2\omega_2^3 cs^2\omega_3^2 + 36\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 v_3^2 - 27\omega_4^2\omega_1^2\omega_2^3 v_1^4\omega_3^2 + 15\omega_4^2\omega_1^3\omega_2^3 cs^4\omega_3^2 - 30\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 v_3^2 - 32\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 - 12\omega_4^2\omega_1\omega_2 cs^4\omega_3 - 27\omega_4\omega_1^3\omega_2 cs^4\omega_3 - 28\omega_4^2\omega_1\omega_2 cs^2\omega_3 v_3^2 - 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 v_3^2 + 3\omega_4^2\omega_1^3\omega_2^3 cs^2\omega_3^2 v_3^2 + 54\omega_1^3\omega_2^3 cs^4\omega_3^2 - 42\omega_4^2\omega_1\omega_2^3 v_1^2\omega_3^2 - 72\omega_4^2\omega_1^2\omega_2^3 cs^4 + 28\omega_4^2\omega_1\omega_2^3 cs^2\omega_3 + 8\omega_4^2\omega_1^2\omega_2^2\omega_3 + 72\omega_4^2\omega_1^3 cs^4\omega_3^2 + 36\omega_4^2\omega_1\omega_2 v_1^2\omega_3 - 4\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 v_3^2 - 36\omega_4\omega_1^3\omega_2^2 cs^4 + 4\omega_4^2\omega_1\omega_2^3 cs^2\omega_3 v_3^2 + 9\omega_4^2\omega_1^3\omega_2^2 cs^2 v_3^2 + 24\omega_4^2\omega_1^2 cs^2\omega_3^2 + 27\omega_4^2\omega_1^3\omega_2^2 v_1^4\omega_3^2 + 12\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 - 9\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 v_3^2 + 74\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 - 4\omega_4^2\omega_1^2 v_2\omega_3 + 18\omega_4^2\omega_1^3\omega_2^2 cs^2 v_3^2 + 49\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 - 138\omega_4^2\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 - 20\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 - 4\omega_4^2\omega_1^3\omega_2^2 v_3^2 - 12\omega_4^2\omega_1^2\omega_2 v_1^2\omega_3^2 v_3^2 - 60\omega_4^2\omega_1^3 v_1^4\omega_3^2 + 78\omega_4^2\omega_1\omega_2^3 cs^4\omega_3^2 + 36\omega_4^2\omega_2^3 cs^2\omega_3^2 + 4\omega_4^2\omega_1\omega_2\omega_3^2 v_3^2 - 36\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 + 324\omega_4^2\omega_1\omega_2^3 cs^2 v_1^2\omega_3 - 32\omega_4^2\omega_1^2\omega_2^3 cs^2\omega_3^2 v_3^2 - 324\omega_4^2\omega_1^3\omega_2 cs^2 v_1^2\omega_3^2 - 48\omega_4^2\omega_1^3 v_1^2\omega_3^2 + 28\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 - 4\omega_4^2\omega_1\omega_2^3\omega_3^2 + 24\omega_4^2\omega_1^3\omega_2^3 cs^2 + 9\omega_4\omega_1^3\omega_2^3 cs^2\omega_3^2 + 4\omega_4^2\omega_1^3\omega_2\omega_3^2 v_3^2 - 18\omega_1^3\omega_2^3 cs^2\omega_3^2 - 36\omega_1^2\omega_2^3 cs^2\omega_3^2 v_3^2 + 72\omega_4^2\omega_1\omega_2^3 v_1^4\omega_3^2 - 84\omega_4^2\omega_1\omega_2^3 cs^4\omega_3 + 36\omega_4\omega_1^2\omega_2^3 cs^2\omega_3^2 v_3^2 - 52\omega_4\omega_1^3 cs^2\omega_3^2 + 54\omega_4^2\omega_1^3\omega_2^3 cs^4 + 12\omega_4^2\omega_1\omega_2^2 v_1^2\omega_3^2 + 16\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3^2 v_3^2 - 36\omega_4^2\omega_1^2\omega_2^3 v_1^4\omega_3^2 + 35\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3^2 + 4\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 - 4\omega_4^2\omega_1\omega_2^3\omega_3^2 + 66\omega_4^2\omega_1^3\omega_2 v_1^2\omega_3^2 - 36\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 - 28\omega_4^2\omega_1\omega_2 cs^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1^3 v_1^2\omega_3^2 v_3^2 + 4\omega_4^2\omega_1\omega_2\omega_3^2 v_3^2 + 27\omega_4^2\omega_1^3\omega_2^2 v_1^2\omega_3^2 - 3\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 + 36\omega_4^2\omega_2^3 v_1^2\omega_3^2\omega_3^2 - 24\omega_4^2\omega_1^2\omega_2^3 cs^2 v_3^2 + 4\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 + 96\omega_4^2\omega_1^2\omega_2^3 cs^4\omega_3$

$C_{44} = 12\omega_1^2\omega_2^3 v_3^2 + 42\omega_1^3\omega_2^3 cs^2\omega_3 - 66\omega_1^2\omega_2^3 v_1^2\omega_3 + 6\omega_1\omega_2^3 - 9\omega_1^3\omega_2\omega_3 v_3^2 + 12\omega_1^2\omega_2^2\omega_3 + 141\omega_1\omega_2^3 v_1^2\omega_3 - 12\omega_1\omega_2^3\omega_3 v_3^2 + 42\omega_2^3\omega_3 - 66\omega_2^3 cs^2\omega_3 + 23\omega_1^3\omega_2^3\omega_3 + 48\omega_1^3\omega_2\omega_3 + 108\omega_1\omega_2^3 cs^2\omega_3 - 114\omega_2^3 v_1^2\omega_3 - 6\omega_1^3\omega_2 v_3^2 + 50\omega_1^3\omega_2^2 v_1^2\omega_3 + 12\omega_1^3\omega_2\omega_3 v_3^2 - 18\omega_1\omega_2^3 cs^2 - 36\omega_1^3\omega_3 - 12\omega_1^2\omega_2\omega_3 v_3^2 - 60\omega_1\omega_2^3\omega_3 + 60\omega_1\omega_2^2 v_1^2\omega_3 - 9\omega_1\omega_2^3\omega_3 v_3^2 - 6\omega_1\omega_2^3 v_3^2 - 18\omega_1^3\omega_2 cs^2 - 75\omega_1^3\omega_2 v_1^2\omega_3 - 18\omega_1^2\omega_2 cs^2\omega_3 - 23\omega_1^3\omega_2^2\omega_3 + 18\omega_1^2\omega_2^2 v_1^2\omega_3 + 84\omega_1^3 cs^2\omega_3 - 50\omega_1^2\omega_2^3 v_1^2\omega_3 - 108\omega_1^3\omega_2 cs^2\omega_3 + 6\omega_1^2\omega_2 v_1^2\omega_3 - 12\omega_1^2\omega_2^2 - 12\omega_1\omega_2^3\omega_3 - 42\omega_1^2\omega_2^3 cs^2\omega_3 + 48\omega_1^3 v_1^2\omega_3 + 6\omega_1^3\omega_2 + 12\omega_2^3\omega_3 v_3^2 + 36\omega_1^2\omega_2^2 cs^2 + 6\omega_1^2\omega_2\omega_3$

$C_{45} = -12\omega_4\omega_1^3\omega_2 v_1^4\omega_3 + 60\omega_4\omega_1\omega_2^3 cs^2\omega_3 v_3^2 + 36\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 - 6\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3 - 12\omega_4\omega_1^3\omega_2^3 v_3^2 + 12\omega_4\omega_1^3 cs^2\omega_3^2 v_3^2 - 48\omega_4\omega_2^3 v_1^4\omega_3 - 72\omega_1^2\omega_2^3 cs^4\omega_3^2 - 12\omega_4\omega_1^2\omega_2 cs^2 v_1^2\omega_3^2 - 14\omega_4\omega_1^3\omega_2^3 cs^4\omega_3^2 - 4\omega_4\omega_1^2 v_2\omega_2^2 + 54\omega_1^3\omega_2^3 cs^2\omega_3^2 v_3^2 - 96\omega_4\omega_2^3 cs^2\omega_3^2 v_3^2 - 18\omega_1^3\omega_2^2 v_1^2\omega_3 + 18\omega_4\omega_1^3\omega_2^2 cs^4\omega_3^2 - 36\omega_4\omega_1^2\omega_3^3 v_1^4\omega_3 - 36\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 - 9\omega_4\omega_1\omega_2^3 v_1^4\omega_3 - 14\omega_4\omega_1\omega_2^3 cs^4\omega_3^2 + 24\omega_4\omega_1\omega_2^3 cs^2\omega_3 v_3^2 - 90\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 v_3^2 - 48\omega_4\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 - 54\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 - 28\omega_4\omega_1\omega_2 cs^2\omega_3^4 - 6\omega_4\omega_1\omega_2^3 v_1^2\omega_3 - 48\omega_4\omega_1^3 v_1^2\omega_3 + 132\omega_4\omega_1^3 cs^2 v_1^2\omega_3 - 126\omega_4\omega_2^2\omega_3^3 cs^2\omega_3 v_3^2 - 18\omega_4\omega_1\omega_2^3 cs^2\omega_3^2 - \omega_4\omega_1^3\omega_2^2\omega_3^2 v_3^2 - 108\omega_4\omega_2^3 cs^2 v_1^2\omega_3^2 + 90\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3^2 - 90\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 v_3^2 - \omega_4\omega_1^2\omega_2^3\omega_2^2 v_3^4 - 72\omega_1\omega_2^3 cs^2\omega_3^2 - 8\omega_4\omega_1\omega_2^3 cs^2\omega_3 + 18\omega_4\omega_1^2\omega_2^3 v_1^4 - 20\omega_4\omega_1^3 cs^2\omega_3 + 30\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 + 12\omega_4\omega_1\omega_2^2 v_1^4\omega_3 - 144\omega_4\omega_1\omega_2^2 v_1^2\omega_3^2 v_3^2 - 18\omega_1\omega_2^3 v_1^2\omega_3 - 54\omega_4\omega_1^3\omega_2^2 cs^2 v_1^2 + 54\omega_1^3\omega_2^2 cs^2 v_1^2\omega_3 - 24\omega_4\omega_1^2\omega_2^3\omega_3 v_3^2 + 132\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 v_3^2 - 24\omega_4\omega_1\omega_2^3 v_1^2\omega_3 + 6\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 18\omega_1^3\omega_2^2 v_1^2\omega_3 + 180\omega_4\omega_2^2\omega_2^2 v_1^2\omega_3^2 v_3^2 - 9\omega_4\omega_1^3\omega_2^3 v_1^4\omega_3^2 - 3\omega_4\omega_1^3\omega_2^2 cs^4\omega_3^2 - 18\omega_1^2\omega_2^3 v_1^4\omega_3^2 - 68\omega_4\omega_2^3 cs^4\omega_3^2 + 18\omega_1^3\omega_2^3 cs^4\omega_3^2 + 8\omega_4\omega_1\omega_2 cs^4\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2 v_1^2\omega_3^2 - 56\omega_4\omega_1^2\omega_2^2 cs^2\omega_3 - 42\omega_4\omega_1^2\omega_2^2 v_1^2\omega_3^2 - 2\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 - 28\omega_4\omega_1^2\omega_2 cs^4\omega_3^2 - 36\omega_4\omega_1^3\omega_2 v_1^4\omega_3^2 + 12\omega_4\omega_1\omega_2^3\omega_3 v_3^2 - 36\omega_4\omega_1^2\omega_2^3 cs^4\omega_3 - 4\omega_4\omega_1\omega_2^3\omega_3^2 + 18\omega_1^2\omega_2^3 v_1^2\omega_3^2 + 18\omega_4\omega_1^3\omega_2^2 v_1^2 + 32\omega_4\omega_1\omega_2^3 cs^2\omega_3^2 + 4\omega_4\omega_2^3\omega_3^2 - 90\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 - 84\omega_4\omega_1\omega_2^3 cs^2\omega_3^2 v_3^2 - 54\omega_1^2\omega_2^3 cs^2 v_1^2\omega_3^2 + 24\omega_4\omega_1^3 v_1^4\omega_3^2 + 6\omega_4\omega_1\omega_2^3 v_1^4\omega_3^2 + 54\omega_4\omega_1\omega_2^3 cs^2 v_1^2 - 12\omega_4\omega_1\omega_2^3\omega_3 v_3^2 - 90\omega_4\omega_1\omega_2^3 cs^2 v_1^2\omega_3 + 24\omega_4\omega_1\omega_2^3 cs^2 v_1^2\omega_3^2 + 76\omega_4\omega_1\omega_2^3 cs^4\omega_3^2 + 54\omega_1^2\omega_2^3 cs^2 v_1^2\omega_3 - 18\omega_4\omega_1^3\omega_2^2 v_1^2 + 12\omega_4\omega_1^2\omega_2^3\omega_3 v_3^2 + 72\omega_1\omega_2^3 cs^4\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2 cs^4\omega_3 - 36\omega_4\omega_1^3\omega_2 cs^2 v_1^2\omega_3^2 + 6\omega_4\omega_1^3\omega_2^2 v_1^4\omega_3^2 + 12\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 - 12\omega_4\omega_1\omega_2^3 cs^2 v_1^2\omega_3^2 + 72\omega_1^2\omega_2^3 cs^2\omega_3^2 + 12\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 + 2\omega_4\omega_1^2\omega_2^3 cs^2\omega_3^2 - 18\omega_4\omega_1^3\omega_2^2 v_1^4 + 18\omega_1^3\omega_2^2 v_1^4\omega_3^2 - 18\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 + 36\omega_4\omega_1^2\omega_2^3 v_1^2\omega_3 + 66\omega_4\omega_1\omega_2^3 cs^2\omega_3^2 v_3^2 - 18\omega_1^2\omega_2^3 v_1^2\omega_3 - 4\omega_4\omega_1^3\omega_2\omega_3^2 - 18\omega_4\omega_1\omega_2^3 cs^2 v_1^2\omega_3 + 18\omega_4\omega_1^3\omega_2^3 cs^2\omega_3^2 + 28\omega_4\omega_1^2\omega_2^3 cs^4\omega_3^2 + 9\omega_4\omega_1^3\omega_2^3 v_1^4\omega_3^2 - 18\omega_1^3\omega_2^2 v_1^4\omega_3^2 + 12\omega_4\omega_1\omega_2^3\omega_3 v_3^2 + 4\omega_4\omega_1^3\omega_3^2 + 9\omega_4\omega_1^2\omega_2^3 v_1^2\omega_3^2 + 28\omega_4\omega_2^3 cs^2\omega_3^2 + 18\omega_1^2\omega_2^3 v_1^2\omega_3^2 - 18\omega_1^3\omega_2^3 cs^2\omega_3^2 - 216\omega_4^2\omega_2^3 cs^2\omega_3^2 v_3^2 + 108\omega_4\omega_2^3 v_1^2\omega_3^2 v_3^2 + 36\omega_4\omega_1^3\omega_2^2 v_1^4\omega_3 + 56\omega_4\omega_1^2\omega_2^2 cs^4\omega_3 + 150\omega_4\omega_1\omega_2^3 cs^2 v_1^2\omega_3 - 8\omega_4\omega_1^3\omega_2 cs^2\omega_3 + 32\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 + 66\omega_4\omega_1^3\omega_2 v_1^2\omega_3 - 18\omega_4\omega_1\omega_2^3 v_1^4\omega_3 - 174\omega_4\omega_1^3\omega_2 cs^2 v_1^2\omega_3 + 2\omega_4\omega_1^3\omega_2^2 cs^4\omega_3^2 + 54\omega_1\omega_2^3 cs^2 v_1^2\omega_3^2 - 6\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 v_3^2 + 36\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 - 18\omega_1^2\omega_2^3 v_1^4\omega_3^2 + 72\omega_4\omega_1^3 v_1^2\omega_3^2 v_3^2 + 16\omega_4\omega_1^3 cs^4\omega_3^2 - 54\omega_1^2\omega_2^3 cs^2 v_1^2\omega_3^2 + 54\omega_4\omega_2^3 cs^2 v_1^2\omega_3^2 + 8\omega_4\omega_1\omega_2^3 cs^4\omega_3^2 + 48\omega_4\omega_1\omega_2^3 cs^2\omega_3^2 v_3^2 + \omega_4\omega_1^3\omega_2^2\omega_3 v_3^4 + 36\omega_4\omega_1\omega_2^3 v_1^2\omega_3^2 + 54\omega_4\omega_1^3\omega_2^3 cs^2\omega_3 v_3^2 + 4\omega_4\omega_1^2\omega_2^3\omega_3^2 v_3^2 + 8\omega_4\omega_1^2\omega_2^3\omega_3^2 + 18\omega_1\omega_2^3 v_1^4\omega_3^2 - 6\omega_4\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 + 216\omega_1\omega_2^3 cs^2\omega_3^2 v_3^2 - 36\omega_4\omega_1^2\omega_2 v_1^2\omega_3^2 v_3^2 + 12\omega_4\omega_1^3\omega_2\omega_3^2 v_3^2 - 30\omega_4\omega_1^2\omega_2^3 cs^2 v_1^2\omega_3^2 + 54\omega_4\omega_1\omega_2^3 v_1^4\omega_3$

$C_{46} = 4\omega_1^3 v_2^2 + 6\omega_1\omega_2^3 - 3\omega_1^3\omega_2 v_1^2 - 72\omega_1^2\omega_2 cs^2 - 12\omega_1\omega_2^2 + 4\omega_1^3 v_1^2 - 4\omega_2^3 v_3^2 + 36\omega_1\omega_2^2 cs^2 - 3\omega_1^3\omega_2 v_2^2 + 2\omega_2^3 v_2^2 + 6\omega_1^2 v_1^2 + 2\omega_2^3 v_1^2 + 4\omega_1^3 v_3^2 + 6\omega_1^2\omega_2 v_2^2 - 18\omega_1\omega_2^3 cs^2 - 6\omega_1^2\omega_2 v_2^2 + 36\omega_1^3 cs^2 - 18\omega_1^3\omega_2 cs^2 - 6\omega_1^2\omega_2 v_1^2 + 24\omega_1^2\omega_2 + 12\omega_1\omega_2^2 v_3^2 - 12\omega_1^2\omega_2^2 - 12\omega_1^3 - 3\omega_1\omega_2^3 v_1^2 + 6\omega_1^3\omega_2 - 12\omega_1^2\omega_2 v_3^2 + 36\omega_1^3\omega_2^2 cs^2 - 3\omega_1\omega_2^3 v_2^2$

$C_{47} = -63\omega_4\omega_1^3\omega_2^3\omega_3^2 + 180\omega_4^2\omega_1\omega_2^3 cs^2\omega_3^2 + 216\omega_4\omega_1^3\omega_2^2 cs^2\omega_3 - 36\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3^2 + 48\omega_4^2\omega_1^2\omega_2^2\omega_3 + 180\omega_4\omega_1^2\omega_2^3\omega_3 v_3^2 + 324\omega_4^2\omega_1^3\omega_3^3 cs^2 - 144\omega_4^2\omega_2^3\omega_3^2 + 48\omega_4^2\omega_2^3\omega_3 v_3^2 + 72\omega_4\omega_1\omega_2^3 v_2^2\omega_3^2 + 72\omega_4\omega_1^3\omega_2^2\omega_3 + 216\omega_4\omega_1^2\omega_2^2 cs^2\omega_3^2 + 144\omega_4^2\omega_1^3\omega_2\omega_3^2 + 36\omega_4\omega_1^3\omega_2^2\omega_3 v_3^2 - 72\omega_4^2\omega_1^2\omega_2^2 v_2^2 - 72\omega_4^2\omega_1^3\omega_2\omega_3 + 108\omega_4^2\omega_1\omega_3^3 v_2^2\omega_3 + 20\omega_4^2\omega_2^3\omega_3 + 180\omega_4^2\omega_1\omega_2^2 cs^2\omega_3 - 24\omega_4^2\omega_1^3\omega_2\omega_3 v_3^2 + 324\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 + 108\omega_4\omega_1\omega_2^3 cs^2\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2\omega_3 v_3^2 + 36\omega_4\omega_1^2\omega_2^2 v_2^2\omega_3^2 - 36\omega_4\omega_1^2\omega_2^2\omega_3 v_3^2 + 72\omega_4^2\omega_2^3 v_1^2\omega_3^2 + 216\omega_4^2\omega_1\omega_2^3 v_1^2\omega_3^2 + 60\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 - 36\omega_4\omega_1\omega_2^3\omega_3 v_3^2 + 24\omega_4\omega_2^2\omega_3^3\omega_3 -$

$$72\omega_4^2\omega_1^2\omega_3^3v_3^2 - 216\omega_4^2\omega_1^3\omega_2^2cs^2 - 120\omega_4^2\omega_1^2cs^2\omega_3^2 + 48\omega_4^2\omega_1^3\omega_2\omega_3 - 24\omega_4^2\omega_1\omega_3^3v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2^2v_2^2\omega_3^2 + 36\omega_4\omega_1^2\omega_2^2\omega_3^3v_3^2 + 72\omega_4\omega_1^3\omega_2^2\omega_3^2 -$$
$$108\omega_4^2\omega_1^2\omega_3^3\omega_3 - 144\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3 - 108\omega_4\omega_1^3\omega_2^3\omega_3v_3^2 + 72\omega_4^2\omega_1^3\omega_2^3v_3^2 + 20\omega_4^2\omega_1^3\omega_2^2v_2^2\omega_3^2 - 108\omega_4^2\omega_1\omega_3^3v_1^2v_3^2 - 216\omega_4\omega_1^3\omega_2^2cs^2\omega_3^2 +$$
$$108\omega_4\omega_1^3\omega_3^3\omega_2\omega_3 - 36\omega_4\omega_1\omega_3^3\omega_2^3v_3^2 - 108\omega_4^2\omega_1^2\omega_2^3\omega_3^2 - 60\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3 - 96\omega_4^2\omega_2^2v_2^2\omega_3^3 - 36\omega_4\omega_1\omega_3^3\omega_2^2 - 180\omega_4^2\omega_1^2\omega_3^3v_2^2\omega_3^2 -$$
$$189\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 + 12\omega_4^2\omega_1^2\omega_2\omega_3v_3^2 - 216\omega_4^2\omega_1^2\omega_2v_1^2v_3^2 - 360\omega_4^2\omega_1^3\omega_2cs^2\omega_3^2 + 54\omega_1^3\omega_3^2\omega_3^2v_3^2 + 108\omega_1^2\omega_3^3v_2^2\omega_3^2 + 72\omega_4^3\omega_1^3\omega_2^2 + 12\omega_4^2\omega_1\omega_3^3\omega_3 +$$
$$96\omega_4^2\omega_1^2\omega_2\omega_3^2 - 60\omega_4^2\omega_1^3cs^2\omega_3^2 + 24\omega_4^2\omega_1\omega_2v_2^2\omega_3^2 + 48\omega_4^2\omega_1^3\omega_3v_3^2 + 54\omega_4^2\omega_1^3\omega_3^2v_3^2 - 36\omega_4^2\omega_1^3\omega_3^2v_3^2 + 12\omega_4\omega_1\omega_3^3v_3^2 - 72\omega_4^2\omega_1^3\omega_2v_2^2\omega_3^2 -$$
$$48\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 - 432\omega_4\omega_1^3\omega_2^3cs^2\omega_3^2 - 63\omega_4^2\omega_1^3\omega_2^2v_2^2\omega_3 - 108\omega_4^2\omega_1^3\omega_2\omega_3 - 20\omega_4^2\omega_1^3\omega_2^2v_2^2\omega_3^2 - 324\omega_4\omega_1^3\omega_3^2cs^2\omega_3 + 144\omega_4\omega_1^3v_1^2\omega_3^2 + 144\omega_4\omega_1^3\omega_2^3\omega_3 -$$
$$72\omega_4^2\omega_1\omega_2^2cs^2\omega_3^2 + 24\omega_4\omega_1\omega_3^3\omega_3 - 432\omega_4\omega_1^3\omega_2^3cs^2 - 108\omega_4^2\omega_1^3\omega_3^2 + 144\omega_4^2\omega_1^3\omega_2^2v_2^2\omega_3^2 - 20\omega_4\omega_1^3\omega_2^2\omega_3^2 - 144\omega_4\omega_1^2\omega_3^3 - 36\omega_4^2\omega_3^3\omega_2^2v_2^2 +$$
$$189\omega_4\omega_1^3\omega_3^2cs^2\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 + 24\omega_4^2\omega_1^2\omega_2v_2^2\omega_3^2 + 36\omega_4\omega_1^3\omega_2\omega_3v_3^2 - 24\omega_4^2\omega_1^3\omega_2v_2^2\omega_3 + 432\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 + 336\omega_4^2\omega_1^3cs^2\omega_3^2 - 54\omega_1^3\omega_3^2v_2^2\omega_3^2 -$$
$$108\omega_1^2\omega_3^3\omega_3v_3^2 - 144\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2 - 36\omega_4\omega_1\omega_3^3\omega_3 - 108\omega_4^3\omega_1\omega_2v_1^2v_3^2 + 36\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 + 144\omega_2^2\omega_1^3\omega_3^2 + 63\omega_4\omega_1^3\omega_3^3\omega_3 + 324\omega_4^2\omega_1^2\omega_2^3cs^2\omega_3 +$$
$$36\omega_4\omega_1^2\omega_3^3v_3^2 - 72\omega_4\omega_1^2\omega_2^3\omega_3 + 63\omega_4\omega_1^3\omega_3^3v_2^2\omega_3 - 48\omega_4^2\omega_1\omega_2^3v_3^2 + 48\omega_4^3\omega_1v_2^3\omega_3 - 36\omega_4\omega_1^3\omega_3^3v_2^2\omega_3 + 54\omega_4^2\omega_1^3\omega_2^3v_3^2 - 144\omega_4\omega_1^3\omega_2cs^2\omega_3$$

$C_{48} = -63\omega_4\omega_1^3\omega_2^3\omega_3^2 + 180\omega_4^2\omega_1\omega_3^3cs^2\omega_3^2 + 216\omega_4\omega_1^3\omega_2^2cs^2\omega_3 + 216\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3^2 + 48\omega_4^2\omega_1^2\omega_2^2\omega_3 + 180\omega_4^2\omega_1^3\omega_3\omega_3v_3^2 + 324\omega_4^2\omega_3^3\omega_2^2cs^2 -$
$72\omega_4^2\omega_1^2\omega_3^3v_1^2 - 144\omega_4^2\omega_1^3\omega_3^2 + 48\omega_4^2\omega_3^3\omega_3v_3^2 + 216\omega_4\omega_1^2\omega_2^3cs^2\omega_3^2 - 36\omega_4\omega_1^3\omega_3^2v_1^2\omega_3^2 - 24\omega_4^2\omega_1\omega_3^3v_1^2\omega_3 + 144\omega_4^2\omega_1^3\omega_2\omega_3 - 72\omega_4^2\omega_1^3\omega_2\omega_3 -$
$108\omega_4^2\omega_1\omega_3^3v_2^2\omega_3^2 + 20\omega_4^2\omega_1^2\omega_2^3\omega_3 + 180\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 + 20\omega_4^2\omega_1^3\omega_2^2v_1^2\omega_3 + 324\omega_4^2\omega_3^3\omega_2^2cs^2\omega_3 - 60\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3 +$
$108\omega_4\omega_1\omega_3^3cs^2\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2\omega_3^2v_3^2 - 36\omega_4^2\omega_1^2\omega_2^3\omega_3v_3^2 - 96\omega_4^2\omega_3^3v_1^2\omega_3 - 36\omega_4^2\omega_1^2\omega_2^2v_1^2\omega_3 + 60\omega_4^2\omega_1^3\omega_2^2cs^2\omega_3 - 36\omega_4\omega_1\omega_3^3\omega_2^2v_3^2 + 24\omega_4^2\omega_2^3\omega_2^2\omega_3 -$
$72\omega_4^2\omega_1^2\omega_3^3v_3^2 - 216\omega_4^2\omega_1^2\omega_2^2cs^2 - 120\omega_4^2\omega_2^3cs^2\omega_3^2 + 48\omega_4^2\omega_1^3\omega_2\omega_3 + 36\omega_4\omega_1^2\omega_2^2\omega_3^2v_3^2 + 72\omega_4\omega_1^3\omega_2^2\omega_3^2 + 72\omega_4^2\omega_3^3\omega_2^2v_3^2 - 108\omega_4^2\omega_1^2\omega_2^3\omega_3 -$
$144\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3 + 72\omega_4\omega_1\omega_3^3v_1^2\omega_3 - 108\omega_4\omega_1^3\omega_2^3\omega_3v_3^2 + 72\omega_4^2\omega_1^2\omega_2^3v_3^2 + 108\omega_4\omega_1\omega_3^3v_1^2\omega_3^2 + 36\omega_4\omega_1^3\omega_2^2v_1^2\omega_3 + 36\omega_4^2\omega_1^2v_1^2\omega_3^2 -$
$216\omega_4^2\omega_1^3cs^2\omega_3^2 + 108\omega_4\omega_1^3\omega_3^3\omega_3 - 36\omega_4^2\omega_1\omega_3^3cs^2\omega_3 - 36\omega_4\omega_1\omega_3^3v_2^2\omega_3^2 - 108\omega_4^2\omega_1^2\omega_2^3\omega_3 - 36\omega_4\omega_1^3\omega_2^3v_3^2 + 72\omega_4^2\omega_2^3v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2\omega_3 - 189\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 +$
$144\omega_4^2\omega_1^3\omega_3^2v_1^2\omega_3 + 12\omega_4^2\omega_1^2\omega_2\omega_3v_3^2 + 24\omega_4^2\omega_1\omega_2v_1^2v_3^2 - 360\omega_4^2\omega_1^3\omega_2cs^2\omega_3^2 + 54\omega_1^3\omega_3^2\omega_3^2v_3^2 - 24\omega_4^2\omega_3^3\omega_2v_2^2\omega_3 + 72\omega_4^2\omega_3^3\omega_2^2 + 12\omega_4\omega_1\omega_3^3\omega_3 +$
$96\omega_4^2\omega_1^2\omega_2\omega_3^2 - 60\omega_4^2\omega_1^3cs^2\omega_3^2 + 48\omega_4^2\omega_1^3\omega_3v_3^2 - 36\omega_4^2\omega_1^3\omega_3^2v_3^2 + 12\omega_4\omega_1\omega_3^3v_3^2 - 108\omega_4^2\omega_3^3\omega_2v_2^2\omega_3 - 48\omega_4^2\omega_1^2\omega_2\omega_3^2v_3^2 - 54\omega_1^3\omega_3^2v_1^2\omega_3^2 -$
$432\omega_4\omega_1^3\omega_3^2cs^2\omega_3^2 + 63\omega_4\omega_1\omega_3^3v_1^2\omega_3^2 - 108\omega_4^2\omega_1^3\omega_2\omega_3 - 324\omega_4\omega_1^3\omega_3^2cs^2\omega_3 - 36\omega_4\omega_1^2\omega_3^2v_1^2\omega_3 + 48\omega_4^2\omega_1^3v_1^2\omega_3^2 + 144\omega_4\omega_1^2\omega_2^3\omega_3^2 - 72\omega_4^2\omega_1\omega_2^2cs^2\omega_3^2 +$
$24\omega_4^2\omega_1\omega_2^3\omega_3 + 54\omega_4\omega_1^3\omega_3^2v_1^2 - 432\omega_4^2\omega_1^3\omega_2cs^2 - 108\omega_4^2\omega_1^3\omega_3^2 - 20\omega_4^2\omega_1^3\omega_2^2\omega_3 - 144\omega_4\omega_1^3\omega_2^3\omega_3 - 180\omega_4\omega_1^2\omega_3^3v_1^2\omega_3 + 189\omega_4\omega_1^3\omega_3^2cs^2\omega_3^2 +$
$108\omega_1^2\omega_3^3v_1^2\omega_3 - 36\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 - 216\omega_4^2\omega_1^2\omega_2v_2^2\omega_3^2 + 36\omega_4\omega_1^3\omega_2\omega_3v_3^2 + 432\omega_4\omega_1^2\omega_2^3cs^2\omega_3 + 336\omega_4^2\omega_1^3cs^2\omega_3^2 + 24\omega_4\omega_1\omega_2v_1^2v_3^2 - 108\omega_1^2\omega_3^3\omega_3v_3^2 -$
$144\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2 - 36\omega_4\omega_1\omega_3^3\omega_3 - 72\omega_4^2\omega_1^3v_2v_1^2\omega_3^2 + 36\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 - 36\omega_4^2\omega_1^3\omega_2v_1^2 + 144\omega_4^2\omega_1^3\omega_2 - 63\omega_4^2\omega_1^3\omega_3^2v_1^2\omega_3 + 63\omega_4\omega_1^3\omega_3^3\omega_3 +$
$324\omega_4^2\omega_1^2\omega_2^3cs^2\omega_3 + 36\omega_4\omega_1^2\omega_2^3\omega_3^2v_3^2 - 72\omega_4\omega_1^2\omega_2^3\omega_3^2 - 48\omega_4^2\omega_1\omega_2^3v_3^2 + 144\omega_4^3\omega_1v_2^3\omega_3^2 - 20\omega_4^2\omega_1^3v_1^2\omega_3^2 + 54\omega_4^2\omega_1^3\omega_3^3v_3^2 - 144\omega_4^2\omega_1^3\omega_2cs^2\omega_3$

$C_{49} = 18\omega_4\omega_1^3\omega_2^2cs^2\omega_3 + \omega_4\omega_1^2\omega_2^2v_1^2\omega_3 + 12\omega_4\omega_1^3\omega_3^3v_3^2 - 2\omega_4\omega_1\omega_3^3\omega_3 + 20\omega_4^2\omega_1^2\omega_2\omega_3 + 18\omega_1^3\omega_2^2cs^2\omega_3 + 18\omega_1^2\omega_2^2cs^2\omega_3 - 3\omega_1^3\omega_3^2v_1^2\omega_3 -$
$3\omega_1\omega_3^2v_2^2\omega_3 - 3\omega_4\omega_1\omega_3^3v_2^2\omega_3^2 + 36\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3 - 4\omega_4\omega_1\omega_3^3\omega_3 + 18\omega_4^2\omega_1^3\omega_3cs^2 + 3\omega_1^3\omega_2^2v_2^2\omega_3 + 3\omega_4\omega_1^3\omega_2^2\omega_2\omega_3 - 6\omega_4\omega_1^2\omega_3^3\omega_3 - 6\omega_4\omega_1^2\omega_3^2 +$
$\omega_4\omega_1\omega_3^3v_1^2\omega_3 + 4\omega_4\omega_1^3v_1^2\omega_3^2 - 6\omega_1^2\omega_3^3\omega_3^2 - 18\omega_4\omega_1\omega_3^3cs^2\omega_3 + 6\omega_4\omega_1^2\omega_3^2v_2^2\omega_3 + 3\omega_1^3\omega_2^2v_2^2\omega_3 - 18\omega_1\omega_3^3cs^2\omega_3 + 6\omega_4\omega_1\omega_3^3cs^2\omega_3 + 6\omega_1^2\omega_3^3\omega_3 +$
$28\omega_4\omega_1^3cs^2\omega_3 + \omega_4\omega_1^2\omega_2^2v_2^2\omega_3 - 3\omega_1\omega_3^2v_1^2\omega_3 - 3\omega_1^3\omega_2^2v_2^2\omega_3 + 6\omega_4\omega_1^3\omega_2^2 - 3\omega_4\omega_3^3\omega_2^2v_2^2 - 3\omega_4\omega_1\omega_3^2v_1^2\omega_3 + 3\omega_1^3\omega_2^2v_1^2\omega_3 + 4\omega_4\omega_1^3v_2^2\omega_3 -$
$6\omega_1^2\omega_2^2\omega_3 + \omega_4\omega_1\omega_3^3v_2^2\omega_3 + 3\omega_4\omega_1^3\omega_2^2v_1^2\omega_3 + 6\omega_4\omega_1^2\omega_2^2cs^2\omega_3 + 6\omega_4\omega_1^2\omega_2^2v_1^2\omega_3 + 6\omega_4\omega_1\omega_3^3\omega_3 + 3\omega_1^2\omega_2^2v_1^2\omega_3 - 3\omega_4\omega_1^3\omega_2^2v_1^2 - 18\omega_1^3\omega_2^2cs^2\omega_3 -$
$12\omega_4\omega_1\omega_3^2cs^2\omega_3 - 4\omega_4\omega_1\omega_3^2\omega_3 - 12\omega_4\omega_1^3\omega_3^3v_3^2 + 3\omega_1^3\omega_3^3v_3^2 + 3\omega_4\omega_1^3\omega_3^2v_1^2 - 36\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 - 3\omega_4\omega_1^3\omega_2v_2^2\omega_3 - 2\omega_4\omega_1^2\omega_2^3\omega_3 - 2\omega_4\omega_1^3\omega_2v_1^2\omega_3 +$
$18\omega_1^2\omega_2^3cs^2\omega_3 + 4\omega_4\omega_3^3v_1^2\omega_3 - 4\omega_4\omega_1\omega_2^2v_2^2\omega_3 - 6\omega_1^3\omega_3^2\omega_3 + 3\omega_4\omega_1\omega_3^3v_2^2 - 3\omega_4\omega_1^3v_1^2\omega_3 - 3\omega_1^3\omega_3^3v_1^2\omega_3 - 4\omega_4\omega_1^2\omega_2v_1^2\omega_3 + 6\omega_4\omega_1\omega_2\omega_3^2 -$
$18\omega_4\omega_1^3\omega_2cs^2\omega_3 + 36\omega_4\omega_1\omega_2^3\omega_3v_3^2 - 12\omega_4\omega_1^3\omega_3^2 + 6\omega_4\omega_1^2\omega_3cs^2 - 18\omega_4\omega_1^2\omega_3^2cs^2 + 20\omega_4\omega_1^3cs^2\omega_3 + 3\omega_1^2\omega_3^3v_1^2\omega_3 - 12\omega_4\omega_1^3\omega_2cs^2\omega_3 +$
$4\omega_4\omega_1\omega_2\omega_3 - 36\omega_4^2\omega_1^2\omega_2cs^2\omega_3 - 3\omega_4\omega_1^3\omega_2v_1^2\omega_3 - 18\omega_1^2\omega_3^3cs^2\omega_3 - 18\omega_4\omega_1^2\omega_3^2cs^2\omega_3 + 6\omega_1^3\omega_2^2\omega_3 + 4\omega_4\omega_3^3v_2^2\omega_3 - 2\omega_4\omega_1^3\omega_2v_2^2\omega_3 -$
$4\omega_4\omega_1\omega_2^2v_1^2\omega_3 - 12\omega_4\omega_1^2\omega_2^3\omega_3 - 3\omega_4\omega_1^3\omega_3^2v_2^2\omega_3 - 4\omega_4\omega_1^2\omega_2v_2^2\omega_3 - 3\omega_1^2\omega_3^3v_2^2\omega_3 + 6\omega_1\omega_3^3\omega_3^2$

$C_{50} = -58\omega_4^2\omega_1\omega_3^3cs^2\omega_3^2 + 8\omega_4^3\omega_1^3\omega_2^2cs^2\omega_3^2v_3^2 - 24\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3^2 - 108\omega_1^2\omega_3^3cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2v_2^4\omega_3^2 + 108\omega_4\omega_1^2\omega_3^3cs^4\omega_3^2 - 18\omega_4^2\omega_1^3\omega_3^3cs^2 -$
$9\omega_4\omega_1^3\omega_2^3cs^2\omega_3^2v_3^2 + 4\omega_4^3\omega_1^3\omega_3 + 18\omega_1^3\omega_3^3cs^2\omega_3^2v_3^2 - 12\omega_4^2\omega_1^2\omega_2v_2^2\omega_3^2v_3^2 - 27\omega_4^2\omega_1^3\omega_2^3v_2^4\omega_3^2 - 72\omega_4\omega_1\omega_2^2cs^4\omega_3^2 - 4\omega_4^2\omega_3^3\omega_3v_3^2 - 12\omega_4^2\omega_1^3\omega_2^2cs^2v_3^2 +$
$16\omega_4^2\omega_1^3cs^2\omega_3^2v_3^2 - 27\omega_4^2\omega_1^3\omega_2^3cs^4\omega_3 - 4\omega_4^3\omega_1^3\omega_2\omega_3^2 - 42\omega_4^2\omega_1\omega_3^3v_2^2\omega_3^2 - 102\omega_4^2\omega_1^3\omega_2cs^4\omega_3^2 - 16\omega_4^2\omega_1^2cs^2\omega_3^2 + 16\omega_4^2\omega_1^3cs^2\omega_3^2v_3^2 +$
$32\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3v_3^2 - 119\omega_4^2\omega_1^3\omega_3cs^4\omega_3^2 + 36\omega_4\omega_1\omega_2v_2^4\omega_3^2 - 25\omega_4^2\omega_3^3cs^2\omega_3^2 - 4\omega_4^2\omega_1\omega_2cs^2\omega_3v_3^2 + 4\omega_4\omega_1\omega_3^3\omega_3v_3^2 + 108\omega_4^2\omega_3^3cs^4\omega_3 +$
$4\omega_4^2\omega_3^3\omega_3^2 - 216\omega_4^2\omega_3^3cs^2v_2^2\omega_3^2 + 12\omega_4^2\omega_1^2\omega_2cs^2 + 20\omega_4^2\omega_3^3cs^2\omega_3^2 + 24\omega_4^2\omega_1^3v_2^4\omega_3^2 + 36\omega_4^2\omega_1^2\omega_2^3cs^2\omega_3v_3^2 + 15\omega_4^2\omega_1^3\omega_3cs^4\omega_3^2 + 216\omega_4^2\omega_1^3cs^2v_2^2\omega_3^2 -$
$32\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3 - 12\omega_4^2\omega_1^3\omega_2cs^4\omega_3 + 24\omega_4^2\omega_1^3v_2^2\omega_3^2v_3^2 - 27\omega_4\omega_1^3\omega_3^2cs^4\omega_3^2 - 28\omega_4^2\omega_1\omega_3^3cs^2\omega_3v_3^2 - 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2v_3^2 + 138\omega_4^2\omega_1^3\omega_2^2cs^2v_2^2\omega_3^2 +$
$3\omega_4^2\omega_1^3\omega_2^3cs^2\omega_3^2v_3^2 - 27\omega_4^2\omega_1^3\omega_2^2v_2^2\omega_3^2 + 54\omega_1^3\omega_3^2cs^4\omega_3^2 - 72\omega_4^2\omega_1^2\omega_3^2cs^4 + 28\omega_4^2\omega_1\omega_3^3cs^2\omega_3 + 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 + 36\omega_4^2\omega_3^3v_2^2\omega_3^2v_3^2 + 72\omega_4^2\omega_1^3cs^4\omega_3^2 -$
$4\omega_4^2\omega_1^3\omega_2cs^2\omega_3v_3^2 + 24\omega_4^2\omega_3^3v_2^3\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2cs^4 + 4\omega_4^2\omega_1\omega_3cs^2\omega_3^2v_3^2 + 9\omega_4^2\omega_1^3\omega_3cs^2\omega_3 + 60\omega_4^2\omega_1^2\omega_2^2v_2^2\omega_3^2v_3^2 + 72\omega_4^2\omega_1\omega_3^3v_2^4\omega_3^2 +$
$24\omega_4^2\omega_1^3\omega_2cs^4\omega_3 - 9\omega_4^2\omega_1^3\omega_2cs^2\omega_3v_3^2 + 74\omega_4^2\omega_1^3\omega_2cs^2\omega_3^2 - 4\omega_4^2\omega_1^2\omega_2\omega_3^2 + 18\omega_4^2\omega_1^3\omega_2cs^2v_3^2 + 49\omega_4^2\omega_1^3\omega_3cs^2\omega_3^2 - 20\omega_4^2\omega_1^3\omega_2cs^2\omega_3v_3^2 +$
$12\omega_4^2\omega_1\omega_3^3v_2^2\omega_3^2 - 4\omega_4^2\omega_1^3\omega_3v_3^2 + 78\omega_4^2\omega_1\omega_3^3cs^4\omega_3^2 + 66\omega_4^2\omega_1^3\omega_2v_2^2\omega_3^2 + 36\omega_1^2\omega_2^3cs^2\omega_3^2 + 4\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 - 36\omega_4^2\omega_1^2\omega_2^2v_2^4\omega_3^2 - 36\omega_4\omega_1^2\omega_3^3cs^2\omega_3^2 -$
$32\omega_4^2\omega_1^3\omega_2cs^2\omega_3^2v_3^2 + 27\omega_4^2\omega_1^3\omega_2v_3^2 + 28\omega_4^2\omega_1\omega_2cs^2\omega_3^2 - 4\omega_4^2\omega_1\omega_2^2v_2^2\omega_3^2 - 48\omega_4^2\omega_1\omega_3^3v_2^2\omega_3^2v_3^2 + 24\omega_4^2\omega_1^3v_2^2\omega_3^2 + 9\omega_4\omega_1^3\omega_3^2cs^2\omega_3^2 +$
$4\omega_4^2\omega_1^3\omega_2cs^2\omega_3 - 18\omega_4^2\omega_1^3\omega_2cs^2 + 12\omega_4^2\omega_1\omega_2v_2^2\omega_3^2 + 27\omega_4^2\omega_3^3v_2^4\omega_3^2 - 30\omega_4^2\omega_1^3\omega_2v_2^2\omega_3^2v_3^2 - 36\omega_4^2\omega_1^2cs^2\omega_3^2v_3^2 - 84\omega_4^2\omega_1\omega_3^3cs^4\omega_3^2 +$
$36\omega_4^2\omega_1^3\omega_3cs^2\omega_3^2v_3^2 - 30\omega_4^2\omega_1\omega_3^3v_2^2\omega_3^2v_3^2 - 60\omega_4^2\omega_1^3v_2^4\omega_3^2 - 52\omega_4^2\omega_1^3cs^2\omega_3^2 + 54\omega_4^2\omega_1^3\omega_3cs^4 - 138\omega_4^2\omega_1^3\omega_2cs^2v_2^2\omega_3^2 + 16\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2v_3^2 +$
$35\omega_4^2\omega_1^3\omega_2cs^4\omega_3^2 + 4\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2 - 4\omega_4^2\omega_1\omega_2^3\omega_3^2 - 36\omega_4^2\omega_1^3cs^2\omega_3 - 28\omega_4\omega_1\omega_2cs^2\omega_3^2v_3^2 + 324\omega_4^2\omega_1\omega_2cs^2v_2^2\omega_3^2 + 4\omega_4^2\omega_1\omega_2^2\omega_3^2v_3^2 -$
$324\omega_4^2\omega_1^3\omega_2cs^2v_2^2\omega_3^2 - 48\omega_4^2\omega_1^3v_2^2\omega_3^2 - 3\omega_4^2\omega_1^3\omega_3^2cs^2\omega_3 - 24\omega_4^2\omega_1^3cs^2v_3^2 + 4\omega_4^2\omega_1^3\omega_2cs^2\omega_3 + 96\omega_4^2\omega_1^2\omega_2^2cs^4\omega_3$

$C_{51} = 12\omega_1^2\omega_2^2v_3^2 + 42\omega_1^3\omega_2^2cs^2\omega_3 + 6\omega_1\omega_2^3 - 9\omega_1^3\omega_2\omega_3v_3^2 - 114\omega_2^3v_2^2\omega_3 + 12\omega_1^2\omega_2^3\omega_3 + 50\omega_1^3\omega_2^2v_2^2\omega_3 - 12\omega_1\omega_2^3\omega_3v_3^2 + 42\omega_2^3\omega_3 - 66\omega_2^3cs^2\omega_3 +$
$23\omega_1^3\omega_2^3\omega_3 + 48\omega_1\omega_2^3\omega_3 - 66\omega_1^2\omega_2^3v_2^2\omega_3 + 108\omega_1\omega_2^3cs^2\omega_3 - 6\omega_1^3\omega_2v_3^2 + 12\omega_1^3\omega_3v_3^2 + 141\omega_1\omega_2^3v_2^2\omega_3 - 18\omega_1\omega_2^3cs^2 - 36\omega_1^3\omega_3 - 12\omega_1^2\omega_2\omega_3v_3^2 +$
$6\omega_1^2\omega_2^2v_2^2\omega_3 - 60\omega_1\omega_2^3\omega_3 + 48\omega_1^3v_2^2\omega_3 - 9\omega_1\omega_2\omega_3v_3^2 - 6\omega_1\omega_3^3v_3^2 - 18\omega_1^3\omega_2cs^2 - 18\omega_1^2\omega_2cs^2\omega_3 - 23\omega_1^3\omega_2\omega_3 + 18\omega_1^2\omega_2\omega_3v_3^2 + 84\omega_1^3cs^2\omega_3 -$
$108\omega_1^3\omega_2cs^2\omega_3 - 12\omega_1^2\omega_2^2 + 60\omega_1\omega_2^2v_2^2\omega_3 - 12\omega_1\omega_2^2\omega_3 - 42\omega_1^2\omega_2^3cs^2\omega_3 - 75\omega_1^3\omega_2v_2^2\omega_3 + 6\omega_1^3\omega_2 + 12\omega_2^3\omega_3v_3^2 + 36\omega_1^2\omega_2^3cs^2 - 50\omega_1^3\omega_2^3v_2^2\omega_3 + 6\omega_1^2\omega_2\omega_3$

$C_{52} = 60\omega_4\omega_1\omega_2^3cs^2\omega_3v_3^2 + 36\omega_4\omega_1^3\omega_2^2cs^2\omega_3 - 12\omega_4\omega_1^3\omega_3^2v_3^2 + 12\omega_4\omega_1^3cs^2\omega_3^2v_3^2 - 72\omega_1^2\omega_2^3cs^4\omega_3^2 - 14\omega_4\omega_1^2\omega_3^3cs^4\omega_3^2 - 4\omega_4\omega_1^2\omega_2\omega_3^2 -$
$12\omega_4\omega_1\omega_2^2v_2^4\omega_3^2 + 30\omega_4\omega_1^3\omega_2^2cs^2v_2^2\omega_3^2 + 54\omega_1^3\omega_2^2cs^2v_2^2\omega_3^2 + 54\omega_1^3\omega_2^3cs^2\omega_3v_3^2 - 96\omega_4\omega_2^3cs^2\omega_3^2v_3^2 + 18\omega_4\omega_1^3\omega_3cs^4\omega_3 - 18\omega_1\omega_2^3v_2^2\omega_3^2 - 24\omega_4\omega_1\omega_2^3v_2^2\omega_3^2 -$
$36\omega_4\omega_1^2\omega_2^3cs^2\omega_3 - 14\omega_4\omega_1^3\omega_2cs^4\omega_3 + 24\omega_4\omega_1^3\omega_2cs^2\omega_3v_3^2 - 4\omega_4\omega_1\omega_2^3\omega_3^2 - 48\omega_4\omega_1^2\omega_2cs^2\omega_3^2v_3^2 - 9\omega_4\omega_1^3v_2^4\omega_3^2 - 28\omega_4\omega_1\omega_2^3cs^4\omega_3^2 +$
$18\omega_1^3\omega_2^2v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2^2v_2^2\omega_3 - 18\omega_1^2\omega_3^3v_2^4\omega_3^2 - 126\omega_4\omega_1^2\omega_2^3cs^2\omega_3v_3^2 - 18\omega_4\omega_1\omega_2^3cs^2\omega_3 - 36\omega_4\omega_1^3\omega_2v_2^4\omega_3^2 - \omega_4\omega_1^2\omega_2^3\omega_3v_3^2 - 42\omega_4\omega_1^2\omega_2^2v_2^2\omega_3^2 +$
$18\omega_1^2\omega_2^3v_2^2\omega_3 - \omega_4\omega_3^3\omega_2^3\omega_3v_3^2 - 72\omega_1\omega_2^3cs^2\omega_3^2 - 8\omega_4\omega_1\omega_3^3cs^2\omega_3 - 48\omega_4\omega_2^3v_2^2\omega_3 - 20\omega_4\omega_1^3cs^2\omega_3 - 6\omega_4\omega_1^2\omega_2^2v_2^2\omega_3 + 108\omega_4\omega_2^3v_2^2\omega_3^2 -$
$12\omega_4\omega_1^3\omega_2v_2^2\omega_3 - 12\omega_4\omega_1^2\omega_2cs^2v_2^2\omega_3 - 36\omega_4\omega_1^3\omega_2v_2^2\omega_3 + 72\omega_4\omega_1^3v_2^2\omega_3^2v_3^2 - 18\omega_1^3\omega_2^2v_2^2\omega_3 + 12\omega_4\omega_1^2\omega_2v_2^2\omega_3 - 9\omega_4\omega_1^3\omega_2^2v_2^2\omega_3 - 24\omega_4\omega_1^2\omega_2^3\omega_3v_3^2 +$

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$$132\omega_4\omega_1^2\omega_2^2cs^2\omega_3v_3^2 + 18\omega_4\omega_1^3\omega_2^2v_2^2 + 18\omega_4\omega_1^2\omega_2^3v_2^4\omega_3 + 6\omega_4\omega_1^3\omega_2^2cs^2\omega_3^2v_3^2 + 18\omega_4\omega_1^2\omega_2^3v_2^4 - 54\omega_4^3\omega_2^2cs^2v_2^2\omega_3 - 3\omega_4\omega_1^3\omega_2^3cs^4\omega_3^2 - 48\omega_4\omega_1^3v_2^2\omega_3^2 +$$
$$132\omega_4\omega_1^3cs^2v_2^2\omega_3^2 - 68\omega_4\omega_1^3\omega_2^3cs^4\omega_3^2 - 6\omega_4\omega_1^3\omega_2^3cs^4\omega_3^2 - 6\omega_4\omega_1\omega_2^3\omega_2^2\omega_3 + 18\omega_1^3\omega_2^3cs^4\omega_3^2 + 8\omega_4\omega_1^3\omega_2^2cs^4\omega_3 - 56\omega_4\omega_1^2\omega_2^2cs^2\omega_3 - 2\omega_4\omega_1^3\omega_2^2cs^2\omega_3 - 28\omega_4\omega_1^2\omega_2cs^4\omega_3^2 -$$
$$36\omega_4\omega_1^2\omega_2v_2^2\omega_3^2v_3^2 + 12\omega_4\omega_1\omega_2^3\omega_3^2v_3^2 - 54\omega_4\omega_1^3\omega_2^2cs^2v_2^2 - 36\omega_4\omega_1^2\omega_2cs^4\omega_3 - 4\omega_4\omega_1\omega_2^3\omega_3^2 - 108\omega_4\omega_2^3cs^2v_2^2\omega_3^2 + 90\omega_4\omega_1^4\omega_2^2cs^2v_2^2\omega_3 +$$
$$9\omega_4\omega_1^2\omega_2^3v_2^2\omega_3^2 - 18\omega_1^3\omega_2^2v_2^4\omega_3 + 32\omega_4\omega_1\omega_2^2cs^2\omega_3^2 + 4\omega_4\omega_1\omega_2^3\omega_3^2 - 90\omega_4\omega_1^3\omega_2^2cs^2\omega_3v_3^2 + 150\omega_4\omega_1\omega_2^3cs^2v_2^2\omega_3 - 84\omega_4\omega_1\omega_2^2cs^2\omega_3^2v_3^2 +$$
$$36\omega_4\omega_1^3\omega_2^2v_2^4\omega_3 - 18\omega_4\omega_1^3\omega_2^2v_2^4 - 12\omega_4\omega_2^3\omega_3^2v_3^2 + 18\omega_1^2\omega_2^3v_2^2\omega_3^2 + 76\omega_4\omega_1\omega_2^3cs^4\omega_3^2 - 174\omega_4^3\omega_2cs^2v_2^2\omega_3^2 + 54\omega_1^3cs^2v_2^2\omega_3^2 - 18\omega_4\omega_1^2\omega_2^2v_2^4\omega_3^2 +$$
$$12\omega_4\omega_1^3\omega_2\omega_3^2v_3^2 + 66\omega_4\omega_1^3\omega_2v_2^2\omega_3^2 - 18\omega_4\omega_1^2\omega_2^2v_2^4\omega_3^2 + 72\omega_1\omega_2^3cs^4\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2cs^4\omega_3 + 72\omega_1^2\omega_2^3cs^2\omega_3^2 + 54\omega_4\omega_1^2\omega_2^3cs^2v_2^2\omega_3 - 54\omega_1^3\omega_2^3cs^2v_2^2\omega_3 +$$
$$2\omega_4\omega_1^2\omega_2^3cs^2\omega_3^2 + 54\omega_4\omega_1^2\omega_2^3cs^2v_2^2 + 36\omega_4\omega_1\omega_2^2v_2^2\omega_3 - 90\omega_4\omega_1^3\omega_2v_2^2\omega_3^2v_3^2 - 18\omega_4\omega_1^2\omega_2^3v_2^2 - 90\omega_4\omega_1\omega_2^3v_2^2\omega_3^2v_3^2 + 18\omega_1\omega_2^3v_2^4\omega_3^2 - 18\omega_4\omega_1^3\omega_2^3cs^2\omega_3 +$$
$$54\omega_4\omega_1\omega_2^3v_2^4\omega_3 + 66\omega_4\omega_1^2\omega_2cs^2\omega_3^2v_3^2 - 30\omega_4\omega_1^2\omega_2^3cs^2v_2^2\omega_3^2 - 4\omega_4\omega_1^3\omega_2\omega_3^2 + 18\omega_4\omega_1^3\omega_2cs^2\omega_3^2 + 28\omega_4\omega_1^2\omega_2^2cs^4\omega_3^2 + 12\omega_4\omega_1\omega_2^2\omega_3^2v_3^2 + 4\omega_4\omega_1^3\omega_2^3 +$$
$$28\omega_4\omega_2^3cs^2\omega_3^2 - 90\omega_4\omega_1^2\omega_2^3cs^2v_2^2\omega_3 - 18\omega_1^3\omega_2^2cs^2\omega_3^2 + 6\omega_4\omega_1\omega_2^3v_2^4\omega_3^2 + 24\omega_4\omega_1^3v_2^4\omega_3^2 - 216\omega_1^2\omega_2^3cs^2\omega_3^2v_3^2 - 54\omega_1^2\omega_2^2cs^2v_2^2\omega_3^2 + 56\omega_4\omega_1^2\omega_2^2cs^4\omega_3^2 -$$
$$8\omega_4\omega_1^3\omega_2cs^2\omega_3^2 + 32\omega_4\omega_1^2v_2^2cs^2\omega_3^2 + 2\omega_4\omega_1^3\omega_2^2cs^4\omega_3^2 + 54\omega_1^2\omega_2^3cs^2v_2^2\omega_3 - 6\omega_4\omega_1^2\omega_2^3cs^2\omega_3^2v_3^2 + 36\omega_4\omega_1^3\omega_2^2cs^2\omega_3 -$$
$$144\omega_4\omega_1\omega_2^2v_2^2\omega_3^2v_3^2 + 16\omega_4\omega_1^3cs^4\omega_3^2 + 8\omega_4\omega_1\omega_2^3cs^4\omega_3^2 + 12\omega_4\omega_1\omega_2^3v_2^2\omega_3^2 + 48\omega_4\omega_1\omega_2^3cs^2\omega_3^2v_3^2 - 12\omega_4\omega_1\omega_2^2cs^2v_2^2\omega_3^2 + 12\omega_4\omega_1^3\omega_2v_2^2\omega_3^2 +$$
$$\omega_4\omega_1^3\omega_2^2\omega_3^2v_3^4 + 6\omega_4\omega_1^2\omega_2^2v_2^4\omega_3 - 36\omega_4\omega_1^3\omega_2cs^2v_2^2\omega_3 + 54\omega_4\omega_1^3\omega_2^2cs^2\omega_3v_3^2 + \omega_4\omega_1^2\omega_2^3\omega_3^2v_3^2 + 8\omega_4\omega_1^2\omega_2^3\omega_3^2 + 180\omega_4\omega_1^2\omega_2^2v_2^2\omega_3^2v_3^2 +$$
$$36\omega_4\omega_1^2\omega_2^3v_2^2\omega_3 + 18\omega_1^3\omega_2^2v_2^4\omega_3^2 + 9\omega_4\omega_1^3\omega_2v_2^4\omega_3^2 - 6\omega_4\omega_1^3\omega_2cs^2\omega_3^2v_3^2 + 216\omega_1\omega_2^3cs^2\omega_3^2v_3^2 - 18\omega_4\omega_1\omega_2^3cs^2v_2^2\omega_3 + 12\omega_4\omega_1^3\omega_2\omega_2\omega_3^2v_3^2 - 18\omega_1^2\omega_2^3v_2^2\omega_3^2$$

$$C_{53} = 4\omega_1^3\omega_3^2 - 6\omega_1^2\omega_3^2cs^4\omega_3^2 + 24\omega_2^3\omega_3^2v_3^2 + 216\omega_1^3cs^2\omega_3^2v_3^2 - 18\omega_1^3\omega_2^2cs^2\omega_3 - 84\omega_1^3\omega_2cs^4\omega_3^2 - 34\omega_1^2\omega_2cs^2\omega_3^2 - 24\omega_1^2\omega_3^2v_1^2\omega_3^2v_3^2 - \omega_1^3\omega_2^2v_1^2\omega_3^2 -$$
$$4\omega_1^2\omega_2cs^2v_1^2\omega_3^2 - 72\omega_1\omega_2^2\omega_3^2v_3^2 + 96\omega_1\omega_2^2v_1^2\omega_3^2v_3^2 + 16\omega_1^3cs^2v_1^2\omega_3^2 + 8\omega_2^3v_1^2\omega_3^2 + 18\omega_1^3\omega_2cs^2v_1^2\omega_3 - 36\omega_1^3\omega_2\omega_3^2v_3^4 - \omega_1^3\omega_2^2\omega_3^2 - 20\omega_2^3cs^2v_1^2\omega_3^2 -$$
$$24\omega_1^3\omega_2^2\omega_3^2 - 4\omega_1^3\omega_2\omega_3^2 - 48\omega_1^3\omega_2v_1^2\omega_3^2v_3^2 - 22\omega_1\omega_2^3cs^2\omega_3^2 - 8\omega_2^3\omega_3^2 + 24\omega_1\omega_2v_1^2\omega_3^2v_3^2 - 8\omega_1\omega_2^2cs^2\omega_3 + 12\omega_1^3\omega_2cs^2 + 20\omega_2^3cs^2\omega_3^2 -$$
$$8\omega_1\omega_2^3v_1^2\omega_3^2 + 24\omega_2^3\omega_3^2v_3^4 - 24\omega_1^2\omega_2^2\omega_3^2v_3^2 + 2\omega_1^3\omega_2cs^2v_1^2\omega_3 - 12\omega_2^3cs^2v_1^2 + 4\omega_1^2\omega_2^2\omega_3^2v_3^2 - 12\omega_1^3\omega_2cs^2\omega_3 + 72\omega_3^3cs^4\omega_3^2 - 4\omega_1^2\omega_2^2\omega_3^2 +$$
$$36\omega_2^3\omega_3^2cs^4 - 54\omega_1^2\omega_3^2cs^4\omega_3 - 60\omega_1\omega_2^3\omega_3^2v_3^2 - 36\omega_1^2\omega_2cs^4\omega_3^2 + 72\omega_3^3\omega_2^2cs^2\omega_3^2v_3^2 - 48\omega_1^2\omega_2^2v_1^2\omega_3^2v_3^2 + 4\omega_1^3\omega_2v_1^2\omega_3^2 - 5\omega_1^3\omega_2^2cs^2\omega_3 + 12\omega_1^2\omega_3^2cs^2v_1^2 -$$
$$48\omega_1^3\omega_2^2v_3^2 + 72\omega_1^2\omega_2^2\omega_3^2v_3^4 - 8\omega_1\omega_2^2cs^2\omega_3^2 - 2\omega_1^2\omega_2^2cs^2v_1^2\omega_3^2 - 4\omega_1^3\omega_2\omega_3^2 - 18\omega_2^3\omega_3^2cs^2v_1^2\omega_3 - 216\omega_1\omega_2^3cs^2\omega_3^2v_3^2 - 24\omega_1^2\omega_2\omega_3^2\omega_3^2 - 36\omega_3^3\omega_2cs^4 +$$
$$42\omega_1\omega_2^3cs^4\omega_3^2 + 8\omega_1\omega_2^3cs^2v_1^2\omega_3 - 12\omega_1^3\omega_2^3cs^2 + 5\omega_1^2\omega_3^2cs^2\omega_3^2 + 24\omega_1^3v_1^2\omega_3^2v_3^2 + 216\omega_1^2\omega_2^2cs^2\omega_3^2v_3^2 + 8\omega_1\omega_2^3\omega_3^2 - 4\omega_1^3v_1^2\omega_3^2 - 36\omega_1\omega_2^3\omega_3^2v_3^4 +$$
$$54\omega_1^3\omega_2^2cs^4\omega_3 + 42\omega_1^2\omega_2^2cs^4\omega_3^2 + 4\omega_1^3\omega_2v_1^2\omega_3^2 + 56\omega_1^3\omega_2cs^2\omega_3^2 - 4\omega_1^3\omega_2cs^2v_1^2\omega_3 + 8\omega_1\omega_2^3cs^2v_1^2\omega_3^2 + 4\omega_1^3\omega_2cs^2\omega_3 - 12\omega_1^2\omega_2^2cs^4\omega_3 -$$
$$52\omega_1^3cs^2\omega_3^2 - 72\omega_2^3v_1^2\omega_3^2v_3^2 + \omega_1^2\omega_3^2v_1^2\omega_3^2 - 72\omega_1^2\omega_3^3cs^2\omega_3^2v_3^2 + 48\omega_1\omega_2^2\omega_3^2v_3^2 - 20\omega_1^3\omega_2cs^2v_1^2\omega_3^2 + 22\omega_1\omega_2^3cs^2v_1^2\omega_3^2 + 24\omega_1^3v_1^2\omega_3^2v_3^2 +$$
$$18\omega_1^2\omega_2^2cs^2\omega_3 + 48\omega_2^3\omega_3^2v_3^4 + 6\omega_1^3\omega_2^2cs^4\omega_3^2 + \omega_1^3\omega_2^2\omega_3^2 + 40\omega_1^2\omega_2cs^2\omega_3^2 + 4\omega_1^3\omega_2v_1^2\omega_3^2 - 2\omega_2^3\omega_3^2cs^2v_1^2\omega_3^2 + 24\omega_1^2\omega_3^3\omega_3^2\omega_3^2 - 324\omega_1^3\omega_2cs^2\omega_3^2v_3^2 +$$
$$24\omega_1^2\omega_2v_1^2\omega_3^2v_3^2 - 8\omega_1\omega_2^3v_1^2\omega_3^2 + 24\omega_1\omega_2^3cs^4\omega_3^2 - 36\omega_2^3cs^4\omega_3^2 + 84\omega_1\omega_2\omega_3^2v_3^2 + 108\omega_1\omega_2^3cs^2\omega_3^2v_3^2 + 8\omega_1\omega_2^3\omega_3^2 - 4\omega_1^2\omega_2^2cs^2v_1^2\omega_3$$

$$C_{54} = -36\omega_4\omega_1^3\omega_2^2\omega_3v_3^4 + 48\omega_4\omega_1\omega_2^3cs^2\omega_3^2 + 168\omega_4^3\omega_1^3\omega_2^2cs^2\omega_3^2v_3^2 - 86\omega_4\omega_1^3\omega_2^2\omega_3^2v_3^2 - 288\omega_4\omega_1^2\omega_2^2v_1^2\omega_3^2v_3^2 - 72\omega_4\omega_1^2\omega_2^3cs^4\omega_3^2 +$$
$$180\omega_4\omega_1^2\omega_2^3\omega_3\omega_3v_3^2 + 24\omega_4^2\omega_3^2cs^2v_1^2\omega_3^2 - 297\omega_4\omega_1^3\omega_2^2cs^2\omega_3^2v_3^2 + 8\omega_4^3\omega_1^4\omega_3^2 + 40\omega_4^2\omega_1^2\omega_2^3\omega_3v_3^4 + 162\omega_1^3\omega_2^3cs^2\omega_3^2v_3^2 + 16\omega_4^2\omega_1\omega_2^2cs^4\omega_3^2 -$$
$$48\omega_4^2\omega_2^3\omega_3^2v_3^2 - 108\omega_4^2\omega_1^3\omega_2\omega_3v_3^4 + 24\omega_4\omega_1^3cs^2v_1^2\omega_3^2 + 96\omega_4^2\omega_1\omega_2^3\omega_3v_3^2 - 108\omega_4\omega_1^3\omega_2^2cs^2v_3^2 + 432\omega_4^2\omega_3^3cs^2\omega_3^2v_3^2 + 18\omega_4\omega_1^3\omega_3^2cs^4\omega_3 -$$
$$8\omega_4\omega_1^3\omega_2\omega_3^2 + 54\omega_4\omega_1^3\omega_2v_3^2 - 28\omega_4^3\omega_3\omega_2cs^4\omega_3^2 - 2\omega_2^2\omega_1^3\omega_3^2 - 12\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3^2 + 24\omega_4^3\omega_1\omega_2\omega_3v_3^2 - 12\omega_4\omega_1^3\omega_2^2cs^2v_1^2\omega_3^2 - 6\omega_2^2\omega_1^3v_2^2v_1^2\omega_3^2 -$$
$$540\omega_4\omega_1^2\omega_2^2cs^2\omega_3v_3^2 + 36\omega_4^2\omega_1^3\omega_2^2cs^2\omega_3 + 108\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 - 72\omega_4\omega_1\omega_2^3cs^2\omega_3^2 - 108\omega_1^2\omega_2^3\omega_3v_3^4 + 144\omega_4^2\omega_1\omega_2^2v_1^2\omega_3^2v_3^2 + 264\omega_4\omega_1^3cs^2\omega_3^2v_3^2 -$$
$$36\omega_4\omega_1^3\omega_2^2v_3^2\omega_3 - 216\omega_4^2\omega_1^2\omega_2^2\omega_3v_3^2 - 108\omega_4\omega_1^2\omega_2^2cs^2\omega_3v_3^2 + 86\omega_4^2\omega_1^3\omega_2cs^4\omega_3^2 + 288\omega_4\omega_1^3\omega_2^2\omega_3v_3^4 + 48\omega_4^2\omega_3^3v_1^2\omega_3^2 - 56\omega_4^2\omega_1^3\omega_2cs^4\omega_3^2 +$$
$$24\omega_4\omega_1^2\omega_3^3v_1^2\omega_3^2 - 288\omega_4^2\omega_1^3\omega_2v_1^2\omega_3^2v_3^2 + 264\omega_4\omega_1^3cs^2\omega_3^2v_3^2 + 96\omega_4\omega_1^2\omega_2^2cs^4\omega_3^2 - 36\omega_4^2\omega_1^2\omega_2cs^4\omega_3^2 - 16\omega_4^2\omega_1^3\omega_2v_3^4 + 72\omega_4^2\omega_1^2\omega_2^2v_3^2 + 48\omega_4^2\omega_1^3\omega_3v_3^4 -$$
$$117\omega_4\omega_1^3\omega_2^2\omega_3^2v_3^4 + 8\omega_4^2\omega_3^3cs^2\omega_3^2 + 117\omega_4^2\omega_1^3\omega_2^3\omega_3v_3^2 + 468\omega_4^2\omega_1^3cs^2\omega_3v_3^2 - 6\omega_4\omega_1^3\omega_3cs^4\omega_3^2 + 576\omega_1\omega_2^3v_1^2\omega_3^2v_3^2 + 36\omega_4\omega_1\omega_2^2cs^2\omega_3^2 -$$
$$72\omega_4^2\omega_1^3\omega_2cs^2v_1^2\omega_3 - 40\omega_4^2\omega_1^2\omega_2^2cs^2\omega_3 + 54\omega_1^3\omega_2^2\omega_3v_3^4 + 16\omega_4^2\omega_1\omega_2cs^4\omega_3^2 - 60\omega_4^2\omega_1^2\omega_2\omega_3v_3^4 + 108\omega_4\omega_1^3\omega_2cs^2\omega_3^2v_3^2 + 24\omega_4^2\omega_1^3\omega_2^3\omega_3v_3^4 +$$
$$18\omega_4\omega_1^3\omega_2^3cs^4\omega_3^2 - 108\omega_4\omega_1^3\omega_2^3\omega_3v_3^2 + 72\omega_4^2\omega_1\omega_2^3cs^2\omega_3v_3^2 + 240\omega_4^2\omega_1^2\omega_2^2\omega_3v_3^2 + 72\omega_4^2\omega_1^3\omega_2^2cs^2\omega_3^2v_3^2 - 144\omega_4^2\omega_1^2\omega_3^2v_1^2\omega_3^2v_3^2 - 96\omega_4^2\omega_1\omega_2cs^2v_1^2\omega_3^2 -$$
$$48\omega_4^2\omega_1\omega_2^3v_1^2\omega_3^2 - 24\omega_4^2\omega_1\omega_2^3\omega_3v_3^2 - 36\omega_4^2\omega_1^3\omega_2^2v_3^2 - 16\omega_4^2\omega_1\omega_2^3cs^2\omega_3 + 72\omega_4\omega_1\omega_2^3\omega_2^2\omega_3^2 - 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 + 96\omega_4^2\omega_1^2\omega_2\omega_2v_3^4 + 32\omega_4^2\omega_3^3cs^4\omega_3^2 -$$
$$72\omega_4^2\omega_1^3\omega_2cs^2\omega_3v_3^2 + 117\omega_4\omega_1^3\omega_2^2\omega_3^2v_3^2 - 852\omega_4^2\omega_1\omega_2^3cs^2\omega_3^2v_3^2 - 117\omega_4^2\omega_1^3\omega_2^3\omega_3v_3^4 - 18\omega_4\omega_1^3\omega_2^2cs^2\omega_3 - 108\omega_4\omega_1^2\omega_2^2cs^2\omega_3v_3^2 + 48\omega_4^2\omega_1^2\omega_2^2cs^2v_1^2\omega_3 -$$
$$36\omega_4\omega_1^2\omega_2^2\omega_3v_3^4 + 20\omega_4^2\omega_1^2\omega_2cs^4\omega_3^2 + 60\omega_4^2\omega_1^2\omega_2\omega_3v_3^2 + 24\omega_4\omega_1^2\omega_2v_1^2\omega_3^2 - 297\omega_4^2\omega_1^3\omega_2cs^2\omega_3v_3^2 + 36\omega_4\omega_1^3\omega_2cs^2\omega_3^2 - 54\omega_1^3\omega_2^3\omega_3^2v_3^2 +$$
$$72\omega_4\omega_1\omega_2^3cs^4\omega_3^2 - 36\omega_4\omega_1^3\omega_2^2cs^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_3^2 - 288\omega_4^2\omega_1\omega_2^3\omega_3v_3^4 + 162\omega_4^3\omega_3^3cs^2v_3^2 - 36\omega_4^2\omega_1^3cs^2\omega_3^2 + 12\omega_4^2\omega_1^2\omega_3^3cs^2v_1^2\omega_3^2 -$$
$$492\omega_4^2\omega_1^3\omega_2cs^2\omega_3^2v_3^2 - 96\omega_4\omega_1^3\omega_3v_3^4 - 72\omega_4^2\omega_1^3\omega_3v_3^4 + 144\omega_4^2\omega_1^2\omega_2v_1^2\omega_3^2v_3^2 + 36\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 + 24\omega_4^2\omega_1\omega_3^3\omega_3\omega_3v_3^2 - 172\omega_4^2\omega_1\omega_3^2cs^4\omega_3^2 -$$
$$72\omega_4\omega_1\omega_2^3\omega_3v_3^4 - 144\omega_4^2\omega_1^2\omega_2\omega_3v_3^2 + 72\omega_4\omega_1\omega_2^3cs^2\omega_3^2 - 12\omega_4^2\omega_1\omega_3^3cs^2v_1^2\omega_3^2 - 24\omega_4^2\omega_1^3\omega_3\omega_3v_3^2 + 174\omega_4^2\omega_1^2\omega_2cs^2\omega_3v_3^2 - 12\omega_4^3\omega_2cs^2v_1^2\omega_3^2 +$$
$$108\omega_4\omega_1^3\omega_2^3\omega_3v_3^4 - 24\omega_4^2\omega_1^3v_1^2\omega_3^2 - 32\omega_4^2\omega_1\omega_2cs^2\omega_3^2 - 144\omega_4^2\omega_1^2\omega_2^2\omega_3v_3^4 + 16\omega_4\omega_1\omega_2^3\omega_3^2 - 108\omega_4\omega_1^2\omega_2cs^2\omega_3^2v_3^2 + 2\omega_4^2\omega_1^3\omega_2^2v_3^2 +$$
$$48\omega_4^2\omega_1^3\omega_2cs^2v_1^2\omega_3 + 48\omega_4^2\omega_1\omega_2cs^2v_1^2\omega_3^2 + 192\omega_4^2\omega_2^3\omega_3v_3^4 - 18\omega_4\omega_1\omega_2^3cs^2\omega_3^2 + 204\omega_4^2\omega_1^3\omega_2\omega_3v_3^2 - 324\omega_1^2\omega_2^3cs^2\omega_3^2v_3^2 + 16\omega_4^2\omega_1\omega_2^3cs^4\omega_3 +$$
$$36\omega_4\omega_1^3\omega_2^2\omega_3v_3^2 + 38\omega_4^2\omega_1^3\omega_2^2\omega_3v_3^4 + 648\omega_4\omega_1^2\omega_2^3cs^2\omega_3^2v_3^2 - 96\omega_4^2\omega_1\omega_2^3cs^2v_1^2\omega_3 - 40\omega_4^2\omega_1^3cs^2\omega_3^2 - 48\omega_4^2\omega_1\omega_2^2v_1^2\omega_3^2 - 180\omega_4\omega_1^2\omega_2^3\omega_3v_3^4 +$$
$$144\omega_4^2\omega_1^3\omega_2^2v_1^2\omega_3^2v_3^2 + 8\omega_4^2\omega_1^3\omega_2^3\omega_3^2v_3^2 - 492\omega_4^2\omega_1^2\omega_2cs^2\omega_3^2v_3^2 - 2\omega_4^2\omega_1^3\omega_2cs^4\omega_3^2 + 108\omega_1^2\omega_3^3\omega_3^2v_3^2 + 64\omega_4^2\omega_1\omega_2cs^2\omega_3^2 + 16\omega_4^2\omega_1\omega_2^3\omega_3^2 +$$
$$24\omega_4^2\omega_1^3\omega_2v_1^2\omega_3^2 + 288\omega_4^2\omega_1^3\omega_2^2cs^2\omega_3v_3^2 - 108\omega_4^2\omega_1^3\omega_2^2\omega_3v_3^2 + 36\omega_4\omega_1^3\omega_2^2\omega_3v_3^4 + 216\omega_4^2\omega_1^2\omega_2^3\omega_3v_3^2 + 72\omega_4^2\omega_1^2\omega_2cs^2v_1^2\omega_3 + 324\omega_4\omega_1^3\omega_2^2cs^2\omega_3v_3^2 +$$
$$36\omega_4^2\omega_2^3\omega_3^2cs^2\omega_3 - 288\omega_4\omega_1^2\omega_2^3\omega_2^2\omega_3^2 + 336\omega_4\omega_1\omega_2^3cs^2\omega_3^2v_3^2 + 144\omega_4^2\omega_1^3v_1^2\omega_3^2v_3^2 - 144\omega_4^2\omega_1\omega_2^3\omega_3v_3^2 + 80\omega_4^2\omega_3^3cs^4\omega_3^2 + 6\omega_4^2\omega_1^2\omega_2^3v_1^2\omega_3^2 +$$
$$24\omega_4^2\omega_1^2\omega_2cs^2v_1^2\omega_3^2 - 432\omega_4^2\omega_3^3v_1^2\omega_3^2v_3^2 - 54\omega_4^2\omega_1^3\omega_2^3\omega_3^2 - 216\omega_4^2\omega_1^2\omega_3^3cs^2v_3^2 - 16\omega_4^2\omega_1\omega_2cs^2\omega_3 - 24\omega_4^2\omega_1^3\omega_2\omega_3v_3^4 + 40\omega_4^2\omega_1^2\omega_2cs^4\omega_3$$

$$C_{55} = 15\omega_1^3\omega_2^2cs^2\omega_3 - 9\omega_1^2\omega_2^2v_1^2\omega_3 - 12\omega_1\omega_2^2 - 66\omega_1^3\omega_2\omega_3v_3^2 - 9\omega_1^2\omega_2^2v_1^2 - 51\omega_1^2\omega_2^2\omega_3 - 6\omega_1^3\omega_2v_1^2 + 27\omega_1\omega_2^3v_1^2\omega_3 - 120\omega_1\omega_2^2\omega_3v_3^2 - 12\omega_2^3\omega_3 -$$
$$12\omega_2^3cs^2\omega_3 + 5\omega_1^3\omega_2^3\omega_3 + 48\omega_1^3\omega_2\omega_3 + 27\omega_1\omega_2^3cs^2\omega_3 + 27\omega_1^3\omega_2cs^2 - 6\omega_1^3\omega_2^2v_1^2 - 24\omega_2^3v_1^2\omega_3 + 5\omega_1^3\omega_2^2v_1^2\omega_3 + 81\omega_1^2\omega_2^2cs^2\omega_3 + 48\omega_1^3\omega_2v_3^2 +$$
$$36\omega_1\omega_2^3cs^2 - 36\omega_1^3\omega_2 - 12\omega_1^2\omega_2\omega_3v_3^2 + 3\omega_1\omega_2^3\omega_3 + 6\omega_1\omega_2^2v_1^2\omega_3 - 66\omega_1\omega_2^3\omega_3v_3^2 - 9\omega_1^3\omega_2^2 - 27\omega_1^2\omega_2cs^2 - 18\omega_1^3\omega_2cs^2 - 18\omega_1^3\omega_2v_1^2\omega_3 -$$
$$18\omega_1^2\omega_2cs^2\omega_3 - 5\omega_1^3\omega_2^2\omega_3 + 132\omega_1^2\omega_2^2\omega_3v_3^2 + 84\omega_1^3cs^2\omega_3 - 5\omega_1^2\omega_3^2v_1^2\omega_3 - 108\omega_1^3\omega_2cs^2\omega_3 + 6\omega_1^3\omega_2v_1^2\omega_3 + 6\omega_1^2\omega_2^2 + 42\omega_1\omega_2^2\omega_3 -$$
$$15\omega_1^2\omega_2^2cs^2\omega_3 + 12\omega_1\omega_2^3v_1^2 + 12\omega_1^3v_1^2\omega_3 + 9\omega_1^2\omega_2^2 + 6\omega_1^3\omega_2 + 84\omega_2^3\omega_3v_3^2 - 54\omega_1\omega_2^2cs^2\omega_3 + 9\omega_1^3\omega_2^2v_1^2 - 18\omega_1^2\omega_2^2cs^2 + 6\omega_1^2\omega_2\omega_3$$

$$C_{56} = 4\omega_1^3\omega_3^2 - 6\omega_1^2\omega_3^2cs^4\omega_3^2 + 24\omega_2^3\omega_3^2v_3^2 + 216\omega_1^3cs^2\omega_3^2v_3^2 - 18\omega_1^3\omega_2^2cs^2\omega_3 + 2\omega_1^3\omega_2^2cs^2v_2^2\omega_3 - 84\omega_1^3\omega_2cs^4\omega_3^2 - 34\omega_1^2\omega_2cs^2\omega_3^2 -$$
$$8\omega_2^3v_2^2\omega_3^2 - 72\omega_1\omega_2^2\omega_3^2v_3^4 - 36\omega_1^3\omega_2\omega_3^2v_3^4 + 24\omega_1^3\omega_2v_2^2\omega_3^2v_3^2 - \omega_1^2\omega_3^2\omega_3^2 + 4\omega_1^2\omega_2v_2^2\omega_3^2 - 24\omega_1^3\omega_2\omega_3^2v_3^2 - 4\omega_1^3\omega_2\omega_3^2 - 22\omega_1\omega_2^3cs^2\omega_3^2 - 8\omega_2^3\omega_3^2 -$$
$$72\omega_2^3v_2^2\omega_3^2v_3^2 - 8\omega_1\omega_2^2cs^2\omega_3^2 + 12\omega_1^3\omega_2cs^2 + 20\omega_2^3cs^2\omega_3^2 - 4\omega_1^2\omega_2cs^2v_2^2\omega_3^2 + 24\omega_2^3\omega_3^2v_3^4 - 24\omega_1^2\omega_2^2\omega_3^2v_3^2 - \omega_1^2\omega_2^2v_2^2\omega_3^2 + 24\omega_1^3v_2^2\omega_3^2v_3^2 +$$
$$4\omega_1^2\omega_2cs^2\omega_3 - 12\omega_1^3\omega_2cs^4\omega_3 + 18\omega_1^2\omega_2cs^2v_2^2\omega_3 + 8\omega_2^3v_2^2\omega_3^2 + 72\omega_2^3cs^4\omega_3^2 + 16\omega_1^3cs^2v_2^2\omega_3^2 + 24\omega_1\omega_2v_2^2\omega_3^2v_3^2 - 4\omega_1^2\omega_2^2\omega_3^2 - 20\omega_2^3cs^2v_2^2\omega_3^2 +$$
$$36\omega_1^2\omega_2cs^4 - 54\omega_1^2\omega_3^2cs^4\omega_3 - 12\omega_1^3\omega_2cs^2v_2^2 - 60\omega_1\omega_2^3\omega_3^2v_3^2 - 36\omega_1^2\omega_2cs^4\omega_3^2 + 72\omega_2^3\omega_2^2cs^2\omega_3^2v_3^2 - 5\omega_1^3\omega_2^2cs^2\omega_3 - 48\omega_1^3\omega_2^2v_3^2 + 72\omega_1^2\omega_2^2\omega_3^2v_3^4 -$$
$$20\omega_1^3\omega_2cs^2v_2^2\omega_3 - 8\omega_1\omega_2^2cs^2\omega_3^2 - 4\omega_1^2\omega_2\omega_3^2 + \omega_1^2\omega_2^2v_2^2\omega_3^2 - 216\omega_1\omega_2^3cs^2\omega_3^2v_3^2 + 22\omega_1\omega_2^3cs^2v_2^2\omega_3^2 + 4\omega_1^3\omega_2v_2^2\omega_3^2 - 24\omega_1^2\omega_2\omega_3^2v_3^2 -$$
$$24\omega_1^2\omega_2^2v_2^2\omega_3^2v_3^2 - 36\omega_2^3\omega_2cs^4 + 42\omega_1\omega_2^3cs^4\omega_3^2 - 8\omega_1\omega_2^3v_2^2\omega_3^2 - 12\omega_1^3\omega_2^3cs^2 + 12\omega_1^3\omega_2cs^2v_2^2 + 5\omega_1^2\omega_3^2cs^2\omega_3^2 - 2\omega_1^2\omega_2cs^2v_2^2\omega_3^2 + 216\omega_1^2\omega_2^2cs^2\omega_3^2v_3^2 +$$
$$8\omega_1\omega_2^3\omega_3^2 - 36\omega_1\omega_2^3\omega_3^2v_3^4 + 54\omega_1^3\omega_2^2cs^4\omega_3 + 96\omega_1\omega_2^3v_2^2\omega_3^2v_3^2 + 42\omega_1^2\omega_2^2cs^4\omega_3^2 - 48\omega_1^3\omega_2v_2^2\omega_3^2v_3^2 + 56\omega_1^3\omega_2cs^2\omega_3^2 - 4\omega_1^2\omega_2^2cs^2v_2^2\omega_3 +$$

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$$4\omega_1^3\omega_2 cs^2\omega_3 + 24\omega_1\omega_2^2 v_2^2\omega_3^2 v_3^2 - 12\omega_1^2\omega_2^2 cs^4\omega_3 - 52\omega_1^3 cs^2\omega_3^2 - 72\omega_1^2\omega_3^2 cs^2\omega_3^2 v_3^2 - 2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3^2 + 48\omega_1\omega_2^2\omega_3^3 v_3^2 - 18\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 +$$
$$18\omega_1^2\omega_2^3 cs^2\omega_3 + 48\omega_2^3\omega_3^2 v_3^4 + 6\omega_1^3\omega_2^2 cs^4\omega_3^2 + \omega_1^3\omega_2^2\omega_3^2 + 40\omega_1^2\omega_2 cs^2\omega_3^2 + 24\omega_1^2\omega_2^3\omega_3^2 v_3^2 - 324\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 + 8\omega_1\omega_2^2 cs^2 v_2^2\omega_3 + 24\omega_1\omega_2^2 cs^4\omega_3 -$$
$$36\omega_2^2 cs^4\omega_3^2 - 4\omega_1^3 v_2^2\omega_3^2 - 48\omega_1^2\omega_2^2 v_2^2\omega_3^2 v_3^2 + 84\omega_1^3\omega_2\omega_3^2 v_3^2 + 4\omega_1^2\omega_2 v_2^2\omega_3^2 + 8\omega_1\omega_2^2 cs^2 v_2^2\omega_3^2 + 108\omega_1\omega_2^3 cs^2\omega_3^2 v_3^2 - 4\omega_1^3\omega_2 cs^2 v_2^2\omega_3 + 8\omega_1\omega_2^2\omega_3^2$$

$C_{57} = -36\omega_4\omega_1^3\omega_2^2\omega_3 v_3^4 + 48\omega_4^2\omega_1\omega_3^2 cs^2\omega_3^2 + 168\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3 - 86\omega_4^2\omega_1^3\omega_2^2\omega_3^2 v_3^2 - 72\omega_4\omega_1^2\omega_3^2 cs^4\omega_3^2 +$
$180\omega_4\omega_1^2\omega_2^3\omega_3\omega_3 v_3^2 - 297\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 8\omega_4^2\omega_1^3\omega_3^2 + 40\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^4 + 162\omega_1^3\omega_3^2 cs^2\omega_3^2 v_3^2 + 144\omega_4^2\omega_1^2\omega_2 v_2^2\omega_3^2 v_3^2 + 16\omega_4^2\omega_1\omega_2^2 cs^4\omega_3^2 -$
$48\omega_4^2\omega_2^3\omega_3^2 v_3^2 - 108\omega_4^2\omega_1\omega_2\omega_3^3 v_3^4 - 72\omega_4^2\omega_1^3\omega_2^2 cs^2 v_2^2\omega_3 + 96\omega_4^2\omega_1\omega_2^2\omega_3^3 v_3^2 - 108\omega_4^2\omega_1^3\omega_2^2 cs^2 v_3^2 + 432\omega_4^2\omega_2^3 cs^2\omega_3^2 v_3^2 + 18\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3 -$
$8\omega_4^2\omega_1^3\omega_2\omega_3^2 + 54\omega_4^2\omega_1^3\omega_2^3 v_3^4 - 96\omega_4^2\omega_1^2\omega_2 cs^2 v_2^2\omega_3 - 48\omega_4^2\omega_1\omega_2^3 v_2^2\omega_3 - 28\omega_4^2\omega_1^3\omega_2 cs^4\omega_3^2 - 2\omega_4^2\omega_1^2\omega_2^3\omega_3 - 12\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3^2 + 24\omega_4^2\omega_1^3\omega_2\omega_2\omega_3 v_3^2 -$
$540\omega_4\omega_1^2\omega_2^3 cs^2\omega_3 v_3^2 + 36\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 + 108\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 - 72\omega_4\omega_1\omega_3^2 cs^2\omega_3^2 - 108\omega_1^2\omega_2^3\omega_3^2 v_3^4 + 264\omega_4^2\omega_1^3 cs^2\omega_3^2 v_3^2 - 36\omega_4\omega_1^3\omega_2^2\omega_3^2 v_3^2 -$
$216\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^2 - 108\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 + 86\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3^2 + 288\omega_4\omega_1^2\omega_2^3\omega_3^2 v_3^4 - 56\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 + 264\omega_4^2\omega_1^2\omega_2 cs^2\omega_3^2 v_3^2 + 96\omega_4^2\omega_1\omega_3^3\omega_3^2 v_3^2 -$
$36\omega_4^2\omega_1^2\omega_3^2 cs^4\omega_3 - 16\omega_4^2\omega_2^3\omega_3^2 + 24\omega_4^2\omega_3^2 cs^2 v_2^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_3^2 v_3^2 + 48\omega_4^2\omega_1^3\omega_3^2 v_3^4 - 117\omega_4\omega_1^3\omega_2^3\omega_3^2 v_3^4 + 8\omega_4^2\omega_3^2 cs^2\omega_3^2 + 144\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3^2 v_3^2 +$
$117\omega_4^2\omega_1^3\omega_2^3\omega_3 v_3^2 + 468\omega_4^2\omega_1^2\omega_2^3 cs^2\omega_3 v_3^2 - 6\omega_4^2\omega_1^3\omega_2^3 cs^4\omega_3^2 + 24\omega_4^2\omega_1^3 cs^2 v_2^2\omega_3^2 + 36\omega_4\omega_1^2\omega_2^3\omega_3^2 v_3^2 - 40\omega_4^2\omega_1^2\omega_2^2 cs^2\omega_3 + 54\omega_1^3\omega_2^3\omega_3^3 v_3^4 +$
$16\omega_4^2\omega_1^3\omega_2 cs^4\omega_3 - 60\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^4 + 108\omega_4\omega_1^3\omega_2^2 cs^2\omega_3^2 v_3^2 + 144\omega_4^2\omega_1^3 v_2^2\omega_3^2 v_3^2 + 24\omega_4^2\omega_1^3\omega_2^3\omega_3^2 v_3^4 + 18\omega_4\omega_1\omega_3^3\omega_3^2 cs^4\omega_3^2 - 108\omega_4\omega_1^3\omega_3^3\omega_3\omega_3 v_3^2 +$
$72\omega_4^2\omega_1\omega_2^3 cs^2\omega_3 v_3^2 + 240\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^2 - 12\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 + 72\omega_4^2\omega_1^3\omega_2^3 cs^2\omega_3^2 v_3^2 - 6\omega_4^2\omega_1^3\omega_2^2 v_2^2\omega_3 - 24\omega_4^2\omega_1\omega_3^3\omega_3\omega_3 v_3^4 - 36\omega_4^2\omega_1^3\omega_2^2 v_3^4 -$
$16\omega_4^2\omega_1\omega_2^3 cs^2\omega_3 + 72\omega_4\omega_1\omega_3^3\omega_2^2 v_3^2 - 8\omega_4^2\omega_1^2\omega_2^2\omega_3^2 + 96\omega_4^2\omega_1^2\omega_2\omega_3^2 v_3^4 - 432\omega_4^2\omega_2^3 v_2^2\omega_3^2 v_3^2 + 32\omega_4^2\omega_1^3 cs^4\omega_3^2 - 72\omega_4^2\omega_1^3\omega_2 cs^2\omega_3 v_3^2 + 48\omega_4^2\omega_2^3 v_2^2\omega_3^2 +$
$48\omega_4^2\omega_1\omega_2^2 cs^2 v_2^2\omega_3^2 + 117\omega_4\omega_1^3\omega_2^3\omega_3 v_3^2 - 852\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 v_3^2 + 48\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3 - 117\omega_4^2\omega_1^3\omega_3^3\omega_3 v_3^4 - 18\omega_4^2\omega_1^3\omega_3^2 cs^2\omega_3 -$
$108\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3 v_3^2 - 288\omega_4^2\omega_1^2\omega_2^2 v_2^2\omega_3^2 v_3^2 - 36\omega_4\omega_1^2\omega_2^3\omega_3^2 v_3^4 + 20\omega_4^2\omega_1^2\omega_2 cs^4\omega_3^2 + 60\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^2 - 297\omega_4^2\omega_1^3\omega_2^3 cs^2\omega_3 v_3^2 + 36\omega_4\omega_1^3\omega_2 cs^2\omega_3^2 -$
$54\omega_1^3\omega_2^3\omega_3^2 v_3^2 + 72\omega_4\omega_1\omega_2^3 cs^4\omega_3^2 - 36\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3 - 8\omega_4^2\omega_1^3\omega_2\omega_3^2 - 288\omega_4^2\omega_1\omega_2^3\omega_3^2 v_3^4 + 162\omega_4^2\omega_1^3\omega_3^2 cs^2 v_3^2 - 36\omega_4^2\omega_1^2\omega_2^3 cs^2\omega_3^2 -$
$492\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 v_3^2 - 48\omega_4^2\omega_1\omega_2 v_2^2\omega_3^2 - 96\omega_4^2\omega_1^3\omega_3^2 v_3^2 - 72\omega_4^2\omega_1^2\omega_2^3 v_3^4 - 96\omega_4^2\omega_1\omega_2^3 cs^2 v_2^2\omega_3 + 36\omega_4^2\omega_1^3\omega_2^3 v_3^2 + 24\omega_4^2\omega_1\omega_3^3\omega_2 v_3^2 -$
$172\omega_4^2\omega_1\omega_2^3 cs^4\omega_3^2 - 72\omega_4\omega_1\omega_2^3\omega_3^3 v_3^4 + 24\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 - 144\omega_4^2\omega_1^2\omega_2\omega_3^2 v_3^2 + 72\omega_4\omega_1^2\omega_2^3 cs^2\omega_3^2 + 72\omega_4^2\omega_1^2\omega_3^2 cs^2 v_2^2\omega_3 - 24\omega_4^2\omega_1^3\omega_3^3\omega_3\omega_3 v_3^2 +$
$174\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3^2 v_3^2 + 6\omega_4^2\omega_1^3\omega_2^3 v_2^2\omega_3^2 + 24\omega_4^2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3^2 + 108\omega_4\omega_1^3\omega_3^3\omega_3 v_3^4 - 32\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 - 144\omega_4^2\omega_1^2\omega_2^2\omega_3^2 v_3^4 + 16\omega_4^2\omega_1\omega_2^2\omega_3^2 +$
$144\omega_4^2\omega_1\omega_2^2 v_2^2\omega_3^2 v_3^2 - 108\omega_4^2\omega_1^2\omega_3^3 cs^2\omega_3^2 v_3^2 + 48\omega_4^2\omega_1^2\omega_2^2 cs^2 v_2^2\omega_3 + 2\omega_4^2\omega_1^3\omega_2^2\omega_3^2 + 192\omega_4^2\omega_2^3\omega_3^2 v_3^4 - 18\omega_4\omega_1^3\omega_2^3 cs^2\omega_3^2 + 204\omega_4^2\omega_1^3\omega_2\omega_2\omega_3 v_3^2 +$
$24\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 - 288\omega_4^2\omega_1^3\omega_2 v_2^2\omega_3^2 v_3^2 - 324\omega_4^2\omega_2^3 cs^2\omega_3^2 v_3^2 + 16\omega_4^2\omega_1\omega_2^3 cs^4\omega_3^2 + 36\omega_4\omega_1^3\omega_2^3\omega_3\omega_3 v_3^2 + 38\omega_4^2\omega_1^3\omega_2^2\omega_3^2 v_3^4 + 648\omega_4\omega_1^2\omega_2^3 cs^2\omega_3^2 v_3^2 +$
$576\omega_4^2\omega_1\omega_2^3 v_2^2\omega_3^2 v_3^2 - 40\omega_4^2\omega_1^3 cs^2\omega_3^2 - 180\omega_4\omega_1^2\omega_2^3\omega_3 v_3^4 + 12\omega_4^2\omega_1^2\omega_2^3 cs^2 v_2^2\omega_3^2 + 8\omega_4^2\omega_1^2\omega_2^3\omega_3^2 v_3^2 - 492\omega_4^2\omega_1^2\omega_2^3 cs^2\omega_3^2 v_3^2 - 2\omega_4^2\omega_1^3\omega_2^2 cs^4\omega_3^2 +$
$108\omega_4^2\omega_1^3\omega_2^3\omega_3^2 v_3^2 + 64\omega_4^2\omega_1^3\omega_2 cs^2\omega_3^2 + 16\omega_4^2\omega_1\omega_2^3\omega_3^2 + 288\omega_4^2\omega_1^3\omega_2^2 cs^2\omega_3\omega_3 v_3^2 - 108\omega_4^2\omega_1^3\omega_3^2\omega_3\omega_3 v_3^2 - 144\omega_4^2\omega_1^2\omega_3^2 v_2^2\omega_3^2 v_3^2 + 36\omega_4\omega_1^3\omega_2^3\omega_3 v_3^4 +$
$216\omega_4^2\omega_1^2\omega_2^3\omega_3 v_3^2 + 324\omega_4\omega_1^3\omega_2^3 cs^2\omega_3\omega_3 v_3^2 + 36\omega_4^2\omega_1^2\omega_2^3 cs^2\omega_3 - 288\omega_4\omega_1^2\omega_2^3\omega_3^2 v_3^2 + 336\omega_4^2\omega_1\omega_2^2 cs^2\omega_3^2 v_3^2 - 12\omega_4\omega_1\omega_3^3 cs^2 v_2^2\omega_3 - 144\omega_4^2\omega_1\omega_2^2\omega_3^2 v_3^2 -$
$12\omega_4^2\omega_1^3\omega_2 cs^2 v_2^2\omega_3^2 - 24\omega_4^2\omega_1^3 v_2^2\omega_3^2 + 80\omega_4^2\omega_2^3 cs^4\omega_3^2 - 54\omega_4^2\omega_1^3\omega_2^2 v_3^2 - 216\omega_4^2\omega_1^2\omega_2^3 cs^2 v_3^2 - 16\omega_4^2\omega_1\omega_2 cs^2\omega_3 - 24\omega_4^2\omega_1^3\omega_2\omega_3\omega_3 v_3^2 + 40\omega_4^2\omega_1^2\omega_2^3 cs^4\omega_3$

$C_{58} = 15\omega_1^3\omega_2^2 cs^2\omega_3\omega_3 - 12\omega_1\omega_2^3 - 66\omega_1^3\omega_2\omega_3\omega_3 v_3^2 - 24\omega_2^3 v_2^2\omega_3 - 51\omega_1^2\omega_2^3\omega_3 + 5\omega_1^3\omega_2^2 v_2^2\omega_3 - 120\omega_1\omega_2^3\omega_3 v_3^2 - 12\omega_2^3\omega_3 - 9\omega_1^2\omega_2^3 v_2^2 - 6\omega_1^3\omega_2 v_2^2 -$
$12\omega_2^3 cs^2\omega_3 + 5\omega_1^3\omega_2^3\omega_3 + 48\omega_1^3\omega_2\omega_3 - 9\omega_1^2\omega_2^2 v_2^2\omega_3 + 27\omega_1\omega_2^3 cs^2\omega_3 + 27\omega_1^3\omega_2 cs^2 + 81\omega_1^2\omega_2^3 cs^2\omega_3 + 48\omega_1^3\omega_2 v_3^2 + 27\omega_1\omega_2 v_2^2\omega_3 - 6\omega_1^2\omega_2^2 v_2^2 +$
$36\omega_1\omega_2^3 cs^2 - 36\omega_1^3\omega_2 - 12\omega_1^2\omega_2\omega_3 v_3^2 + 6\omega_1^2\omega_2 v_2^2\omega_3 + 3\omega_1\omega_2^3\omega_3 + 12\omega_1^3 v_2^2\omega_3 - 66\omega_1\omega_2^3\omega_3 v_3^2 - 9\omega_1^2\omega_2^2 - 27\omega_1^2\omega_2^3 cs^2 - 18\omega_1^3\omega_2 cs^2 -$
$18\omega_1^2\omega_2 cs^2\omega_3 - 5\omega_1^3\omega_2^2\omega_3 + 132\omega_1^2\omega_2^3\omega_3 v_3^2 + 84\omega_1^3 cs^2\omega_3 - 108\omega_1^3\omega_2 cs^2\omega_3 + 6\omega_1^2\omega_2^2 + 6\omega_1\omega_2^2 v_2^2\omega_3 + 42\omega_1\omega_2^3\omega_3 - 15\omega_1^2\omega_2^2 cs^2\omega_3 + 9\omega_1^3\omega_2^2 v_2^2 +$
$9\omega_1^2\omega_2^3 - 18\omega_1^3\omega_2 v_2^2\omega_3 + 6\omega_1^2\omega_2 + 84\omega_2^3\omega_3 v_3^2 - 54\omega_1\omega_2^2 cs^2\omega_3 - 18\omega_1^2\omega_2 cs^2 + 12\omega_1\omega_2^3 v_2^2 - 5\omega_1^2\omega_3^3 v_2^2\omega_3 + 6\omega_1^2\omega_2\omega_3$

$C_{59} = -464\omega_1^3\omega_2 cs^2\omega_3 v_3^2 - 196\omega_1^2\omega_2^3\omega_3 v_3^2 - 78\omega_1^3\omega_2^2 cs^2\omega_3 + 90\omega_1^3\omega_2^2\omega_3 v_3^4 + 72\omega_1^2\omega_2 cs^4\omega_3 + 94\omega_1^3\omega_2\omega_3 v_3^2 + 72\omega_1^3 cs^4\omega_3 - 16\omega_1^2\omega_2^2\omega_3 -$
$15\omega_1^3\omega_2^2 cs^4\omega_3 - 1472\omega_1\omega_2^3 cs^2\omega_3 v_3^2 - 48\omega_1^2\omega_2^2 cs^4 - 176\omega_1\omega_2^2\omega_3 v_3^2 + 808\omega_1^2\omega_2^3 cs^2\omega_3 v_3^2 + 16\omega_2^3\omega_3 - 184\omega_2^3 cs^2\omega_3 + 144\omega_2^3\omega_3 v_3^4 -$
$1088\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 + 16\omega_1^2\omega_2^3\omega_3 - 10\omega_1^3\omega_2\omega_3 - 300\omega_1\omega_2^3\omega_3 v_3^2 + 320\omega_1\omega_2^3 cs^2\omega_3 + 72\omega_1\omega_2^2 cs^4\omega_3 + 8\omega_1\omega_2^3 cs^2 v_3^2 + 152\omega_1^2\omega_2^2 cs^2\omega_3 -$
$156\omega_1^3\omega_2 cs^4\omega_3 - 264\omega_1^2\omega_2^2\omega_3 v_3^2 - 28\omega_1^3\omega_2\omega_3 v_3^2 + 30\omega_1^3\omega_2^3\omega_3 v_3^2 - 8\omega_1\omega_2^3 cs^2 - 16\omega_1^2\omega_2^2 cs^2 v_3^2 + 656\omega_1\omega_2^2 cs^2\omega_3 v_3^2 + 4\omega_1^3\omega_3 + 164\omega_1^2\omega_2^3 cs^4\omega_3 +$
$24\omega_1^3\omega_2 cs^4 - 104\omega_1^2\omega_2\omega_3\omega_3 v_3^2 - 28\omega_1\omega_2^3\omega_3 + 404\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 + 328\omega_1\omega_2^3\omega_3 v_3^2 + 216\omega_2^3 cs^4\omega_3 - 8\omega_1^3\omega_2 cs^2 - 80\omega_1^2\omega_2 cs^2\omega_3 + 82\omega_1^3\omega_2^2 cs^4\omega_3 +$
$8\omega_1^3\omega_2^3\omega_3 + 96\omega_1^2\omega_2\omega_3 v_3^4 + 280\omega_1^2\omega_2^3\omega_3 v_3^2 + 24\omega_1^3\omega_2 v_3^4 - 52\omega_1^3 cs^2\omega_3 - 27\omega_1^3\omega_2^3\omega_3 v_3^4 + 18\omega_1^3\omega_2 cs^2\omega_3 + 24\omega_1\omega_2^3 cs^4 + 122\omega_1^3\omega_2 cs^2\omega_3 -$
$84\omega_1^3\omega_2\omega_3 v_3^4 - 120\omega_1^2\omega_2^2 cs^4\omega_3 + 8\omega_1^3\omega_2 cs^2 v_3^2 + 8\omega_1\omega_2^3\omega_3 + 180\omega_1^2\omega_2^3\omega_3 v_3^4 - 156\omega_1^2\omega_2^3 cs^2\omega_3 + 440\omega_1^2\omega_2 cs^2\omega_3 v_3^2 - 98\omega_1^3\omega_2^3\omega_3 v_3^2 - 372\omega_1\omega_2^3 cs^4\omega_3 +$
$160\omega_1^3 cs^2\omega_3 v_3^2 - 160\omega_2^3\omega_3 v_3^2 - 3\omega_1^3\omega_2^3\omega_3 - 102\omega_1^3\omega_2^3 cs^2\omega_3 v_3^2 - 80\omega_1\omega_2^3 cs^2\omega_3 + 16\omega_1^2\omega_2^2 cs^2 + 168\omega_1\omega_2\omega_3 v_3^4 + 760\omega_2^3 cs^2\omega_3 v_3^2 + 8\omega_1^3\omega_2\omega_3$

$C_{60} = -360\omega_1^3\omega_2 cs^2\omega_3 v_3^2 - 308\omega_1^2\omega_2^3\omega_3 v_3^2 - 22\omega_1^3\omega_2^2 cs^2\omega_3 + 310\omega_1^3\omega_2^2\omega_3 v_3^4 + 8\omega_1^2\omega_2 cs^4\omega_3 + 174\omega_1^3\omega_2\omega_3 v_3^2 + 16\omega_1^3 cs^4\omega_3 - 16\omega_1^2\omega_2^2\omega_3 -$
$3\omega_1^3\omega_2^3 cs^4\omega_3 - 1008\omega_1\omega_2^3 cs^2\omega_3 v_3^2 - 16\omega_1^2\omega_2^2 cs^4 - 240\omega_1\omega_2^2\omega_3 v_3^2 + 504\omega_1^2\omega_2^3 cs^2\omega_3 v_3^2 + 16\omega_2^3\omega_3 - 56\omega_2^3 cs^2\omega_3 + 528\omega_2^3\omega_3 v_3^4 -$
$576\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 + 16\omega_1^2\omega_2^3\omega_3 - 10\omega_1^3\omega_2\omega_3 - 1068\omega_1\omega_2^3\omega_3 v_3^4 + 96\omega_1\omega_2^2 cs^2\omega_3 + 8\omega_1\omega_2^2 cs^4\omega_3 + 24\omega_1\omega_2^3 cs^2 v_3^2 + 24\omega_1^2\omega_2^2 cs^2\omega_3 - 32\omega_1^3\omega_2 cs^4\omega_3 -$
$888\omega_1^2\omega_2^2\omega_3 v_3^2 - 60\omega_1^3\omega_2 v_3^2 + 42\omega_1^3\omega_2^3\omega_3 v_3^2 - 8\omega_1\omega_2^3 cs^2 - 48\omega_1^2\omega_2^2 cs^2 v_3^2 + 336\omega_1\omega_2^2 cs^2\omega_3 v_3^2 + 4\omega_1^3\omega_3 + 28\omega_1^2\omega_2^3 cs^4\omega_3 + 8\omega_1^3\omega_2 cs^4 -$
$168\omega_1^2\omega_2\omega_3\omega_3 v_3^2 - 28\omega_1\omega_2^3\omega_3 + 252\omega_1^2\omega_2^2 cs^2\omega_3 v_3^2 + 552\omega_1\omega_2^3\omega_3 v_3^2 + 40\omega_2^3 cs^4\omega_3 - 8\omega_1^3\omega_2 cs^2 - 16\omega_1^2\omega_2 cs^2\omega_3 + 14\omega_1^3\omega_2^2 cs^4\omega_3 + 8\omega_1^3\omega_2^3\omega_3 +$
$336\omega_1^2\omega_2\omega_3 v_3^4 + 408\omega_1^2\omega_2^3\omega_3 v_3^2 + 96\omega_1^3\omega_3\omega_3 v_3^4 - 20\omega_1^3 cs^2\omega_3 - 87\omega_1^3\omega_2^3\omega_3 v_3^4 + 6\omega_1^3\omega_2 cs^2\omega_3 + 8\omega_1\omega_2^3 cs^4 + 42\omega_1^3\omega_2 cs^2\omega_3 - 312\omega_1^3\omega_2\omega_3 v_3^4 -$
$8\omega_1^2\omega_2 cs^4\omega_3 + 24\omega_1^3\omega_2 cs^2 v_3^2 + 8\omega_1\omega_2^3\omega_3 + 620\omega_1^2\omega_2^3\omega_3 v_3^4 - 44\omega_1^2\omega_2^3 cs^2\omega_3 + 264\omega_1^2\omega_2 cs^2\omega_3 v_3^2 - 154\omega_1^3\omega_2^3\omega_3 v_3^2 - 68\omega_1\omega_2^3 cs^4\omega_3 +$
$144\omega_1^3 cs^2\omega_3 v_3^2 - 288\omega_2^3\omega_3 v_3^2 - 3\omega_1^3\omega_2^3\omega_3 - 54\omega_1^3\omega_2^3 cs^2\omega_3 v_3^2 - 16\omega_1\omega_2^2 cs^2\omega_3 + 16\omega_1^2\omega_2^2 cs^2 + 552\omega_1\omega_2^3\omega_3 v_3^4 + 552\omega_2^3 cs^2\omega_3 v_3^2 + 8\omega_1^3\omega_2\omega_3$

3 Comparison of SRT, MRT, CLBM, and CuLBM

3.1 Conservation of mass: ρ

$$\frac{\partial\rho}{\partial t} + v_1\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \rho\frac{\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + v_2\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \rho\frac{\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + v_3\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} + \rho\frac{\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + C_{D_x^3\rho}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + C_{D_x^3 v_1}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} +$$

$$C_{D_x^2 D_y v_2}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} + C_{D_x D_y^2 v_1}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C_{D_y^3\rho}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2^3} + C_{D_y^3 v_2}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_{D_x^2 D_z v_3}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} +$$

$$C_{D_y^2 D_z v_3}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C_{D_x D_z^2 v_1}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} + C_{D_y D_z^2 v_2}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C_{D_z^3\rho}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + C_{D_z^3 v_3}^{(0)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} + C_{D_x^4\rho}^{(0)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^4} +$$

$$C^{(0)}_{\mathrm{D}_x^4 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^4} + C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_y \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_2} + C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_2} + C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1^3 \partial x_2} + C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2} +$$

$$C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2} + C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1 \partial x_2^3} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_y^3 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^3} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_y^3 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^3} +$$

$$C^{(0)}_{\mathrm{D}_y^4 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_2^4} + C^{(0)}_{\mathrm{D}_y^4 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^4} + C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_z \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1^3 \partial x_3} + C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} + C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$$

$$C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} + C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$C^{(0)}_{\mathrm{D}_y^3 \mathrm{D}_z \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_2^3 \partial x_3} + C^{(0)}_{\mathrm{D}_y^3 \mathrm{D}_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} + C^{(0)}_{\mathrm{D}_y^3 \mathrm{D}_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} + C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_z^2 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} + C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} +$$

$$C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} + C^{(0)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2} +$$

$$C^{(0)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + C^{(0)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_z^3 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1 \partial x_3^3} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_z^3 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + C^{(0)}_{\mathrm{D}_x \mathrm{D}_z^3 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} +$$

$$C^{(0)}_{\mathrm{D}_y \mathrm{D}_z^3 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_2 \partial x_3^3} + C^{(0)}_{\mathrm{D}_y \mathrm{D}_z^3 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} + C^{(0)}_{\mathrm{D}_y \mathrm{D}_z^3 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} + C^{(0)}_{\mathrm{D}_z^4 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_3^4} + C^{(0)}_{\mathrm{D}_z^4 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

coefficient $C^{(0)}_{\mathrm{D}_x^3 \rho}$ at $\frac{\partial^3 \rho}{\partial x_1^3}$:

$$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x^3 \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1}{12}$$

$$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x^3 \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1}{12}$$

$$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x^3 \rho} = (-1 + v_1^2 + 3cs^2)\frac{v_1}{12}$$

$$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x^3 \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1}{12}$$

$$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x^3 \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1}{12}$$

$$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x^3 \rho} = (-1 + v_1^2 + 3cs^2)\frac{v_1}{12}$$

$$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x^3 \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1}{12}$$

coefficient $C^{(0)}_{\mathrm{D}_x^3 v_1}$ at $\frac{\partial^3 v_1}{\partial x_1^3}$:

$$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x^3 v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho}{12}$$

$$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x^3 v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho}{12}$$

$$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x^3 v_1} = (-1 + 3v_1^2 + cs^2)\frac{\rho}{12}$$

$$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x^3 v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho}{12}$$

$$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x^3 v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho}{12}$$

$$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x^3 v_1} = (-1 + 3v_1^2 + cs^2)\frac{\rho}{12}$$

$$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x^3 v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho}{12}$$

coefficient $C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y v_2}$ at $\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2}$:

$$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x^2 \mathrm{D}_y v_2} = \frac{-\rho cs^2}{6}$$

$$C^{(0),\text{MRT1}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{MRT2}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CLBM1}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CLBM2}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CuLBM1}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CuLBM2}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho c s^2}{6}$$

coefficient $C^{(0)}_{\text{D}_x \text{D}^2_y v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x^2_2}$:

$$C^{(0),\text{SRT}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{MRT1}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{MRT2}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CLBM1}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CLBM2}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CuLBM1}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho c s^2}{6}$$

$$C^{(0),\text{CuLBM2}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho c s^2}{6}$$

coefficient $C^{(0)}_{\text{D}^3_y \rho}$ **at** $\frac{\partial^3 \rho}{\partial x^3_2}$:

$$C^{(0),\text{SRT}}_{\text{D}^3_y \rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2}{12}$$

$$C^{(0),\text{MRT1}}_{\text{D}^3_y \rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2}{12}$$

$$C^{(0),\text{MRT2}}_{\text{D}^3_y \rho} = (-1 + v_2^2 + 3cs^2)\frac{v_2}{12}$$

$$C^{(0),\text{CLBM1}}_{\text{D}^3_y \rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2}{12}$$

$$C^{(0),\text{CLBM2}}_{\text{D}^3_y \rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2}{12}$$

$$C^{(0),\text{CuLBM1}}_{\text{D}^3_y \rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2}{12}$$

$$C^{(0),\text{CuLBM2}}_{\text{D}^3_y \rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2}{12}$$

coefficient $C^{(0)}_{\text{D}^3_y v_2}$ **at** $\frac{\partial^3 v_2}{\partial x^3_2}$:

$$C^{(0),\text{SRT}}_{\text{D}^3_y v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho}{12}$$

$$C^{(0),\text{MRT1}}_{\text{D}^3_y v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho}{12}$$

$$C_{D_y^3 v_2}^{(0),\text{MRT2}} = (-1 + 3v_2^2 + cs^2)\frac{\rho}{12}$$

$$C_{D_y^3 v_2}^{(0),\text{CLBM1}} = (-1 + cs^2 + 3v_2^2)\frac{\rho}{12}$$

$$C_{D_y^3 v_2}^{(0),\text{CLBM2}} = (-1 + cs^2 + 3v_2^2)\frac{\rho}{12}$$

$$C_{D_y^3 v_2}^{(0),\text{CuLBM1}} = (-1 + cs^2 + 3v_2^2)\frac{\rho}{12}$$

$$C_{D_y^3 v_2}^{(0),\text{CuLBM2}} = (-1 + cs^2 + 3v_2^2)\frac{\rho}{12}$$

coefficient $C_{D_x^2 D_z v_3}^{(0)}$ **at** $\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3}$**:**

$$C_{D_x^2 D_z v_3}^{(0),\text{SRT}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x^2 D_z v_3}^{(0),\text{MRT1}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x^2 D_z v_3}^{(0),\text{MRT2}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x^2 D_z v_3}^{(0),\text{CLBM1}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x^2 D_z v_3}^{(0),\text{CLBM2}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x^2 D_z v_3}^{(0),\text{CuLBM1}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x^2 D_z v_3}^{(0),\text{CuLBM2}} = \frac{-\rho cs^2}{6}$$

coefficient $C_{D_y^2 D_z v_3}^{(0)}$ **at** $\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3}$**:**

$$C_{D_y^2 D_z v_3}^{(0),\text{SRT}} = \frac{-\rho cs^2}{6}$$

$$C_{D_y^2 D_z v_3}^{(0),\text{MRT1}} = \frac{-\rho cs^2}{6}$$

$$C_{D_y^2 D_z v_3}^{(0),\text{MRT2}} = \frac{-\rho cs^2}{6}$$

$$C_{D_y^2 D_z v_3}^{(0),\text{CLBM1}} = \frac{-\rho cs^2}{6}$$

$$C_{D_y^2 D_z v_3}^{(0),\text{CLBM2}} = \frac{-\rho cs^2}{6}$$

$$C_{D_y^2 D_z v_3}^{(0),\text{CuLBM1}} = \frac{-\rho cs^2}{6}$$

$$C_{D_y^2 D_z v_3}^{(0),\text{CuLBM2}} = \frac{-\rho cs^2}{6}$$

coefficient $C_{D_x D_z^2 v_1}^{(0)}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2}$**:**

$$C_{D_x D_z^2 v_1}^{(0),\text{SRT}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x D_z^2 v_1}^{(0),\text{MRT1}} = \frac{-\rho cs^2}{6}$$

$$C_{D_x D_z^2 v_1}^{(0),\text{MRT2}} = \frac{-\rho cs^2}{6}$$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(0),\mathrm{CLBM1}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(0),\mathrm{CLBM2}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(0),\mathrm{CuLBM1}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(0),\mathrm{CuLBM2}} = \frac{-\rho c s^2}{6}$

coefficient $C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0)}$ at $\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2}$:

$C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{SRT}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{MRT1}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{MRT2}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{CLBM1}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{CLBM2}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{CuLBM1}} = \frac{-\rho c s^2}{6}$

$C_{\mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{CuLBM2}} = \frac{-\rho c s^2}{6}$

coefficient $C_{\mathrm{D}_z^3 \rho}^{(0)}$ at $\frac{\partial^3 \rho}{\partial x_3^3}$:

$C_{\mathrm{D}_z^3 \rho}^{(0),\mathrm{SRT}} = (-1 + 3cs^2 + v_3^2)\frac{v_3}{12}$

$C_{\mathrm{D}_z^3 \rho}^{(0),\mathrm{MRT1}} = (-1 + 3cs^2 + v_3^2)\frac{v_3}{12}$

$C_{\mathrm{D}_z^3 \rho}^{(0),\mathrm{MRT2}} = (-1 + v_3^2 + 3cs^2)\frac{v_3}{12}$

$C_{\mathrm{D}_z^3 \rho}^{(0),\mathrm{CLBM1}} = (-1 + 3cs^2 + v_3^2)\frac{v_3}{12}$

$C_{\mathrm{D}_z^3 \rho}^{(0),\mathrm{CLBM2}} = (-1 + 3cs^2 + v_3^2)\frac{v_3}{12}$

$C_{\mathrm{D}_z^3 \rho}^{(0),\mathrm{CuLBM1}} = (-1 + 3cs^2 + v_3^2)\frac{v_3}{12}$

$C_{\mathrm{D}_z^3 \rho}^{(0),\mathrm{CuLBM2}} = (-1 + 3cs^2 + v_3^2)\frac{v_3}{12}$

coefficient $C_{\mathrm{D}_z^3 v_3}^{(0)}$ at $\frac{\partial^3 v_3}{\partial x_3^3}$:

$C_{\mathrm{D}_z^3 v_3}^{(0),\mathrm{SRT}} = (-1 + cs^2 + 3v_3^2)\frac{\rho}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(0),\mathrm{MRT1}} = (-1 + cs^2 + 3v_3^2)\frac{\rho}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(0),\mathrm{MRT2}} = (-1 + 3v_3^2 + cs^2)\frac{\rho}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(0),\mathrm{CLBM1}} = (-1 + cs^2 + 3v_3^2)\frac{\rho}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(0),\mathrm{CLBM2}} = (-1 + cs^2 + 3v_3^2)\frac{\rho}{12}$

$$C_{\mathrm{D}_z^3 v_3}^{(0),\mathrm{CuLBM1}} = (-1 + cs^2 + 3v_3^2)\tfrac{\rho}{12}$$

$$C_{\mathrm{D}_z^3 v_3}^{(0),\mathrm{CuLBM2}} = (-1 + cs^2 + 3v_3^2)\tfrac{\rho}{12}$$

coefficient $C_{\mathrm{D}_x^4 \rho}^{(0)}$ **at** $\frac{\partial^4 \rho}{\partial x_1^4}$**:**

$$C_{\mathrm{D}_x^4 \rho}^{(0),\mathrm{SRT}} = (3v_1^2\omega - \omega cs^4 + 24v_1^2 cs^2 + 6v_1^4 - 2cs^2 - 6v_1^2 + 2cs^4 - 3v_1^4\omega - 12v_1^2\omega cs^2 + \omega cs^2)\tfrac{1}{24\omega}$$

$$C_{\mathrm{D}_x^4 \rho}^{(0),\mathrm{MRT1}} = (24v_1^2 cs^2 - 3v_1^4\omega_9 - \omega_9 cs^4 + 6v_1^4 - 2cs^2 - 6v_1^2 + 3v_1^2\omega_9 + 2cs^4 - 12v_1^2\omega_9 cs^2 + \omega_9 cs^2)\tfrac{1}{24\omega_9}$$

$$C_{\mathrm{D}_x^4 \rho}^{(0),\mathrm{MRT2}} = (-12v_1^2\omega_9 cs^2 - 3v_1^4\omega_9 + 2cs^4 + 6v_1^4 + \omega_9 cs^2 - 6v_1^2 + 24v_1^2 cs^2 + 3v_1^2\omega_9 - \omega_9 cs^4 - 2cs^2)\tfrac{1}{24\omega_9}$$

$$C_{\mathrm{D}_x^4 \rho}^{(0),\mathrm{CLBM1}} = (-\omega_9 cs^4 + 24v_1^2 cs^2 - 3v_1^4\omega_9 - 2cs^2 + 6v_1^4 - 12v_1^2\omega_9 cs^2 - 6v_1^2 + 3v_1^2\omega_9 + 2cs^4 + \omega_9 cs^2)\tfrac{1}{24\omega_9}$$

$$C_{\mathrm{D}_x^4 \rho}^{(0),\mathrm{CLBM2}} = (-2cs^2 - 3v_1^4\omega_9 + 24v_1^2 cs^2 + 6v_1^4 - \omega_9 cs^4 - 6v_1^2 + 3v_1^2\omega_9 + \omega_9 cs^2 - 12v_1^2\omega_9 cs^2 + 2cs^4)\tfrac{1}{24\omega_9}$$

$$C_{\mathrm{D}_x^4 \rho}^{(0),\mathrm{CuLBM1}} = (-3v_1^4\omega_4 + \omega_4 cs^2 + 6v_1^4 + 2cs^4 - 12v_1^2\omega_4 cs^2 - 6v_1^2 + 3v_1^2\omega_4 - 2cs^2 + 24v_1^2 cs^2 - \omega_4 cs^4)\tfrac{1}{24\omega_4}$$

$$C_{\mathrm{D}_x^4 \rho}^{(0),\mathrm{CuLBM2}} = (9v_1^2\omega_1\omega_2 - 2\omega_1 cs^2 + 4cs^4\omega_2 + 6v_1^4\omega_1 - 3\omega_1 cs^4\omega_2 - 9v_1^4\omega_1\omega_2 - 12v_1^2\omega_2 + 24v_1^2\omega_1 cs^2 - 36v_1^2\omega_1 cs^2\omega_2 - 4cs^2\omega_2 + 2\omega_1 cs^4 + 48v_1^2 cs^2\omega_2 - 6v_1^2\omega_1 + 3\omega_1 cs^2\omega_2 + 12v_1^4\omega_2)\tfrac{1}{72\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x^4 v_1}^{(0)}$ **at** $\frac{\partial^4 v_1}{\partial x_1^4}$**:**

$$C_{\mathrm{D}_x^4 v_1}^{(0),\mathrm{SRT}} = (-4 - 5v_1^2\omega + 6cs^2 + 10v_1^2 + 2\omega - 3\omega cs^2)\tfrac{\rho v_1}{12\omega}$$

$$C_{\mathrm{D}_x^4 v_1}^{(0),\mathrm{MRT1}} = (-4 + 2\omega_9 + 6cs^2 + 10v_1^2 - 5v_1^2\omega_9 - 3\omega_9 cs^2)\tfrac{\rho v_1}{12\omega_9}$$

$$C_{\mathrm{D}_x^4 v_1}^{(0),\mathrm{MRT2}} = (-4 + 2\omega_9 - 3\omega_9 cs^2 + 10v_1^2 - 5v_1^2\omega_9 + 6cs^2)\tfrac{\rho v_1}{12\omega_9}$$

$$C_{\mathrm{D}_x^4 v_1}^{(0),\mathrm{CLBM1}} = (-4 + 2\omega_9 + 6cs^2 + 10v_1^2 - 5v_1^2\omega_9 - 3\omega_9 cs^2)\tfrac{\rho v_1}{12\omega_9}$$

$$C_{\mathrm{D}_x^4 v_1}^{(0),\mathrm{CLBM2}} = (-4 + 2\omega_9 + 6cs^2 + 10v_1^2 - 5v_1^2\omega_9 - 3\omega_9 cs^2)\tfrac{\rho v_1}{12\omega_9}$$

$$C_{\mathrm{D}_x^4 v_1}^{(0),\mathrm{CuLBM1}} = (-4 - 3\omega_4 cs^2 + 10v_1^2 - 5v_1^2\omega_4 + 6cs^2 + 2\omega_4)\tfrac{\rho v_1}{12\omega_4}$$

$$C_{\mathrm{D}_x^4 v_1}^{(0),\mathrm{CuLBM2}} = (-15v_1^2\omega_1\omega_2 + 6\omega_1 cs^2 + 20v_1^2\omega_2 + 6\omega_1\omega_2 + 12cs^2\omega_2 - 4\omega_1 + 10v_1^2\omega_1 - 9\omega_1 cs^2\omega_2 - 8\omega_2)\tfrac{\rho v_1}{36\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0)}$ **at** $\frac{\partial^4 \rho}{\partial x_1^3 \partial x_2}$**:**

$$C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0),\mathrm{SRT}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0),\mathrm{MRT1}} = (3\omega_{12} cs^2 + \omega_9 - \omega_{12} - v_1^2\omega_9 + v_1^2\omega_{12} - 3\omega_9 cs^2)\tfrac{v_1 v_2}{4\omega_9\omega_{12}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0),\mathrm{MRT2}} = (\omega_9 - \omega_{12} - 3\omega_9 cs^2 - v_1^2\omega_9 + 3\omega_{12} cs^2 + v_1^2\omega_{12})\tfrac{v_1 v_2}{4\omega_9\omega_{12}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0),\mathrm{CLBM1}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0),\mathrm{CLBM2}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0),\mathrm{CuLBM1}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y \rho}^{(0),\mathrm{CuLBM2}} = (3\omega_1 cs^2 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\tfrac{v_1 v_2}{12\omega_1\omega_2}$$

coefficient $C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_y v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} = 0$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} = (\omega_{12}cs^2 + \omega_9 - \omega_{12} - 3v_1^2\omega_9 + 3v_1^2\omega_{12} - \omega_9 cs^2)\frac{\rho v_2}{4\omega_9\omega_{12}}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} = (\omega_9 - \omega_{12} - \omega_9 cs^2 - 3v_1^2\omega_9 + \omega_{12}cs^2 + 3v_1^2\omega_{12})\frac{\rho v_2}{4\omega_9\omega_{12}}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} = 0$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} = 0$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} = 0$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x^3 \mathrm{D}_y v_1} = (3\omega_1 cs^2 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{\rho v_2}{36\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_x^3 \mathrm{D}_y v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} = (2 + v_1^2\omega - 6cs^2 - 2v_1^2 - \omega + 3\omega cs^2)\frac{\rho v_1}{12\omega}$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} = (v_1^2\omega_{12}\omega_5 - 3\omega_9 cs^2\omega_5 + v_1^2\omega_9\omega_{12}\omega_5 - \omega_{12}\omega_5 + 3\omega_9\omega_5 - 6\omega_9\omega_{12}cs^2 + 3\omega_9\omega_{12}cs^2\omega_5 - 3v_1^2\omega_9\omega_5 - \omega_9\omega_{12}\omega_5 + 3\omega_{12}cs^2\omega_5)\frac{\rho v_1}{12\omega_9\omega_{12}\omega_5}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} = (-3\omega_9 cs^2\omega_5 + v_1^2\omega_{12}\omega_5 - 6\omega_9\omega_{12}cs^2 + v_1^2\omega_9\omega_{12}\omega_5 - \omega_{12}\omega_5 + 3\omega_9\omega_{12}cs^2\omega_5 + 3\omega_9\omega_5 + 3\omega_{12}cs^2\omega_5 - 3v_1^2\omega_9\omega_5 - \omega_9\omega_{12}\omega_5)\frac{\rho v_1}{12\omega_9\omega_{12}\omega_5}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} = (-\omega_9\omega_{12} + 3\omega_9 - \omega_{12} + 3\omega_{12}cs^2 + v_1^2\omega_9\omega_{12} - 3v_1^2\omega_9 + 3\omega_9\omega_{12}cs^2 - 9\omega_9 cs^2 + v_1^2\omega_{12})\frac{\rho v_1}{12\omega_9\omega_{12}}$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} = (-\omega_9\omega_{12} + 3\omega_9 - \omega_{12} + v_1^2\omega_9\omega_{12} + 3\omega_{12}cs^2 - 3v_1^2\omega_9 - 9\omega_9 cs^2 + v_1^2\omega_{12} + 3\omega_9\omega_{12}cs^2)\frac{\rho v_1}{12\omega_9\omega_{12}}$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} = (3\omega_9 cs^2 - \omega_9 - 9\omega_4 cs^2 + v_1^2\omega_9\omega_4 - \omega_9\omega_4 - 3v_1^2\omega_4 + 3\omega_9\omega_4 cs^2 + v_1^2\omega_9 + 3\omega_4)\frac{\rho v_1}{12\omega_9\omega_4}$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x^3 \mathrm{D}_y v_2} = (9\omega_3\omega_1\omega_2 + 18\omega_3\omega_4\omega_1 cs^2\omega_2 - 9v_1^2\omega_4\omega_1\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 + 6v_1^2\omega_3\omega_4\omega_1\omega_2 - 27\omega_3\omega_1 cs^2\omega_2 + 4v_1^2\omega_3\omega_4\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 12\omega_3\omega_4\omega_1 cs^2 - 8\omega_3\omega_4\omega_1 - 18v_2^2\omega_3\omega_4\omega_2 + 9\omega_4\omega_1\omega_2 - 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 + 18v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_1}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho}$ **at** $\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} = (-2 + \omega)\frac{cs^4}{6\omega}$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} = (-2 + \omega_5)\frac{cs^4}{6\omega_5}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} = (-2 + \omega_5)\frac{cs^4}{6\omega_5}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} = (-2 + \omega_5)\frac{cs^4}{6\omega_5}$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} = (-2 + \omega_5)\frac{cs^4}{6\omega_5}$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} = (-2 + \omega_1)\frac{cs^4}{6\omega_1}$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho} = (2\omega_1 cs^2 + 3v_2^2\omega_1 - 3v_1^2\omega_2 - 3v_2^2\omega_2 - 14cs^2\omega_2 - 2\omega_1 + 3v_1^2\omega_1 + 6\omega_1 cs^2\omega_2 + 2\omega_2)\frac{cs^2}{36\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} = 0$

$$C^{(0),\text{MRT1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} = (-\omega_{12} + \omega_5)\frac{\rho v_1 cs^2}{2\omega_{12}\omega_5}$$

$$C^{(0),\text{MRT2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} = (-\omega_{12} + \omega_5)\frac{\rho v_1 cs^2}{2\omega_{12}\omega_5}$$

$$C^{(0),\text{CLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} = 0$$

$$C^{(0),\text{CLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} = 0$$

$$C^{(0),\text{CuLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} = 0$$

$$C^{(0),\text{CuLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_1} = (3\omega_1 cs^2 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{\rho v_1}{36\omega_1\omega_2}$$

coefficient $C^{(0)}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2}$ at $\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2}$:

$$C^{(0),\text{SRT}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = 0$$

$$C^{(0),\text{MRT1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = (-\omega_{15} + \omega_5)\frac{\rho v_2 cs^2}{2\omega_{15}\omega_5}$$

$$C^{(0),\text{MRT2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = (-\omega_{15} + \omega_5)\frac{\rho v_2 cs^2}{2\omega_{15}\omega_5}$$

$$C^{(0),\text{CLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = 0$$

$$C^{(0),\text{CLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = 0$$

$$C^{(0),\text{CuLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = 0$$

$$C^{(0),\text{CuLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = (3\omega_1 cs^2 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{\rho v_2}{36\omega_1\omega_2}$$

coefficient $C^{(0)}_{\mathrm{D}_x \mathrm{D}_y^3 \rho}$ at $\frac{\partial^4 \rho}{\partial x_1 \partial x_2^3}$:

$$C^{(0),\text{SRT}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = 0$$

$$C^{(0),\text{MRT1}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = (-\omega_{15} + \omega_{15}v_2^2 + \omega_{10} - 3cs^2\omega_{10} - v_2^2\omega_{10} + 3\omega_{15}cs^2)\frac{v_1 v_2}{4\omega_{15}\omega_{10}}$$

$$C^{(0),\text{MRT2}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = (-\omega_{15} + \omega_{15}v_2^2 + 3\omega_{15}cs^2 + \omega_{10} - v_2^2\omega_{10} - 3\omega_{10}cs^2)\frac{v_1 v_2}{4\omega_{15}\omega_{10}}$$

$$C^{(0),\text{CLBM1}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = 0$$

$$C^{(0),\text{CLBM2}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = 0$$

$$C^{(0),\text{CuLBM1}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = 0$$

$$C^{(0),\text{CuLBM2}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = (3\omega_1 cs^2 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{v_1 v_2}{12\omega_1\omega_2}$$

coefficient $C^{(0)}_{\mathrm{D}_x \mathrm{D}_y^3 v_1}$ at $\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3}$:

$$C^{(0),\text{SRT}}_{\mathrm{D}_x \mathrm{D}_y^3 v_1} = (2 - 6cs^2 + v_2^2\omega - \omega - 2v_2^2 + 3\omega cs^2)\frac{\rho v_2}{12\omega}$$

$$C^{(0),\text{MRT1}}_{\mathrm{D}_x \mathrm{D}_y^3 v_1} =$$
$$(3\omega_{15}cs^2\omega_{10}\omega_5 + \omega_{15}v_2^2\omega_5 + 3\omega_{10}\omega_5 + \omega_{15}v_2^2\omega_{10}\omega_5 + 3\omega_{15}cs^2\omega_5 - 6\omega_{15}cs^2\omega_{10} - 3v_2^2\omega_{10}\omega_5 - \omega_{15}\omega_5 - \omega_{15}\omega_{10}\omega_5 - 3cs^2\omega_{10}\omega_5)\frac{\rho v_2}{12\omega_{15}\omega_{10}\omega_5}$$

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$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_1} =$

$(3\omega_{15}\omega_{10}cs^2\omega_5 + \omega_{15}v_2^2\omega_5 + 3\omega_{15}cs^2\omega_5 + 3\omega_{10}\omega_5 + \omega_{15}v_2^2\omega_{10}\omega_5 - 6\omega_{15}\omega_{10}cs^2 - 3v_2^2\omega_{10}\omega_5 - 3\omega_{10}cs^2\omega_5 - \omega_{15}\omega_5 - \omega_{15}\omega_{10}\omega_5)\frac{\rho v_2}{12\omega_{15}\omega_{10}\omega_5}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^3 v_1} = (-\omega_{15} - 9\omega_{10}cs^2 + \omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10} + 3\omega_{10} - \omega_{15}\omega_{10} - 3v_2^2\omega_{10} + 3\omega_{15}\omega_{10}cs^2 + 3\omega_{15}cs^2)\frac{\rho v_2}{12\omega_{15}\omega_{10}}$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_1} = (-\omega_{15} - 9cs^2\omega_{10} + \omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10} + 3\omega_{10} + 3\omega_{15}cs^2 - \omega_{15}\omega_{10} - 3v_2^2\omega_{10} + 3\omega_{15}cs^2\omega_{10})\frac{\rho v_2}{12\omega_{15}\omega_{10}}$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^3 v_1} = (-\omega_7\omega_5 - 9cs^2\omega_5 - \omega_7 + v_2^2\omega_7 + 3\omega_7cs^2 - 3v_2^2\omega_5 + 3\omega_7cs^2\omega_5 + v_2^2\omega_7\omega_5 + 3\omega_5)\frac{\rho v_2}{12\omega_7\omega_5}$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_1} = (9\omega_3\omega_1\omega_2 + 18\omega_3\omega_4\omega_1cs^2\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 - 27\omega_3\omega_1cs^2\omega_2 - 18v_1^2\omega_3\omega_4\omega_2 - 27\omega_4\omega_1cs^2\omega_2 + 12\omega_3\omega_4\omega_1cs^2 - 8\omega_3\omega_4\omega_1 + 4v_2^2\omega_3\omega_4\omega_2 + 6v_2^2\omega_3\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 - 9v_2^2\omega_3\omega_1\omega_2 + 18v_1^2\omega_3\omega_4\omega_1 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 6\omega_3\omega_4cs^2\omega_2)\frac{\rho v_2}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_x\mathrm{D}_y^3 v_2}$ at $\frac{\partial^4 v_2}{\partial x_1\partial x_2^3}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = 0$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = (-\omega_{15} + 3\omega_{15}v_2^2 + \omega_{10} - cs^2\omega_{10} - 3v_2^2\omega_{10} + \omega_{15}cs^2)\frac{\rho v_1}{4\omega_{15}\omega_{10}}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = (-\omega_{15} + 3\omega_{15}v_2^2 + \omega_{15}cs^2 + \omega_{10} - 3v_2^2\omega_{10} - \omega_{10}cs^2)\frac{\rho v_1}{4\omega_{15}\omega_{10}}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = 0$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = 0$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = 0$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = (3\omega_1cs^2 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{\rho v_1}{36\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_y^4\rho}$ at $\frac{\partial^4\rho}{\partial x_2^4}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_y^4\rho} = (-12v_2^2\omega cs^2 - \omega cs^4 + 6v_2^4 - 2cs^2 - 3v_2^4\omega + 2cs^4 + 3v_2^2\omega - 6v_2^2 + \omega cs^2 + 24v_2^2cs^2)\frac{1}{24\omega}$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_y^4\rho} = (-3v_2^4\omega_{10} + 6v_2^4 - cs^4\omega_{10} - 12v_2^2cs^2\omega_{10} - 2cs^2 + cs^2\omega_{10} + 2cs^4 + 3v_2^2\omega_{10} + 24v_2^2cs^2 - 6v_2^2)\frac{1}{24\omega_{10}}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_y^4\rho} = (-3v_2^4\omega_{10} + 6v_2^4 + 2cs^4 + 24v_2^2cs^2 - 12v_2^2\omega_{10}cs^2 - \omega_{10}cs^4 + 3v_2^2\omega_{10} + \omega_{10}cs^2 - 6v_2^2 - 2cs^2)\frac{1}{24\omega_{10}}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_y^4\rho} = (-3v_2^4\omega_{10} + \omega_{10}cs^2 + 6v_2^4 - 2cs^2 + 2cs^4 + 3v_2^2\omega_{10} - 12v_2^2\omega_{10}cs^2 - \omega_{10}cs^4 - 6v_2^2 + 24v_2^2cs^2)\frac{1}{24\omega_{10}}$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_y^4\rho} = (-3v_2^4\omega_{10} + cs^2\omega_{10} - 2cs^2 + 6v_2^4 + 24v_2^2cs^2 - cs^4\omega_{10} + 3v_2^2\omega_{10} - 6v_2^2 - 12v_2^2cs^2\omega_{10} + 2cs^4)\frac{1}{24\omega_{10}}$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_y^4\rho} = (-3v_2^4\omega_5 + 24v_2^2cs^2 + 6v_2^4 + 2cs^4 + cs^2\omega_5 - 2cs^2 - 12v_2^2cs^2\omega_5 + 3v_2^2\omega_5 - cs^4\omega_5 - 6v_2^2)\frac{1}{24\omega_5}$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_y^4\rho} = (-2\omega_1cs^2 - 6v_2^2\omega_1 + 12v_2^4\omega_2 + 4cs^4\omega_2 - 3\omega_1cs^4\omega_2 - 36v_2^2\omega_1cs^2\omega_2 + 48v_2^2cs^2\omega_2 + 9v_2^2\omega_1\omega_2 + 6v_2^4\omega_1 - 12v_2^2\omega_2 - 4cs^2\omega_2 + 24v_2^2\omega_1cs^2 - 9v_2^4\omega_1\omega_2 + 2\omega_1cs^4 + 3\omega_1cs^2\omega_2)\frac{1}{72\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_y^4 v_2}$ at $\frac{\partial^4 v_2}{\partial x_2^4}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_y^4 v_2} = (-4 + 6cs^2 - 5v_2^2\omega + 2\omega + 10v_2^2 - 3\omega cs^2)\frac{\rho v_2}{12\omega}$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_y^4 v_2} = (-4 + 2\omega_{10} + 6cs^2 - 3cs^2\omega_{10} - 5v_2^2\omega_{10} + 10v_2^2)\frac{\rho v_2}{12\omega_{10}}$

$$C_{\mathrm{D}_y^4 v_2}^{(0),\mathrm{MRT2}} = (-4 + 2\omega_{10} - 5v_2^2\omega_{10} - 3\omega_{10}cs^2 + 10v_2^2 + 6cs^2)\frac{\rho v_2}{12\omega_{10}}$$

$$C_{\mathrm{D}_y^4 v_2}^{(0),\mathrm{CLBM1}} = (-4 - 3\omega_{10}cs^2 + 6cs^2 + 2\omega_{10} - 5v_2^2\omega_{10} + 10v_2^2)\frac{\rho v_2}{12\omega_{10}}$$

$$C_{\mathrm{D}_y^4 v_2}^{(0),\mathrm{CLBM2}} = (-4 - 3cs^2\omega_{10} + 6cs^2 + 2\omega_{10} - 5v_2^2\omega_{10} + 10v_2^2)\frac{\rho v_2}{12\omega_{10}}$$

$$C_{\mathrm{D}_y^4 v_2}^{(0),\mathrm{CuLBM1}} = (-4 - 3cs^2\omega_5 + 6cs^2 - 5v_2^2\omega_5 + 10v_2^2 + 2\omega_5)\frac{\rho v_2}{12\omega_5}$$

$$C_{\mathrm{D}_y^4 v_2}^{(0),\mathrm{CuLBM2}} = (6\omega_1 cs^2 + 10v_2^2\omega_1 + 6\omega_1\omega_2 - 15v_2^2\omega_1\omega_2 + 20v_2^2\omega_2 + 12cs^2\omega_2 - 4\omega_1 - 9\omega_1 cs^2\omega_2 - 8\omega_2)\frac{\rho v_2}{36\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0)}$ at $\frac{\partial^4 \rho}{\partial x_1^3 \partial x_3}$:

$$C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0),\mathrm{SRT}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0),\mathrm{MRT1}} = (\omega_9 + v_1^2\omega_{13} - \omega_{13} - v_1^2\omega_9 + 3cs^2\omega_{13} - 3\omega_9 cs^2)\frac{v_1 v_3}{4\omega_9\omega_{13}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0),\mathrm{MRT2}} = (\omega_9 + v_1^2\omega_{13} - \omega_{13} - 3\omega_9 cs^2 - v_1^2\omega_9 + 3\omega_{13}cs^2)\frac{v_1 v_3}{4\omega_9\omega_{13}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0),\mathrm{CLBM1}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0),\mathrm{CLBM2}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0),\mathrm{CuLBM1}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z \rho}^{(0),\mathrm{CuLBM2}} = (3\omega_1 cs^2 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{v_1 v_3}{12\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0)}$ at $\frac{\partial^4 v_1}{\partial x_1^3 \partial x_3}$:

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0),\mathrm{SRT}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0),\mathrm{MRT1}} = (\omega_9 + 3v_1^2\omega_{13} - \omega_{13} - 3v_1^2\omega_9 + cs^2\omega_{13} - \omega_9 cs^2)\frac{\rho v_3}{4\omega_9\omega_{13}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0),\mathrm{MRT2}} = (\omega_9 + 3v_1^2\omega_{13} - \omega_{13} - \omega_9 cs^2 - 3v_1^2\omega_9 + \omega_{13}cs^2)\frac{\rho v_3}{4\omega_9\omega_{13}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0),\mathrm{CLBM1}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0),\mathrm{CLBM2}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0),\mathrm{CuLBM1}} = 0$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_1}^{(0),\mathrm{CuLBM2}} = (3\omega_1 cs^2 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{\rho v_3}{36\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(0)}$ at $\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3}$:

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(0),\mathrm{SRT}} = (2 + v_1^2\omega - 6cs^2 - 2v_1^2 - \omega + 3\omega cs^2)\frac{\rho v_1}{12\omega}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(0),\mathrm{MRT1}} = (3\omega_9\omega_6 - 6\omega_9 cs^2\omega_{13} + v_1^2\omega_6\omega_{13} - 3v_1^2\omega_9\omega_6 + v_1^2\omega_9\omega_6\omega_{13} - \omega_6\omega_{13} - 3\omega_9\omega_6 cs^2 + 3\omega_6 cs^2\omega_{13} - \omega_9\omega_6\omega_{13} + 3\omega_9\omega_6 cs^2\omega_{13})\frac{\rho v_1}{12\omega_9\omega_6\omega_{13}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(0),\mathrm{MRT2}} = (3\omega_9\omega_6 - 3\omega_9\omega_6 cs^2 + v_1^2\omega_6\omega_{13} - 3v_1^2\omega_9\omega_6 + v_1^2\omega_9\omega_6\omega_{13} - \omega_6\omega_{13} - 6\omega_9\omega_{13}cs^2 + 3\omega_9\omega_6\omega_{13}cs^2 - \omega_9\omega_6\omega_{13} + 3\omega_6\omega_{13}cs^2)\frac{\rho v_1}{12\omega_9\omega_6\omega_{13}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(0),\mathrm{CLBM1}} = (3\omega_9 + v_1^2\omega_{13} + 3\omega_{13}cs^2 - \omega_{13} - 3v_1^2\omega_9 - \omega_9\omega_{13} + 3\omega_9\omega_{13}cs^2 - 9\omega_9 cs^2 + v_1^2\omega_9\omega_{13})\frac{\rho v_1}{12\omega_9\omega_{13}}$$

$$C^{(0),\text{CLBM2}}_{\text{D}^3_x\text{D}_z v_3} = (3\omega_9 + 3cs^2\omega_{13} + v_1^2\omega_{13} - \omega_{13} - 3v_1^2\omega_9 - \omega_9\omega_{13} + 3\omega_9 cs^2\omega_{13} - 9\omega_9 cs^2 + v_1^2\omega_9\omega_{13})\frac{\rho v_1}{12\omega_9\omega_{13}}$$

$$C^{(0),\text{CuLBM1}}_{\text{D}^3_x\text{D}_z v_3} = (-\omega_{12} - 9\omega_4 cs^2 + 3\omega_{12}\omega_4 cs^2 - 3v_1^2\omega_4 + 3\omega_4 - \omega_{12}\omega_4 + v_1^2\omega_{12}\omega_4 + v_1^2\omega_{12} + 3\omega_{12}cs^2)\frac{\rho v_1}{12\omega_{12}\omega_4}$$

$$C^{(0),\text{CuLBM2}}_{\text{D}^3_x\text{D}_z v_3} = (9\omega_3\omega_1\omega_2 - 18v_3^2\omega_3\omega_4\omega_2 + 18\omega_3\omega_4\omega_1 cs^2\omega_2 - 9v_1^2\omega_4\omega_1\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 + 6v_1^2\omega_3\omega_4\omega_1\omega_2 - 27\omega_3\omega_1 cs^2\omega_2 + 4v_1^2\omega_3\omega_4\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 12\omega_3\omega_4\omega_1 cs^2 - 8\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 + 18v_3^2\omega_3\omega_4\omega_1 - 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_1}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(0)}_{\text{D}^2_x\text{D}_y\text{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3}$:

$$C^{(0),\text{SRT}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(0),\text{MRT1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = (-\omega_8 + \omega_5)\frac{\rho v_3 cs^2}{2\omega_8\omega_5}$$

$$C^{(0),\text{MRT2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = (-\omega_8 + \omega_5)\frac{\rho v_3 cs^2}{2\omega_8\omega_5}$$

$$C^{(0),\text{CLBM1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(0),\text{CLBM2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(0),\text{CuLBM1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(0),\text{CuLBM2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = (-9\omega_3\omega_1\omega_2 - 2v_3^2\omega_3\omega_4\omega_2 + 27\omega_3\omega_1 cs^2\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 6\omega_3\omega_4\omega_1 cs^2 - 2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 + 9v_3^2\omega_3\omega_1\omega_2 + 2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_3}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(0)}_{\text{D}^2_x\text{D}_y\text{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3}$:

$$C^{(0),\text{SRT}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(0),\text{MRT1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = (\omega_6 - \omega_8)\frac{\rho v_2 cs^2}{2\omega_6\omega_8}$$

$$C^{(0),\text{MRT2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = (\omega_6 - \omega_8)\frac{\rho v_2 cs^2}{2\omega_6\omega_8}$$

$$C^{(0),\text{CLBM1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(0),\text{CLBM2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(0),\text{CuLBM1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(0),\text{CuLBM2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = (-9\omega_3\omega_1\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 + 27\omega_3\omega_1 cs^2\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 6\omega_3\omega_4\omega_1 cs^2 - 2\omega_3\omega_4\omega_1 - 2v_2^2\omega_3\omega_4\omega_2 + 9\omega_4\omega_1\omega_2 + 9v_2^2\omega_3\omega_1\omega_2 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_2}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(0)}_{\text{D}_x\text{D}^2_y\text{D}_z v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3}$:

$$C^{(0),\text{SRT}}_{\text{D}_x\text{D}^2_y\text{D}_z v_1} = 0$$

$$C^{(0),\text{MRT1}}_{\text{D}_x\text{D}^2_y\text{D}_z v_1} = (-\omega_8 + \omega_5)\frac{\rho v_3 cs^2}{2\omega_8\omega_5}$$

$$C^{(0),\text{MRT2}}_{\text{D}_x\text{D}^2_y\text{D}_z v_1} = (-\omega_8 + \omega_5)\frac{\rho v_3 cs^2}{2\omega_8\omega_5}$$

$$C^{(0),\text{CLBM1}}_{\text{D}_x\text{D}^2_y\text{D}_z v_1} = 0$$

$C^{(0),\text{CLBM2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_1} = 0$

$C^{(0),\text{CuLBM1}}_{\text{D}_x\text{D}_y^2\text{D}_z v_1} = 0$

$C^{(0),\text{CuLBM2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_1} = (-9\omega_3\omega_1\omega_2 - 2v_3^2\omega_3\omega_4\omega_2 + 27\omega_3\omega_1 cs^2\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 6\omega_3\omega_4\omega_1 cs^2 - 2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 + 9v_3^2\omega_3\omega_1\omega_2 + 2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_3}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(0)}_{\text{D}_x\text{D}_y^2\text{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3}$**:**

$C^{(0),\text{SRT}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = 0$

$C^{(0),\text{MRT1}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (\omega_7 - \omega_8)\frac{\rho v_1 cs^2}{2\omega_7\omega_8}$

$C^{(0),\text{MRT2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (\omega_7 - \omega_8)\frac{\rho v_1 cs^2}{2\omega_7\omega_8}$

$C^{(0),\text{CLBM1}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = 0$

$C^{(0),\text{CLBM2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = 0$

$C^{(0),\text{CuLBM1}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = 0$

$C^{(0),\text{CuLBM2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (-9\omega_3\omega_1\omega_2 - 9v_1^2\omega_4\omega_1\omega_2 + 27\omega_3\omega_1 cs^2\omega_2 - 2v_1^2\omega_3\omega_4\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 6\omega_3\omega_4\omega_1 cs^2 - 2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 + 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_1}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(0)}_{\text{D}_y^3\text{D}_z \rho}$ **at** $\frac{\partial^4 \rho}{\partial x_2^3 \partial x_3}$**:**

$C^{(0),\text{SRT}}_{\text{D}_y^3\text{D}_z \rho} = 0$

$C^{(0),\text{MRT1}}_{\text{D}_y^3\text{D}_z \rho} = (-\omega_{16} + \omega_{10} + 3cs^2\omega_{16} - 3cs^2\omega_{10} + v_2^2\omega_{16} - v_2^2\omega_{10})\frac{v_2 v_3}{4\omega_{16}\omega_{10}}$

$C^{(0),\text{MRT2}}_{\text{D}_y^3\text{D}_z \rho} = (-\omega_{16} + \omega_{10} + 3\omega_{16}cs^2 + v_2^2\omega_{16} - v_2^2\omega_{10} - 3\omega_{10}cs^2)\frac{v_2 v_3}{4\omega_{16}\omega_{10}}$

$C^{(0),\text{CLBM1}}_{\text{D}_y^3\text{D}_z \rho} = 0$

$C^{(0),\text{CLBM2}}_{\text{D}_y^3\text{D}_z \rho} = 0$

$C^{(0),\text{CuLBM1}}_{\text{D}_y^3\text{D}_z \rho} = 0$

$C^{(0),\text{CuLBM2}}_{\text{D}_y^3\text{D}_z \rho} = (3\omega_1 cs^2 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{v_2 v_3}{12\omega_1\omega_2}$

coefficient $C^{(0)}_{\text{D}_y^3\text{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_2^3 \partial x_3}$**:**

$C^{(0),\text{SRT}}_{\text{D}_y^3\text{D}_z v_2} = 0$

$C^{(0),\text{MRT1}}_{\text{D}_y^3\text{D}_z v_2} = (-\omega_{16} + \omega_{10} + cs^2\omega_{16} - cs^2\omega_{10} + 3v_2^2\omega_{16} - 3v_2^2\omega_{10})\frac{\rho v_3}{4\omega_{16}\omega_{10}}$

$C^{(0),\text{MRT2}}_{\text{D}_y^3\text{D}_z v_2} = (-\omega_{16} + \omega_{10} + \omega_{16}cs^2 + 3v_2^2\omega_{16} - 3v_2^2\omega_{10} - \omega_{10}cs^2)\frac{\rho v_3}{4\omega_{16}\omega_{10}}$

$C^{(0),\text{CLBM1}}_{\text{D}_y^3\text{D}_z v_2} = 0$

$$C^{(0),\text{CLBM2}}_{\mathrm{D}_y^3\mathrm{D}_z v_2} = 0$$

$$C^{(0),\text{CuLBM1}}_{\mathrm{D}_y^3\mathrm{D}_z v_2} = 0$$

$$C^{(0),\text{CuLBM2}}_{\mathrm{D}_y^3\mathrm{D}_z v_2} = (3\omega_1 cs^2 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{\rho v_3}{36\omega_1\omega_2}$$

coefficient $C^{(0)}_{\mathrm{D}_y^3\mathrm{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3}$:

$$C^{(0),\text{SRT}}_{\mathrm{D}_y^3\mathrm{D}_z v_3} = (2 - 6cs^2 + v_2^2\omega - \omega - 2v_2^2 + 3\omega cs^2)\frac{\rho v_2}{12\omega}$$

$$C^{(0),\text{MRT1}}_{\mathrm{D}_y^3\mathrm{D}_z v_3} =$$
$$(3cs^2\omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_7 + 3\omega_{10}\omega_7 + v_2^2\omega_{16}\omega_7 + v_2^2\omega_{16}\omega_{10}\omega_7 - 3v_2^2\omega_{10}\omega_7 + 3cs^2\omega_{16}\omega_7 - 3cs^2\omega_{10}\omega_7 - 6cs^2\omega_{16}\omega_{10})\frac{\rho v_2}{12\omega_{16}\omega_{10}\omega_7}$$

$$C^{(0),\text{MRT2}}_{\mathrm{D}_y^3\mathrm{D}_z v_3} =$$
$$(-\omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_7 + 3\omega_{10}\omega_7 + 3\omega_{16}\omega_{10}\omega_7 cs^2 + v_2^2\omega_{16}\omega_7 + v_2^2\omega_{16}\omega_{10}\omega_7 + 3\omega_{16}\omega_7 cs^2 - 3v_2^2\omega_{10}\omega_7 - 3\omega_{10}\omega_7 cs^2 - 6\omega_{16}\omega_{10}cs^2)\frac{\rho v_2}{12\omega_{16}\omega_{10}\omega_7}$$

$$C^{(0),\text{CLBM1}}_{\mathrm{D}_y^3\mathrm{D}_z v_3} = (-9\omega_{10}cs^2 + 3\omega_{16}cs^2 + 3\omega_{16}\omega_{10}cs^2 - \omega_{16} + 3\omega_{10} - \omega_{16}\omega_{10} + v_2^2\omega_{16}\omega_{10} + v_2^2\omega_{16} - 3v_2^2\omega_{10})\frac{\rho v_2}{12\omega_{16}\omega_{10}}$$

$$C^{(0),\text{CLBM2}}_{\mathrm{D}_y^3\mathrm{D}_z v_3} = (-9cs^2\omega_{10} + 3cs^2\omega_{16} - \omega_{16} + 3\omega_{10} - \omega_{16}\omega_{10} + 3cs^2\omega_{16}\omega_{10} + v_2^2\omega_{16}\omega_{10} + v_2^2\omega_{16} - 3v_2^2\omega_{10})\frac{\rho v_2}{12\omega_{16}\omega_{10}}$$

$$C^{(0),\text{CuLBM1}}_{\mathrm{D}_y^3\mathrm{D}_z v_3} = (-\omega_{11}\omega_5 + v_2^2\omega_{11} + 3cs^2\omega_{11}\omega_5 - 9cs^2\omega_5 - 3v_2^2\omega_5 - \omega_{11} + 3cs^2\omega_{11} + v_2^2\omega_{11}\omega_5 + 3\omega_5)\frac{\rho v_2}{12\omega_{11}\omega_5}$$

$$C^{(0),\text{CuLBM2}}_{\mathrm{D}_y^3\mathrm{D}_z v_3} = (9\omega_3\omega_1\omega_2 - 18v_3^2\omega_3\omega_4\omega_2 + 18\omega_3\omega_4\omega_1 cs^2\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 - 27\omega_3\omega_1 cs^2\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 12\omega_3\omega_4\omega_1 cs^2 -$$
$$8\omega_3\omega_4\omega_1 + 4v_2^2\omega_3\omega_4\omega_2 + 6v_2^2\omega_3\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 - 9v_2^2\omega_3\omega_1\omega_2 + 18v_3^2\omega_3\omega_4\omega_1 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_2}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(0)}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2}$:

$$C^{(0),\text{SRT}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (-2+\omega)\frac{cs^4}{6\omega}$$

$$C^{(0),\text{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (-2+\omega_6)\frac{cs^4}{6\omega_6}$$

$$C^{(0),\text{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (-2+\omega_6)\frac{cs^4}{6\omega_6}$$

$$C^{(0),\text{CLBM1}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (-2+\omega_6)\frac{cs^4}{6\omega_6}$$

$$C^{(0),\text{CLBM2}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (-2+\omega_6)\frac{cs^4}{6\omega_6}$$

$$C^{(0),\text{CuLBM1}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (-2+\omega_2)\frac{cs^4}{6\omega_2}$$

$$C^{(0),\text{CuLBM2}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (2\omega_1 cs^2 - 3v_1^2\omega_2 + 3v_3^2\omega_1 - 14cs^2\omega_2 - 2\omega_1 - 3v_3^2\omega_2 + 3v_1^2\omega_1 + 6\omega_1 cs^2\omega_2 + 2\omega_2)\frac{cs^2}{36\omega_1\omega_2}$$

coefficient $C^{(0)}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2}$:

$$C^{(0),\text{SRT}}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1} = 0$$

$$C^{(0),\text{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1} = (\omega_6 - \omega_{13})\frac{\rho v_1 cs^2}{2\omega_6\omega_{13}}$$

$$C^{(0),\text{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1} = (\omega_6 - \omega_{13})\frac{\rho v_1 cs^2}{2\omega_6\omega_{13}}$$

$$C^{(0),\text{CLBM1}}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1} = 0$$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_1}^{(0),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_1}^{(0),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_1}^{(0),\mathrm{CuLBM2}} = (3\omega_1 cs^2 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{\rho v_1}{36\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0)}$ **at** $\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2}$:

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0),\mathrm{MRT1}} = (-\omega_{18} + \omega_6)\frac{\rho v_3 cs^2}{2\omega_{18}\omega_6}$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0),\mathrm{MRT2}} = (-\omega_{18} + \omega_6)\frac{\rho v_3 cs^2}{2\omega_{18}\omega_6}$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3}^{(0),\mathrm{CuLBM2}} = (3\omega_1 cs^2 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{\rho v_3}{36\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0)}$ **at** $\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2}$:

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0),\mathrm{MRT1}} = (\omega_6 - \omega_8)\frac{\rho v_2 cs^2}{2\omega_6\omega_8}$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0),\mathrm{MRT2}} = (\omega_6 - \omega_8)\frac{\rho v_2 cs^2}{2\omega_6\omega_8}$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1}^{(0),\mathrm{CuLBM2}} = (-9\omega_3\omega_1\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 + 27\omega_3\omega_1 cs^2\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 6\omega_3\omega_4\omega_1 cs^2 - 2\omega_3\omega_4\omega_1 - 2v_2^2\omega_3\omega_4\omega_2 + 9\omega_4\omega_1\omega_2 + 9v_2^2\omega_3\omega_1\omega_2 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_2}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0)}$ **at** $\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2}$:

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{MRT1}} = (\omega_7 - \omega_8)\frac{\rho v_1 cs^2}{2\omega_7\omega_8}$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{MRT2}} = (\omega_7 - \omega_8)\frac{\rho v_1 cs^2}{2\omega_7\omega_8}$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(0),\mathrm{CuLBM1}} = 0$

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$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_2}^{(0),\mathrm{CuLBM2}} = (-9\omega_3\omega_1\omega_2 - 9v_1^2\omega_4\omega_1\omega_2 + 27\omega_3\omega_1 cs^2\omega_2 - 2v_1^2\omega_3\omega_4\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 6\omega_3\omega_4\omega_1 cs^2 - 2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 + 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_1}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0)}$ **at** $\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2}$**:**

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0),\mathrm{SRT}} = (-2+\omega)\frac{cs^4}{6\omega}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0),\mathrm{MRT1}} = (-2+\omega_7)\frac{cs^4}{6\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0),\mathrm{MRT2}} = (-2+\omega_7)\frac{cs^4}{6\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0),\mathrm{CLBM1}} = (-2+\omega_7)\frac{cs^4}{6\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0),\mathrm{CLBM2}} = (-2+\omega_7)\frac{cs^4}{6\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0),\mathrm{CuLBM1}} = (-2+\omega_3)\frac{cs^4}{6\omega_3}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(0),\mathrm{CuLBM2}} = (2\omega_1 cs^2 + 3v_2^2\omega_1 + 3v_3^2\omega_1 - 3v_2^2\omega_2 - 14cs^2\omega_2 - 2\omega_1 - 3v_3^2\omega_2 + 6\omega_1 cs^2\omega_2 + 2\omega_2)\frac{cs^2}{36\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0)}$ **at** $\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2}$**:**

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0),\mathrm{MRT1}} = (-\omega_{16}+\omega_7)\frac{\rho v_2 cs^2}{2\omega_{16}\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0),\mathrm{MRT2}} = (-\omega_{16}+\omega_7)\frac{\rho v_2 cs^2}{2\omega_{16}\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}^{(0),\mathrm{CuLBM2}} = (3\omega_1 cs^2 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{\rho v_2}{36\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0)}$ **at** $\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2}$**:**

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0),\mathrm{MRT1}} = (-\omega_{19}+\omega_7)\frac{\rho v_3 cs^2}{2\omega_{19}\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0),\mathrm{MRT2}} = (-\omega_{19}+\omega_7)\frac{\rho v_3 cs^2}{2\omega_{19}\omega_7}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(0),\mathrm{CuLBM2}} = (3\omega_1 cs^2 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{\rho v_3}{36\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_x\mathrm{D}_z^3\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1\partial x_3^3}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = 0$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = (-\omega_{18} + \omega_{18}v_3^2 - 3cs^2\omega_{11} - v_3^2\omega_{11} + 3\omega_{18}cs^2 + \omega_{11})\frac{v_1v_3}{4\omega_{18}\omega_{11}}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = (-\omega_{18} + 3\omega_{18}cs^2 - 3cs^2\omega_{11} + \omega_{18}v_3^2 - v_3^2\omega_{11} + \omega_{11})\frac{v_1v_3}{4\omega_{18}\omega_{11}}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = 0$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = 0$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = 0$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = (3\omega_1cs^2 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{v_1v_3}{12\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_x\mathrm{D}_z^3v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1\partial x_3^3}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_z^3v_1} = (2 - 6cs^2 + v_3^2\omega - 2v_3^2 - \omega + 3\omega cs^2)\frac{\rho v_3}{12\omega}$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_z^3v_1} =$
$(-3\omega_6cs^2\omega_{11} + 3\omega_{18}\omega_6cs^2 - 6\omega_{18}cs^2\omega_{11} - 3\omega_6v_3^2\omega_{11} - \omega_{18}\omega_6 + 3\omega_{18}\omega_6cs^2\omega_{11} - \omega_{18}\omega_6\omega_{11} + \omega_{18}\omega_6v_3^2 + 3\omega_6\omega_{11} + \omega_{18}\omega_6v_3^2\omega_{11})\frac{\rho v_3}{12\omega_{18}\omega_6\omega_{11}}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_z^3v_1} =$
$(-3\omega_6cs^2\omega_{11} - 6\omega_{18}cs^2\omega_{11} - 3\omega_6v_3^2\omega_{11} - \omega_{18}\omega_6 - \omega_{18}\omega_6\omega_{11} + 3\omega_{18}\omega_6cs^2\omega_{11} + \omega_{18}\omega_6v_3^2 + 3\omega_6\omega_{11} + 3\omega_{18}\omega_6cs^2 + \omega_{18}\omega_6v_3^2\omega_{11})\frac{\rho v_3}{12\omega_{18}\omega_6\omega_{11}}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3v_1} = (-\omega_{18} + \omega_{18}v_3^2\omega_{11} + 3\omega_{18}\omega_{11}cs^2 + \omega_{18}v_3^2 - 9\omega_{11}cs^2 - 3v_3^2\omega_{11} - \omega_{18}\omega_{11} + 3\omega_{18}cs^2 + 3\omega_{11})\frac{\rho v_3}{12\omega_{18}\omega_{11}}$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3v_1} = (-\omega_{18} + \omega_{18}v_3^2\omega_{11} + \omega_{18}v_3^2 - 3v_3^2\omega_{11} - \omega_{18}\omega_{11} - 9cs^2\omega_{11} + 3\omega_{11} + 3\omega_{18}cs^2\omega_{11} + 3\omega_{18}cs^2)\frac{\rho v_3}{12\omega_{18}\omega_{11}}$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3v_1} = (-\omega_6\omega_8 + 3\omega_6cs^2\omega_8 + 3cs^2\omega_8 + 3\omega_6 - 3\omega_6v_3^2 + \omega_6v_3^2\omega_8 + v_3^2\omega_8 - \omega_8 - 9\omega_6cs^2)\frac{\rho v_3}{12\omega_6\omega_8}$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3v_1} = (9\omega_3\omega_1\omega_2 + 4v_3^2\omega_3\omega_4\omega_2 + 18\omega_3\omega_4\omega_1cs^2\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 27\omega_3\omega_1cs^2\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 18v_1^2\omega_3\omega_4\omega_2 - 27\omega_4\omega_1cs^2\omega_2 + 12\omega_3\omega_4\omega_1cs^2 - 8\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 + 6v_3^2\omega_3\omega_4\omega_1\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 - 9v_3^2\omega_3\omega_1\omega_2 + 18v_1^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 6\omega_3\omega_4cs^2\omega_2)\frac{\rho v_3}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_x\mathrm{D}_z^3v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1\partial x_3^3}$:

$C^{(0),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_z^3v_3} = 0$

$C^{(0),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_z^3v_3} = (-\omega_{18} + 3\omega_{18}v_3^2 - cs^2\omega_{11} - 3v_3^2\omega_{11} + \omega_{18}cs^2 + \omega_{11})\frac{\rho v_1}{4\omega_{18}\omega_{11}}$

$C^{(0),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_z^3v_3} = (-\omega_{18} + \omega_{18}cs^2 - cs^2\omega_{11} + 3\omega_{18}v_3^2 - 3v_3^2\omega_{11} + \omega_{11})\frac{\rho v_1}{4\omega_{18}\omega_{11}}$

$C^{(0),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3v_3} = 0$

$C^{(0),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3v_3} = 0$

$C^{(0),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3v_3} = 0$

$C^{(0),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3v_3} = (3\omega_1cs^2 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{\rho v_1}{36\omega_1\omega_2}$

coefficient $C^{(0)}_{\mathrm{D}_y\mathrm{D}_z^3\rho}$ **at** $\frac{\partial^4\rho}{\partial x_2\partial x_3^3}$:

$$C^{(0),\text{SRT}}_{\text{D}_y\text{D}_z^3\rho} = 0$$

$$C^{(0),\text{MRT1}}_{\text{D}_y\text{D}_z^3\rho} = (-3cs^2\omega_{11} - v_3^2\omega_{11} - \omega_{19} + v_3^2\omega_{19} + \omega_{11} + 3\omega_{19}cs^2)\frac{v_2 v_3}{4\omega_{19}\omega_{11}}$$

$$C^{(0),\text{MRT2}}_{\text{D}_y\text{D}_z^3\rho} = (-3cs^2\omega_{11} - v_3^2\omega_{11} + 3\omega_{19}cs^2 - \omega_{19} + v_3^2\omega_{19} + \omega_{11})\frac{v_2 v_3}{4\omega_{19}\omega_{11}}$$

$$C^{(0),\text{CLBM1}}_{\text{D}_y\text{D}_z^3\rho} = 0$$

$$C^{(0),\text{CLBM2}}_{\text{D}_y\text{D}_z^3\rho} = 0$$

$$C^{(0),\text{CuLBM1}}_{\text{D}_y\text{D}_z^3\rho} = 0$$

$$C^{(0),\text{CuLBM2}}_{\text{D}_y\text{D}_z^3\rho} = (3\omega_1 cs^2 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{v_2 v_3}{12\omega_1\omega_2}$$

coefficient $C^{(0)}_{\text{D}_y\text{D}_z^3 v_2}$ at $\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3}$:

$$C^{(0),\text{SRT}}_{\text{D}_y\text{D}_z^3 v_2} = (2 - 6cs^2 + v_3^2\omega - 2v_3^2 - \omega + 3\omega cs^2)\frac{\rho v_3}{12\omega}$$

$$C^{(0),\text{MRT1}}_{\text{D}_y\text{D}_z^3 v_2} =$$
$$(-3cs^2\omega_7\omega_{11} - \omega_{19}\omega_7\omega_{11} + 3\omega_{19}cs^2\omega_7 - \omega_{19}\omega_7 + 3\omega_7\omega_{11} + v_3^2\omega_{19}\omega_7\omega_{11} + 3\omega_{19}cs^2\omega_7\omega_{11} - 3v_3^2\omega_7\omega_{11} + v_3^2\omega_{19}\omega_7 - 6\omega_{19}cs^2\omega_{11})\frac{\rho v_3}{12\omega_{19}\omega_7\omega_{11}}$$

$$C^{(0),\text{MRT2}}_{\text{D}_y\text{D}_z^3 v_2} =$$
$$(3\omega_{19}\omega_7 cs^2\omega_{11} + 3\omega_{19}\omega_7 cs^2 - \omega_{19}\omega_7\omega_{11} - \omega_{19}\omega_7 + 3\omega_7\omega_{11} + v_3^2\omega_{19}\omega_7\omega_{11} - 3\omega_7 cs^2\omega_{11} - 6\omega_{19}cs^2\omega_{11} - 3v_3^2\omega_7\omega_{11} + v_3^2\omega_{19}\omega_7)\frac{\rho v_3}{12\omega_{19}\omega_7\omega_{11}}$$

$$C^{(0),\text{CLBM1}}_{\text{D}_y\text{D}_z^3 v_2} = (-\omega_{19}\omega_{11} - 9\omega_{11}cs^2 - 3v_3^2\omega_{11} - \omega_{19} + v_3^2\omega_{19}\omega_{11} + 3\omega_{19}\omega_{11}cs^2 + v_3^2\omega_{19} + 3\omega_{11} + 3\omega_{19}cs^2)\frac{\rho v_3}{12\omega_{19}\omega_{11}}$$

$$C^{(0),\text{CLBM2}}_{\text{D}_y\text{D}_z^3 v_2} = (-\omega_{19}\omega_{11} - 3v_3^2\omega_{11} - \omega_{19} + 3cs^2\omega_{19} + v_3^2\omega_{19}\omega_{11} - 9cs^2\omega_{11} + v_3^2\omega_{19} + 3\omega_{11} + 3cs^2\omega_{19}\omega_{11})\frac{\rho v_3}{12\omega_{19}\omega_{11}}$$

$$C^{(0),\text{CuLBM1}}_{\text{D}_y\text{D}_z^3 v_2} = (3\omega_6 - \omega_6\omega_{10} - \omega_{10} - 3\omega_6 v_3^2 - 9\omega_6 cs^2 + 3\omega_{10}cs^2 + \omega_6 v_3^2\omega_{10} + v_3^2\omega_{10} + 3\omega_6\omega_{10}cs^2)\frac{\rho v_3}{12\omega_6\omega_{10}}$$

$$C^{(0),\text{CuLBM2}}_{\text{D}_y\text{D}_z^3 v_2} = (9\omega_3\omega_1\omega_2 + 4v_3^2\omega_3\omega_4\omega_2 + 18\omega_3\omega_4\omega_1 cs^2\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 27\omega_3\omega_1 cs^2\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 12\omega_3\omega_4\omega_1 cs^2 - 8\omega_3\omega_4\omega_1 - 18v_3^2\omega_3\omega_4\omega_2 + 9\omega_4\omega_1\omega_2 + 6v_3^2\omega_3\omega_4\omega_1\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 - 9v_3^2\omega_3\omega_1\omega_2 + 18v_3^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 6\omega_3\omega_4 cs^2\omega_2)\frac{\rho v_3}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(0)}_{\text{D}_y\text{D}_z^3 v_3}$ at $\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3}$:

$$C^{(0),\text{SRT}}_{\text{D}_y\text{D}_z^3 v_3} = 0$$

$$C^{(0),\text{MRT1}}_{\text{D}_y\text{D}_z^3 v_3} = (-cs^2\omega_{11} - 3v_3^2\omega_{11} - \omega_{19} + 3v_3^2\omega_{19} + \omega_{11} + \omega_{19}cs^2)\frac{\rho v_2}{4\omega_{19}\omega_{11}}$$

$$C^{(0),\text{MRT2}}_{\text{D}_y\text{D}_z^3 v_3} = (-cs^2\omega_{11} - 3v_3^2\omega_{11} + \omega_{19}cs^2 - \omega_{19} + 3v_3^2\omega_{19} + \omega_{11})\frac{\rho v_2}{4\omega_{19}\omega_{11}}$$

$$C^{(0),\text{CLBM1}}_{\text{D}_y\text{D}_z^3 v_3} = 0$$

$$C^{(0),\text{CLBM2}}_{\text{D}_y\text{D}_z^3 v_3} = 0$$

$$C^{(0),\text{CuLBM1}}_{\text{D}_y\text{D}_z^3 v_3} = 0$$

$$C^{(0),\text{CuLBM2}}_{\text{D}_y\text{D}_z^3 v_3} = (3\omega_1 cs^2 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{\rho v_2}{36\omega_1\omega_2}$$

coefficient $C^{(0)}_{\text{D}_z^4\rho}$ at $\frac{\partial^4\rho}{\partial x_3^4}$:

$$C^{(0),\text{SRT}}_{\text{D}_z^4\rho} = (6v_3^4 - \omega cs^4 - 3v_3^4\omega - 2cs^2 + 2cs^4 - 12v_3^2\omega cs^2 + 3v_3^2\omega + 24v_3^2 cs^2 - 6v_3^2 + \omega cs^2)\frac{1}{24\omega}$$

$C_{\mathrm{D}_z^4\rho}^{(0),\mathrm{MRT1}} = (6v_3^4 + cs^2\omega_{11} + 3v_3^2\omega_{11} - 12v_3^2cs^2\omega_{11} - 2cs^2 + 24v_3^2cs^2 - cs^4\omega_{11} + 2cs^4 - 6v_3^2 - 3v_3^4\omega_{11})\frac{1}{24\omega_{11}}$

$C_{\mathrm{D}_z^4\rho}^{(0),\mathrm{MRT2}} = (cs^2\omega_{11} + 24v_3^2cs^2 + 6v_3^4 + 2cs^4 + 3v_3^2\omega_{11} - 12v_3^2cs^2\omega_{11} - cs^4\omega_{11} - 6v_3^2 - 3v_3^4\omega_{11} - 2cs^2)\frac{1}{24\omega_{11}}$

$C_{\mathrm{D}_z^4\rho}^{(0),\mathrm{CLBM1}} = (6v_3^4 - 12v_3^2\omega_{11}cs^2 + \omega_{11}cs^2 + 3v_3^2\omega_{11} - 2cs^2 - \omega_{11}cs^4 + 2cs^4 + 24v_3^2cs^2 - 6v_3^2 - 3v_3^4\omega_{11})\frac{1}{24\omega_{11}}$

$C_{\mathrm{D}_z^4\rho}^{(0),\mathrm{CLBM2}} = (6v_3^4 - cs^4\omega_{11} - 2cs^2 + 3v_3^2\omega_{11} + cs^2\omega_{11} - 6v_3^2 + 24v_3^2cs^2 - 3v_3^4\omega_{11} - 12v_3^2cs^2\omega_{11} + 2cs^4)\frac{1}{24\omega_{11}}$

$C_{\mathrm{D}_z^4\rho}^{(0),\mathrm{CuLBM1}} = (-\omega_6cs^4 + 6v_3^4 - 3\omega_6v_3^4 - 12\omega_6v_3^2cs^2 + 2cs^4 + 24v_3^2cs^2 - 2cs^2 + 3\omega_6v_3^2 - 6v_3^2 + \omega_6cs^2)\frac{1}{24\omega_6}$

$C_{\mathrm{D}_z^4\rho}^{(0),\mathrm{CuLBM2}} = (-2\omega_1cs^2 - 36v_3^2\omega_1cs^2\omega_2 + 4cs^4\omega_2 + 9v_3^2\omega_1\omega_2 - 3\omega_1cs^4\omega_2 + 12v_3^4\omega_2 + 24v_3^2\omega_1cs^2 - 9v_3^4\omega_1\omega_2 - 6v_3^2\omega_1 - 4cs^2\omega_2 + 2\omega_1cs^4 - 12v_3^2\omega_2 + 6v_3^4\omega_1 + 3\omega_1cs^2\omega_2 + 48v_3^2cs^2\omega_2)\frac{1}{72\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_z^4 v_3}^{(0)}$ at $\frac{\partial^4 v_3}{\partial x_3^4}$:

$C_{\mathrm{D}_z^4 v_3}^{(0),\mathrm{SRT}} = (-4 + 6cs^2 - 5v_3^2\omega + 10v_3^2 + 2\omega - 3\omega cs^2)\frac{\rho v_3}{12\omega}$

$C_{\mathrm{D}_z^4 v_3}^{(0),\mathrm{MRT1}} = (-4 - 3cs^2\omega_{11} - 5v_3^2\omega_{11} + 6cs^2 + 2\omega_{11} + 10v_3^2)\frac{\rho v_3}{12\omega_{11}}$

$C_{\mathrm{D}_z^4 v_3}^{(0),\mathrm{MRT2}} = (-4 - 3cs^2\omega_{11} - 5v_3^2\omega_{11} + 2\omega_{11} + 10v_3^2 + 6cs^2)\frac{\rho v_3}{12\omega_{11}}$

$C_{\mathrm{D}_z^4 v_3}^{(0),\mathrm{CLBM1}} = (-4 - 3\omega_{11}cs^2 - 5v_3^2\omega_{11} + 6cs^2 + 2\omega_{11} + 10v_3^2)\frac{\rho v_3}{12\omega_{11}}$

$C_{\mathrm{D}_z^4 v_3}^{(0),\mathrm{CLBM2}} = (-4 + 6cs^2 - 5v_3^2\omega_{11} - 3cs^2\omega_{11} + 2\omega_{11} + 10v_3^2)\frac{\rho v_3}{12\omega_{11}}$

$C_{\mathrm{D}_z^4 v_3}^{(0),\mathrm{CuLBM1}} = (-4 + 2\omega_6 + 6cs^2 - 5\omega_6v_3^2 + 10v_3^2 - 3\omega_6cs^2)\frac{\rho v_3}{12\omega_6}$

$C_{\mathrm{D}_z^4 v_3}^{(0),\mathrm{CuLBM2}} = (6\omega_1cs^2 - 15v_3^2\omega_1\omega_2 + 6\omega_1\omega_2 + 10v_3^2\omega_1 + 12cs^2\omega_2 - 4\omega_1 + 20v_3^2\omega_2 - 9\omega_1cs^2\omega_2 - 8\omega_2)\frac{\rho v_3}{36\omega_1\omega_2}$

3.2 Conservation of momentum: ρv_1

$v_1\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_1}{\partial t} + C_{\mathrm{D}_x\rho}^{(1)}\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + 2\rho v_1\frac{\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + v_1v_2\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \rho v_2\frac{\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_2} + \rho v_1\frac{\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + v_1v_3\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} + \rho v_3\frac{\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_3} +$

$\rho v_1\frac{\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + C_{\mathrm{D}_x\rho,\mathrm{D}_x v_1}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_1} + C_{\mathrm{D}_x v_1,\mathrm{D}_x v_1}^{(1)}\frac{\delta_l^2}{\delta_t}\left(\frac{\partial v_1}{\partial x_1}\right)^2 + C_{\mathrm{D}_x\rho,\mathrm{D}_y v_2}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_2} + C_{\mathrm{D}_x v_2,\mathrm{D}_y v_2}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial v_2}{\partial x_1}\frac{\partial v_2}{\partial x_2} +$

$C_{\mathrm{D}_x\rho,\mathrm{D}_z v_3}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_3}{\partial x_3} + C_{\mathrm{D}_x v_3,\mathrm{D}_z v_3}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial v_3}{\partial x_1}\frac{\partial v_3}{\partial x_3} + C_{\mathrm{D}_y\rho,\mathrm{D}_x v_2}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_1} + C_{\mathrm{D}_y\rho,\mathrm{D}_y v_1}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_1}{\partial x_1} +$

$C_{\mathrm{D}_z\rho,\mathrm{D}_x v_3}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_1} + C_{\mathrm{D}_z\rho,\mathrm{D}_z v_1}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_3} + C_{\mathrm{D}_x^2\rho}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_1^2} + C_{\mathrm{D}_x^2 v_1}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_1}{\partial x_1^2} + C_{\mathrm{D}_x\mathrm{D}_y\rho}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_2} +$

$C_{\mathrm{D}_x\mathrm{D}_y v_2}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_2}{\partial x_1\partial x_2} + C_{\mathrm{D}_y^2 v_1}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_1}{\partial x_2^2} + C_{\mathrm{D}_x\mathrm{D}_z\rho}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_3} + C_{\mathrm{D}_x\mathrm{D}_z v_3}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_3}{\partial x_1\partial x_3} + C_{\mathrm{D}_z^2 v_1}^{(1)}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_1}{\partial x_3^2} + C_{\mathrm{D}_x^3\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^3} +$

$C_{\mathrm{D}_x^3 v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C_{\mathrm{D}_x^2\mathrm{D}_y\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} + C_{\mathrm{D}_x^2\mathrm{D}_y v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_2} + C_{\mathrm{D}_x^2\mathrm{D}_y v_2}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} + C_{\mathrm{D}_x\mathrm{D}_y^2\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2^2} +$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2^2} + C_{\mathrm{D}_y^3\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2^3} + C_{\mathrm{D}_y^3 v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_2^3} + C_{\mathrm{D}_y^3 v_2}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C_{\mathrm{D}_x^2\mathrm{D}_z\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} +$

$C_{\mathrm{D}_x^2\mathrm{D}_z v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_3} + C_{\mathrm{D}_x^2\mathrm{D}_z v_3}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} + C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2\partial x_3} + C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_2}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2\partial x_3} +$

$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_2\partial x_3} + C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_2^2\partial x_3} + C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C_{\mathrm{D}_x\mathrm{D}_z^2\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} + C_{\mathrm{D}_x\mathrm{D}_z^2 v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} +$

$C_{\mathrm{D}_x\mathrm{D}_z^2 v_3}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_3^2} + C_{\mathrm{D}_y\mathrm{D}_z^2 v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_2\partial x_3^2} + C_{\mathrm{D}_y\mathrm{D}_z^2 v_2}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C_{\mathrm{D}_z^3\rho}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + C_{\mathrm{D}_z^3 v_1}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_3^3} + C_{\mathrm{D}_z^3 v_3}^{(1)}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} +$

$C_{\mathrm{D}_x^4\rho}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^4} + C_{\mathrm{D}_x^4 v_1}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C_{\mathrm{D}_x^3\mathrm{D}_y\rho}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} + C_{\mathrm{D}_x^3\mathrm{D}_y v_1}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} + C_{\mathrm{D}_x^3\mathrm{D}_y v_2}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C_{\mathrm{D}_x^2\mathrm{D}_y^2\rho}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} +$

$+ C_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} + C_{\mathrm{D}_x^2\mathrm{D}_y^2 v_2}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} + C_{\mathrm{D}_x\mathrm{D}_y^3\rho}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + C_{\mathrm{D}_x\mathrm{D}_y^3 v_1}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} + C_{\mathrm{D}_x\mathrm{D}_y^3 v_2}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} +$

$C_{\mathrm{D}_y^4\rho}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_2^4} + C_{\mathrm{D}_y^4 v_1}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_2^4} + C_{\mathrm{D}_y^4 v_2}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} + C_{\mathrm{D}_x^3\mathrm{D}_z\rho}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} + C_{\mathrm{D}_x^3\mathrm{D}_z v_1}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} + C_{\mathrm{D}_x^3\mathrm{D}_z v_3}^{(1)}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} +$

$$
C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_2 \partial x_3}
+ C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2 \partial x_3}
+ C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3}
+ C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} +
$$

$$
C^{(1)}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1 \partial x_2^2 \partial x_3}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^2 \partial x_3}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} +
$$

$$
C^{(1)}_{\mathrm{D}_y^3 \mathrm{D}_z \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_2^3 \partial x_3}
+ C^{(1)}_{\mathrm{D}_y^3 \mathrm{D}_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_2^3 \partial x_3}
+ C^{(1)}_{\mathrm{D}_y^3 \mathrm{D}_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^3 \partial x_3}
+ C^{(1)}_{\mathrm{D}_y^3 \mathrm{D}_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2^3 \partial x_3}
+ C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_z^2 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2} +
$$

$$
C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} +
$$

$$
C^{(1)}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_2^2 \partial x_3^2} +
$$

$$
C^{(1)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_z^3 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_1 \partial x_3^3}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_z^3 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_3^3}
+ C^{(1)}_{\mathrm{D}_x \mathrm{D}_z^3 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} +
$$

$$
C^{(1)}_{\mathrm{D}_y \mathrm{D}_z^3 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_2 \partial x_3^3}
+ C^{(1)}_{\mathrm{D}_y \mathrm{D}_z^3 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_2 \partial x_3^3}
+ C^{(1)}_{\mathrm{D}_y \mathrm{D}_z^3 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2 \partial x_3^3}
+ C^{(1)}_{\mathrm{D}_y \mathrm{D}_z^3 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2 \partial x_3^3}
+ C^{(1)}_{\mathrm{D}_z^4 \rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 \rho}{\partial x_3^4} +
$$

$$
C^{(1)}_{\mathrm{D}_z^4 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_3^4}
+ C^{(1)}_{\mathrm{D}_z^4 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_3^4} = 0,
$$

where:

coefficient $C^{(1)}_{\mathrm{D}_x \rho}$ at $\frac{\partial \rho}{\partial x_1}$:

$$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x \rho} = (v_1^2 + cs^2)$$

$$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x \rho} = (cs^2 + v_1^2)$$

$$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x \rho} = (v_1^2 + cs^2)$$

$$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x \rho} = (cs^2 + v_1^2)$$

$$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x \rho} = (v_1^2 + cs^2)$$

$$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x \rho} = (cs^2 + v_1^2)$$

$$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x \rho} = (v_1^2 + cs^2)$$

coefficient $C^{(1)}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1}$ at $\frac{\partial \rho}{\partial x_1} \frac{\partial v_1}{\partial x_1}$:

$$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1} = (-2 - 3v_1^2 \omega - 2cs^2 \omega + 6v_1^2 + 4cs^2 + \omega)\frac{1}{\omega}$$

$$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1} = (-2 + 4cs^2 + \omega_9 + 6v_1^2 - 3v_1^2 \omega_9 - 2\omega_9 cs^2)\frac{1}{\omega_9}$$

$$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1} = (-2 + \omega_9 - 2\omega_9 cs^2 + 6v_1^2 - 3v_1^2 \omega_9 + 4cs^2)\frac{1}{\omega_9}$$

$$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1} = (-2 + \omega_9 + 4cs^2 + 6v_1^2 - 3v_1^2 \omega_9 - 2\omega_9 cs^2)\frac{1}{\omega_9}$$

$$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1} = (-2 - 2\omega_9 cs^2 + \omega_9 + 6v_1^2 + 4cs^2 - 3v_1^2 \omega_9)\frac{1}{\omega_9}$$

$$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1} = (-2 - 2cs^2 \omega_4 + 4cs^2 + 6v_1^2 - 3v_1^2 \omega_4 + \omega_4)\frac{1}{\omega_4}$$

$$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x \rho, \mathrm{D}_x v_1} = (-9v_1^2 \omega_1 \omega_2 + 12v_1^2 \omega_2 + 3\omega_1 \omega_2 - 2\omega_1 - 6\omega_1 cs^2 \omega_2 + 4\omega_1 cs^2 + 8cs^2 \omega_2 + 6v_1^2 \omega_1 - 4\omega_2)\frac{1}{3\omega_1 \omega_2}$$

coefficient $C^{(1)}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1}$ at $\left(\frac{\partial v_1}{\partial x_1}\right)^2$:

$$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1} = (2 - \omega)\frac{3\rho v_1}{\omega}$$

$$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1} = (2 - \omega_9)\frac{3\rho v_1}{\omega_9}$$

$$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1} = C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1}$$

$$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1} = C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1}$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1} = C^{(1),\text{MRT1}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1}$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1} = (2 - \omega_4)\frac{3\rho v_1}{\omega_4}$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x v_1, \mathrm{D}_x v_1} = (-3\omega_1\omega_2 + 2\omega_1 + 4\omega_2)\frac{\rho v_1}{\omega_1\omega_2}$$

coefficient $C^{(1)}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2}$ **at** $\frac{\partial \rho}{\partial x_1}\frac{\partial v_2}{\partial x_2}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{MRT2}}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CLBM1}}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x \rho, \mathrm{D}_y v_2} = (3v_2^2\omega_1 - 3v_2^2\omega_2 - \omega_1 + \omega_1 cs^2 - cs^2\omega_2 + \omega_2)\frac{1}{3\omega_1\omega_2}$$

coefficient $C^{(1)}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2}$ **at** $\frac{\partial v_2}{\partial x_1}\frac{\partial v_2}{\partial x_2}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{MRT2}}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CLBM1}}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2} = 0$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x v_2, \mathrm{D}_y v_2} = (\omega_1 - \omega_2)\frac{2\rho v_2}{\omega_1\omega_2}$$

coefficient $C^{(1)}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3}$ **at** $\frac{\partial \rho}{\partial x_1}\frac{\partial v_3}{\partial x_3}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3} = 0$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3} = 0$$

$$C^{(1),\text{MRT2}}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3} = 0$$

$$C^{(1),\text{CLBM1}}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3} = 0$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3} = 0$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3} = 0$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x \rho, \mathrm{D}_z v_3} = (3v_3^2\omega_1 - \omega_1 + \omega_1 cs^2 - cs^2\omega_2 - 3v_3^2\omega_2 + \omega_2)\frac{1}{3\omega_1\omega_2}$$

coefficient $C^{(1)}_{\mathrm{D}_x v_3, \mathrm{D}_z v_3}$ **at** $\frac{\partial v_3}{\partial x_1}\frac{\partial v_3}{\partial x_3}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_x v_3, \mathrm{D}_z v_3} = 0$$

$C^{(1),\text{MRT1}}_{\text{D}_x v_3, \text{D}_z v_3} = 0$

$C^{(1),\text{MRT2}}_{\text{D}_x v_3, \text{D}_z v_3} = 0$

$C^{(1),\text{CLBM1}}_{\text{D}_x v_3, \text{D}_z v_3} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_x v_3, \text{D}_z v_3} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_x v_3, \text{D}_z v_3} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_x v_3, \text{D}_z v_3} = (\omega_1 - \omega_2)\frac{2\rho v_3}{\omega_1 \omega_2}$

coefficient $C^{(1)}_{\text{D}_y \rho, \text{D}_x v_2}$ **at** $\frac{\partial \rho}{\partial x_2}\frac{\partial v_2}{\partial x_1}$**:**

$C^{(1),\text{SRT}}_{\text{D}_y \rho, \text{D}_x v_2} = (-2 + \omega)\frac{cs^2}{2\omega}$

$C^{(1),\text{MRT1}}_{\text{D}_y \rho, \text{D}_x v_2} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{MRT2}}_{\text{D}_y \rho, \text{D}_x v_2} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{CLBM1}}_{\text{D}_y \rho, \text{D}_x v_2} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{CLBM2}}_{\text{D}_y \rho, \text{D}_x v_2} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{CuLBM1}}_{\text{D}_y \rho, \text{D}_x v_2} = (-2 + \omega_1)\frac{cs^2}{2\omega_1}$

$C^{(1),\text{CuLBM2}}_{\text{D}_y \rho, \text{D}_x v_2} = (6v_2^2\omega_1 - 6v_2^2\omega_2 - 2\omega_1 + 3\omega_1 cs^2\omega_2 + 6\omega_1 cs^2 - 12cs^2\omega_2 + 2\omega_2)\frac{1}{6\omega_1\omega_2}$

coefficient $C^{(1)}_{\text{D}_y \rho, \text{D}_y v_1}$ **at** $\frac{\partial \rho}{\partial x_2}\frac{\partial v_1}{\partial x_2}$**:**

$C^{(1),\text{SRT}}_{\text{D}_y \rho, \text{D}_y v_1} = (-2 + \omega)\frac{cs^2}{2\omega}$

$C^{(1),\text{MRT1}}_{\text{D}_y \rho, \text{D}_y v_1} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{MRT2}}_{\text{D}_y \rho, \text{D}_y v_1} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{CLBM1}}_{\text{D}_y \rho, \text{D}_y v_1} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{CLBM2}}_{\text{D}_y \rho, \text{D}_y v_1} = (-2 + \omega_5)\frac{cs^2}{2\omega_5}$

$C^{(1),\text{CuLBM1}}_{\text{D}_y \rho, \text{D}_y v_1} = (-2 + \omega_1)\frac{cs^2}{2\omega_1}$

$C^{(1),\text{CuLBM2}}_{\text{D}_y \rho, \text{D}_y v_1} = (-2 + \omega_1)\frac{cs^2}{2\omega_1}$

coefficient $C^{(1)}_{\text{D}_z \rho, \text{D}_x v_3}$ **at** $\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_1}$**:**

$C^{(1),\text{SRT}}_{\text{D}_z \rho, \text{D}_x v_3} = (-2 + \omega)\frac{cs^2}{2\omega}$

$C^{(1),\text{MRT1}}_{\text{D}_z \rho, \text{D}_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{MRT2}}_{\text{D}_z \rho, \text{D}_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{CLBM1}}_{\text{D}_z \rho, \text{D}_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{CLBM2}}_{\text{D}_z \rho, \text{D}_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{CuLBM1}}_{\mathrm{D}_z\rho,\mathrm{D}_x v_3} = (-2 + \omega_2)\frac{cs^2}{2\omega_2}$

$C^{(1),\text{CuLBM2}}_{\mathrm{D}_z\rho,\mathrm{D}_x v_3} = (6v_3^2\omega_1 - 2\omega_1 + 3\omega_1 cs^2\omega_2 + 6\omega_1 cs^2 - 12cs^2\omega_2 - 6v_3^2\omega_2 + 2\omega_2)\frac{1}{6\omega_1\omega_2}$

coefficient $C^{(1)}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1}$ at $\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_3}$:

$C^{(1),\text{SRT}}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1} = (-2 + \omega)\frac{cs^2}{2\omega}$

$C^{(1),\text{MRT1}}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{MRT2}}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{CLBM1}}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{CLBM2}}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C^{(1),\text{CuLBM1}}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1} = (-2 + \omega_2)\frac{cs^2}{2\omega_2}$

$C^{(1),\text{CuLBM2}}_{\mathrm{D}_z\rho,\mathrm{D}_z v_1} = (-2 + \omega_1)\frac{cs^2}{2\omega_1}$

coefficient $C^{(1)}_{\mathrm{D}_x^2\rho}$ at $\frac{\partial^2\rho}{\partial x_1^2}$:

$C^{(1),\text{SRT}}_{\mathrm{D}_x^2\rho} = (-2 - v_1^2\omega - 3cs^2\omega + 2v_1^2 + 6cs^2 + \omega)\frac{v_1}{2\omega}$

$C^{(1),\text{MRT1}}_{\mathrm{D}_x^2\rho} = (-2 + 6cs^2 + \omega_9 + 2v_1^2 - v_1^2\omega_9 - 3\omega_9 cs^2)\frac{v_1}{2\omega_9}$

$C^{(1),\text{MRT2}}_{\mathrm{D}_x^2\rho} = (-2 + \omega_9 - 3\omega_9 cs^2 + 2v_1^2 - v_1^2\omega_9 + 6cs^2)\frac{v_1}{2\omega_9}$

$C^{(1),\text{CLBM1}}_{\mathrm{D}_x^2\rho} = (-2 + \omega_9 + 6cs^2 + 2v_1^2 - v_1^2\omega_9 - 3\omega_9 cs^2)\frac{v_1}{2\omega_9}$

$C^{(1),\text{CLBM2}}_{\mathrm{D}_x^2\rho} = (-2 - 3\omega_9 cs^2 + \omega_9 + 2v_1^2 + 6cs^2 - v_1^2\omega_9)\frac{v_1}{2\omega_9}$

$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x^2\rho} = (-2 - 3cs^2\omega_4 + 6cs^2 + 2v_1^2 - v_1^2\omega_4 + \omega_4)\frac{v_1}{2\omega_4}$

$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x^2\rho} = (-3v_1^2\omega_1\omega_2 + 4v_1^2\omega_2 + 3\omega_1\omega_2 - 2\omega_1 - 9\omega_1 cs^2\omega_2 + 6\omega_1 cs^2 + 12cs^2\omega_2 + 2v_1^2\omega_1 - 4\omega_2)\frac{v_1}{6\omega_1\omega_2}$

coefficient $C^{(1)}_{\mathrm{D}_x^2 v_1}$ at $\frac{\partial^2 v_1}{\partial x_1^2}$:

$C^{(1),\text{SRT}}_{\mathrm{D}_x^2 v_1} = (-2 - 3v_1^2\omega - cs^2\omega + 6v_1^2 + 2cs^2 + \omega)\frac{\rho}{2\omega}$

$C^{(1),\text{MRT1}}_{\mathrm{D}_x^2 v_1} = (-2 + 2cs^2 + \omega_9 + 6v_1^2 - 3v_1^2\omega_9 - \omega_9 cs^2)\frac{\rho}{2\omega_9}$

$C^{(1),\text{MRT2}}_{\mathrm{D}_x^2 v_1} = (-2 + \omega_9 - \omega_9 cs^2 + 6v_1^2 - 3v_1^2\omega_9 + 2cs^2)\frac{\rho}{2\omega_9}$

$C^{(1),\text{CLBM1}}_{\mathrm{D}_x^2 v_1} = (-2 + \omega_9 + 2cs^2 + 6v_1^2 - 3v_1^2\omega_9 - \omega_9 cs^2)\frac{\rho}{2\omega_9}$

$C^{(1),\text{CLBM2}}_{\mathrm{D}_x^2 v_1} = (-2 - \omega_9 cs^2 + \omega_9 + 6v_1^2 + 2cs^2 - 3v_1^2\omega_9)\frac{\rho}{2\omega_9}$

$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x^2 v_1} = (-2 - cs^2\omega_4 + 2cs^2 + 6v_1^2 - 3v_1^2\omega_4 + \omega_4)\frac{\rho}{2\omega_4}$

$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x^2 v_1} = (-9v_1^2\omega_1\omega_2 + 12v_1^2\omega_2 + 3\omega_1\omega_2 - 2\omega_1 - 3\omega_1 cs^2\omega_2 + 2\omega_1 cs^2 + 4cs^2\omega_2 + 6v_1^2\omega_1 - 4\omega_2)\frac{\rho}{6\omega_1\omega_2}$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_y\rho}$ at $\frac{\partial^2\rho}{\partial x_1\partial x_2}$:

$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(1),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(1),\mathrm{MRT1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(1),\mathrm{MRT2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(1),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(1),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(1),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(1),\mathrm{CuLBM2}} = (v_2^2 \omega_1 - v_2^2 \omega_2 - \omega_1 + 3\omega_1 cs^2 - 3cs^2 \omega_2 + \omega_2) \frac{v_2}{3\omega_1 \omega_2}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1)}$ **at** $\frac{\partial^2 v_2}{\partial x_1 \partial x_2}$:

$C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1),\mathrm{SRT}} = (-2 + \omega) \frac{\rho cs^2}{2\omega}$

$C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1),\mathrm{MRT1}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1),\mathrm{MRT2}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1),\mathrm{CLBM1}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1),\mathrm{CLBM2}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1),\mathrm{CuLBM1}} = (-2 + \omega_1) \frac{\rho cs^2}{2\omega_1}$

$C_{\mathrm{D}_x \mathrm{D}_y v_2}^{(1),\mathrm{CuLBM2}} = (6v_2^2 \omega_1 - 6v_2^2 \omega_2 - 2\omega_1 + 3\omega_1 cs^2 \omega_2 + 2\omega_1 cs^2 - 8cs^2 \omega_2 + 2\omega_2) \frac{\rho}{6\omega_1 \omega_2}$

coefficient $C_{\mathrm{D}_y^2 v_1}^{(1)}$ **at** $\frac{\partial^2 v_1}{\partial x_2^2}$:

$C_{\mathrm{D}_y^2 v_1}^{(1),\mathrm{SRT}} = (-2 + \omega) \frac{\rho cs^2}{2\omega}$

$C_{\mathrm{D}_y^2 v_1}^{(1),\mathrm{MRT1}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_y^2 v_1}^{(1),\mathrm{MRT2}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_y^2 v_1}^{(1),\mathrm{CLBM1}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_y^2 v_1}^{(1),\mathrm{CLBM2}} = (-2 + \omega_5) \frac{\rho cs^2}{2\omega_5}$

$C_{\mathrm{D}_y^2 v_1}^{(1),\mathrm{CuLBM1}} = (-2 + \omega_1) \frac{\rho cs^2}{2\omega_1}$

$C_{\mathrm{D}_y^2 v_1}^{(1),\mathrm{CuLBM2}} = (-2 + \omega_1) \frac{\rho cs^2}{2\omega_1}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1)}$ **at** $\frac{\partial^2 \rho}{\partial x_1 \partial x_3}$:

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1),\mathrm{MRT1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1),\mathrm{MRT2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(1),\mathrm{CuLBM2}} = (v_3^2 \omega_1 - \omega_1 + 3\omega_1 cs^2 - 3cs^2 \omega_2 - v_3^2 \omega_2 + \omega_2)\frac{v_3}{3\omega_1 \omega_2}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1)}$ at $\frac{\partial^2 v_3}{\partial x_1 \partial x_3}$:

$C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1),\mathrm{SRT}} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$

$C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1),\mathrm{MRT1}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1),\mathrm{MRT2}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1),\mathrm{CLBM1}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1),\mathrm{CLBM2}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1),\mathrm{CuLBM1}} = (-2 + \omega_2)\frac{\rho cs^2}{2\omega_2}$

$C_{\mathrm{D}_x \mathrm{D}_z v_3}^{(1),\mathrm{CuLBM2}} = (6v_3^2 \omega_1 - 2\omega_1 + 3\omega_1 cs^2 \omega_2 + 2\omega_1 cs^2 - 8cs^2 \omega_2 - 6v_3^2 \omega_2 + 2\omega_2)\frac{\rho}{6\omega_1 \omega_2}$

coefficient $C_{\mathrm{D}_z^2 v_1}^{(1)}$ at $\frac{\partial^2 v_1}{\partial x_3^2}$:

$C_{\mathrm{D}_z^2 v_1}^{(1),\mathrm{SRT}} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$

$C_{\mathrm{D}_z^2 v_1}^{(1),\mathrm{MRT1}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_z^2 v_1}^{(1),\mathrm{MRT2}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_z^2 v_1}^{(1),\mathrm{CLBM1}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_z^2 v_1}^{(1),\mathrm{CLBM2}} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_z^2 v_1}^{(1),\mathrm{CuLBM1}} = (-2 + \omega_2)\frac{\rho cs^2}{2\omega_2}$

$C_{\mathrm{D}_z^2 v_1}^{(1),\mathrm{CuLBM2}} = (-2 + \omega_1)\frac{\rho cs^2}{2\omega_1}$

coefficient $C_{\mathrm{D}_x^3 \rho}^{(1)}$ at $\frac{\partial^3 \rho}{\partial x_1^3}$:

$C_{\mathrm{D}_x^3 \rho}^{(1),\mathrm{SRT}} =$
$(-144v_1^2 cs^2 \omega + 36v_1^2 \omega - cs^2 \omega^2 + 36v_1^4 + 12cs^2 \omega + 24v_1^2 cs^2 \omega^2 + 12cs^4 - 7v_1^2 \omega^2 + cs^4 \omega^2 - 36v_1^2 - 12cs^2 - 36v_1^4 \omega + 144v_1^2 cs^2 + 7v_1^4 \omega^2 - 12cs^4 \omega)\frac{1}{12\omega^2}$

$C_{\mathrm{D}_x^3 \rho}^{(1),\mathrm{MRT1}} = (-12cs^2 + 24v_1^2 \omega_9^2 cs^2 - 36v_1^4 \omega_9 + 7v_1^4 \omega_9^2 - 12\omega_9 cs^4 + 36v_1^4 + 144v_1^2 cs^2 - \omega_9^2 cs^2 - 36v_1^2 + 36v_1^2 \omega_9 + 12\omega_9 cs^2 + \omega_9^2 cs^4 - 144v_1^2 \omega_9 cs^2 + 12cs^4 - 7v_1^2 \omega_9^2)\frac{1}{12\omega_9^2}$

$C_{\mathrm{D}_x^3 \rho}^{(1),\mathrm{MRT2}} = (-144v_1^2 \omega_9 cs^2 + 12cs^4 - 36v_1^4 \omega_9 + 7v_1^4 \omega_9^2 + \omega_9^2 cs^4 + 36v_1^4 + 12\omega_9 cs^2 - 36v_1^2 + 144v_1^2 cs^2 + 36v_1^2 \omega_9 - \omega_9^2 cs^2 - 12\omega_9 cs^4 + 24v_1^2 \omega_9^2 cs^2 - 12cs^2 - 7v_1^2 \omega_9^2)\frac{1}{12\omega_9^2}$

$C_{\mathrm{D}_x^3 \rho}^{(1),\mathrm{CLBM1}} = (-12\omega_9 cs^4 + 144v_1^2 cs^2 - \omega_9^2 cs^2 - 36v_1^4 \omega_9 + 7v_1^4 \omega_9^2 - 12cs^2 + 36v_1^4 + 24v_1^2 \omega_9^2 cs^2 - 36v_1^2 - 144v_1^2 \omega_9 cs^2 + 36v_1^2 \omega_9 + 12cs^4 + 12\omega_9 cs^2 + \omega_9^2 cs^4 - 7v_1^2 \omega_9^2)\frac{1}{12\omega_9^2}$

$C_{\mathrm{D}_x^3\rho}^{(1),\mathrm{CLBM2}} =$

$(12\omega_9 cs^2+\omega_9^2 cs^4-36v_1^4\omega_9+7v_1^4\omega_9^2-144v_1^2\omega_9 cs^2+36v_1^4+12cs^4-36v_1^2-12cs^2+36v_1^2\omega_9+24v_1^2\omega_9^2 cs^2-12\omega_9 cs^4-7v_1^2\omega_9^2+144v_1^2 cs^2-\omega_9^2 cs^2)\frac{1}{12\omega_9^2}$

$C_{\mathrm{D}_x^3\rho}^{(1),\mathrm{CuLBM1}} =$

$(144v_1^2 cs^2-144v_1^2 cs^2\omega_4-cs^2\omega_4^2-36v_1^4\omega_4+12cs^2\omega_4+36v_1^4+7v_1^4\omega_4^2-12cs^2+24v_1^2 cs^2\omega_4^2+cs^4\omega_4^2-36v_1^2+36v_1^2\omega_4+12cs^4-12cs^4\omega_4-7v_1^2\omega_4^2)\frac{1}{12\omega_4^2}$

$C_{\mathrm{D}_x^3\rho}^{(1),\mathrm{CuLBM2}} = (8cs^4\omega_2^2+24v_1^2\omega_1^2 cs^2-\omega_1^2 cs^2\omega_2^2+48v_1^2\omega_1 cs^2\omega_2-16v_1^2\omega_1\omega_2+4v_1^4\omega_2^2-24v_1^4\omega_1\omega_2-16v_1^2\omega_2^2+16v_1^4\omega_1\omega_2-4\omega_1^2 cs^2-$
$8\omega_1 cs^4\omega_2^2+4\omega_1^2 cs^2\omega_2+24v_1^2\omega_1\omega_2^2-96v_1^2\omega_1 cs^2\omega_2^2+4\omega_1^2 cs^4-4v_1^2\omega_1^2-7v_1^2\omega_1^2\omega_2^2+16v_1^4\omega_2^2-8cs^2\omega_2^2+\omega_1^2 cs^4\omega_2^2-12v_1^4\omega_1^2\omega_2+$
$24v_1^2\omega_1^2 cs^2\omega_2^2-48v_1^2\omega_1^2 cs^2\omega_2+8\omega_1 cs^2\omega_2^2-4\omega_1^2 cs^4\omega_2+7v_1^4\omega_1^2\omega_2^2+12v_1^2\omega_1^2\omega_2+72v_1^2 cs^2\omega_2^2)\frac{1}{12\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_x^3 v_1}^{(1)}$ at $\frac{\partial^3 v_1}{\partial x_1^3}$:

$C_{\mathrm{D}_x^3 v_1}^{(1),\mathrm{SRT}} = (-24-60v_1^2\omega-4\omega^2+5cs^2\omega^2-36cs^2\omega+11v_1^2\omega^2+60v_1^2+36cs^2+24\omega)\frac{\rho v_1}{6\omega^2}$

$C_{\mathrm{D}_x^3 v_1}^{(1),\mathrm{MRT1}} = (-24+36cs^2+24\omega_9+5\omega_9^2 cs^2+60v_1^2-4\omega_9^2-60v_1^2\omega_9-36\omega_9 cs^2+11v_1^2\omega_9^2)\frac{\rho v_1}{6\omega_9^2}$

$C_{\mathrm{D}_x^3 v_1}^{(1),\mathrm{MRT2}} = (-24+24\omega_9-36\omega_9 cs^2+60v_1^2-4\omega_9^2-60v_1^2\omega_9+5\omega_9^2 cs^2+36cs^2+11v_1^2\omega_9^2)\frac{\rho v_1}{6\omega_9^2}$

$C_{\mathrm{D}_x^3 v_1}^{(1),\mathrm{CLBM1}} = (-24+24\omega_9+5\omega_9^2 cs^2+36cs^2+60v_1^2-4\omega_9^2-60v_1^2\omega_9-36\omega_9 cs^2+11v_1^2\omega_9^2)\frac{\rho v_1}{6\omega_9^2}$

$C_{\mathrm{D}_x^3 v_1}^{(1),\mathrm{CLBM2}} = (-24-36\omega_9 cs^2+24\omega_9+60v_1^2+36cs^2-4\omega_9^2-60v_1^2\omega_9+11v_1^2\omega_9^2+5\omega_9^2 cs^2)\frac{\rho v_1}{6\omega_9^2}$

$C_{\mathrm{D}_x^3 v_1}^{(1),\mathrm{CuLBM1}} = (-24+5cs^2\omega_4^2-36cs^2\omega_4+36cs^2+60v_1^2-60v_1^2\omega_4+24\omega_4-4\omega_4^2+11v_1^2\omega_4^2)\frac{\rho v_1}{6\omega_4^2}$

$C_{\mathrm{D}_x^3 v_1}^{(1),\mathrm{CuLBM2}} = (5\omega_1^2 cs^2\omega_2^2+24v_1^2\omega_1\omega_2+16\omega_1\omega_2^2+28v_1^2\omega_2^2-12\omega_2^2-8\omega_1\omega_2+8\omega_1^2 cs^2-12\omega_1^2 cs^2\omega_2-40v_1^2\omega_1\omega_2^2+8v_1^2\omega_1^2+11v_1^2\omega_1^2\omega_2^2+$
$20cs^2\omega_2^2+8\omega_1^2\omega_2+8\omega_1 cs^2\omega_2-4\omega_1^2\omega_2^2-24\omega_1 cs^2\omega_2^2-20v_1^2\omega_1^2\omega_2-4\omega_1^2)\frac{\rho v_1}{6\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1)}$ at $\frac{\partial^3\rho}{\partial x_1^2\partial x_2}$:

$C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1),\mathrm{MRT1}} = (3\omega_9^2 cs^2\omega_5-\omega_9\omega_{12}+3\omega_{12}cs^2\omega_5+v_1^2\omega_{12}\omega_5+v_1^2\omega_9^2\omega_5+v_1^2\omega_9\omega_{12}-3\omega_9\omega_{12}cs^2\omega_5-v_1^2\omega_9\omega_{12}\omega_5-\omega_9^2\omega_5-3\omega_9^2 cs^2-\omega_{12}\omega_5+$
$\omega_9^2+\omega_9\omega_5-3\omega_9 cs^2\omega_5-v_1^2\omega_9\omega_5+3\omega_9\omega_{12}cs^2+\omega_9\omega_{12}\omega_5-v_1^2\omega_9^2)\frac{v_1 v_2}{\omega_9^2\omega_{12}\omega_5}$

$C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1),\mathrm{MRT2}} = (-3\omega_9 cs^2\omega_5-\omega_9\omega_{12}+v_1^2\omega_{12}\omega_5+v_1^2\omega_9^2\omega_5+3\omega_9\omega_{12}cs^2+v_1^2\omega_9\omega_{12}-v_1^2\omega_9\omega_{12}\omega_5-\omega_9^2\omega_5-\omega_{12}\omega_5+\omega_9^2+\omega_9\omega_5-3\omega_9^2 cs^2-$
$3\omega_9\omega_{12}cs^2\omega_5+3\omega_9^2 cs^2\omega_5-v_1^2\omega_9\omega_5+\omega_9\omega_{12}\omega_5+3\omega_{12}cs^2\omega_5-v_1^2\omega_9^2)\frac{v_1 v_2}{\omega_9^2\omega_{12}\omega_5}$

$C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x^2 \mathrm{D}_y\rho}^{(1),\mathrm{CuLBM2}} = (-4v_1^2\omega_1\omega_2-3\omega_1\omega_2^2+2v_1^2\omega_2^2+2\omega_2^2+2\omega_1\omega_2+2v_2^2\omega_1^2+12\omega_1^2 cs^2-3v_2^2\omega_1^2\omega_2-9\omega_1^2 cs^2\omega_2+2v_2^2\omega_1\omega_2+2v_1^2\omega_1^2-6cs^2\omega_2^2+$
$3\omega_1^2\omega_2-6\omega_1 cs^2\omega_2+9\omega_1 cs^2\omega_2^2+3v_2^2\omega_1\omega_2^2-4v_2^2\omega_2^2-4\omega_1^2)\frac{v_1 v_2}{6\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_y v_1}^{(1)}$ at $\frac{\partial^3 v_1}{\partial x_1^2\partial x_2}$:

$C_{\mathrm{D}_x^2 \mathrm{D}_y v_1}^{(1),\mathrm{SRT}} = 0$

$C^{(1),\text{MRT1}}_{\text{D}^2_x\text{D}_y v_1} = (\omega_9^2 cs^2\omega_5 - \omega_9\omega_{12} + \omega_{12}cs^2\omega_5 + 3v_1^2\omega_{12}\omega_5 + 3v_1^2\omega_9^2\omega_5 + 3v_1^2\omega_9\omega_{12} - \omega_9\omega_{12}cs^2\omega_5 - 3v_1^2\omega_9\omega_{12}\omega_5 - \omega_9^2\omega_5 - \omega_9^2 cs^2 - \omega_{12}\omega_5 + \omega_9^2 + \omega_9\omega_5 - \omega_9 cs^2\omega_5 - 3v_1^2\omega_9\omega_5 + \omega_9\omega_{12}cs^2 + \omega_9\omega_{12}\omega_5 - 3v_1^2\omega_9^2)\frac{\rho v_2}{\omega_9^2\omega_{12}\omega_5}$

$C^{(1),\text{MRT2}}_{\text{D}^2_x\text{D}_y v_1} = (-\omega_9 cs^2\omega_5 - \omega_9\omega_{12} + 3v_1^2\omega_{12}\omega_5 + 3v_1^2\omega_9^2\omega_5 + \omega_9\omega_{12}cs^2 + 3v_1^2\omega_9\omega_{12} - 3v_1^2\omega_9\omega_{12}\omega_5 - \omega_9^2\omega_5 - \omega_{12}\omega_5 + \omega_9^2 + \omega_9\omega_5 - \omega_9^2 cs^2 - \omega_9\omega_{12}cs^2\omega_5 + \omega_9^2 cs^2\omega_5 - 3v_1^2\omega_9\omega_5 + \omega_9\omega_{12}\omega_5 + \omega_{12}cs^2\omega_5 - 3v_1^2\omega_9^2)\frac{\rho v_2}{\omega_9^2\omega_{12}\omega_5}$

$C^{(1),\text{CLBM1}}_{\text{D}^2_x\text{D}_y v_1} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}^2_x\text{D}_y v_1} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}^2_x\text{D}_y v_1} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}^2_x\text{D}_y v_1} = (8\omega_3\omega_1^2 cs^2 - 4\omega_3\omega_1 cs^2\omega_2 + 4\omega_3\omega_1\omega_2 - 4\omega_3\omega_1^2 - 2\omega_1\omega_2^2 - v_2^2\omega_3\omega_1^2\omega_2 + 6v_1^2\omega_3\omega_1^2 - 2v_2^2\omega_1^2\omega_2 - 2v_2^2\omega_3\omega_2^2 - 6\omega_1^2 cs^2\omega_2 + 3\omega_3\omega_1 cs^2\omega_2^2 - \omega_3\omega_1\omega_2^2 + 2\omega_1^2\omega_2 - 12v_1^2\omega_3\omega_1\omega_2 + 2v_2^2\omega_3\omega_1^2 + 6\omega_1 cs^2\omega_2^2 - 3\omega_3\omega_1^2 cs^2\omega_2 + v_2^2\omega_3\omega_1\omega_2^2 + 6v_1^2\omega_3\omega_2^2 + \omega_3\omega_1^2\omega_2 + 2v_2^2\omega_1\omega_2^2 - 4\omega_3 cs^2\omega_2^2)\frac{\rho v_2}{6\omega_3\omega_1^2\omega_2^2}$

coefficient $C^{(1)}_{\text{D}^2_x\text{D}_y v_2}$ **at** $\frac{\partial^3 v_2}{\partial x_1^2\partial x_2}$:

$C^{(1),\text{SRT}}_{\text{D}^2_x\text{D}_y v_2} = (12 + 12v_1^2\omega + 3\omega^2 - 11cs^2\omega^2 + 36cs^2\omega - 3v_1^2\omega^2 - 12v_1^2 - 36cs^2 - 12\omega)\frac{\rho v_1}{12\omega^2}$

$C^{(1),\text{MRT1}}_{\text{D}^2_x\text{D}_y v_2} = (-12\omega_9^2\omega_5 - 12\omega_9^2 cs^2\omega_5 - 12\omega_{12}\omega_5^2 - 6\omega_9^2\omega_{12}\omega_5 - 24\omega_9^2\omega_{12}cs^2 - 6v_1^2\omega_9\omega_{12}\omega_5^2 - 12v_1^2\omega_9^2\omega_5 - 18\omega_9\omega_{12}cs^2\omega_5^2 + 12v_1^2\omega_{12}\omega_5^2 + 12v_1^2\omega_9^2\omega_5^2 - 24\omega_9\omega_{12}cs^2\omega_5 + 3\omega_9^2\omega_{12}\omega_5^2 + 36\omega_{12}cs^2\omega_5^2 + 12\omega_9^2\omega_5 + 12\omega_9^2 cs^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_5 + 6\omega_9\omega_{12}\omega_5^2 - 11\omega_9^2\omega_{12}cs^2\omega_5^2 - 12\omega_9 cs^2\omega_5^2 - 12v_1^2\omega_9\omega_5^2 + 42\omega_9^2\omega_{12}cs^2\omega_5 - 3v_1^2\omega_9^2\omega_{12}\omega_5^2 + 12\omega_9\omega_5^2)\frac{\rho v_1}{12\omega_9^2\omega_{12}\omega_5^2}$

$C^{(1),\text{MRT2}}_{\text{D}^2_x\text{D}_y v_2} = (-12\omega_9^2\omega_5^2 + 42\omega_9^2\omega_{12}cs^2\omega_5 - 12\omega_{12}\omega_5^2 - 6\omega_9^2\omega_{12}\omega_5 - 6v_1^2\omega_9\omega_{12}\omega_5^2 - 12v_1^2\omega_9^2\omega_5 + 12v_1^2\omega_{12}\omega_5^2 + 12v_1^2\omega_9^2\omega_5^2 + 3\omega_9^2\omega_{12}\omega_5^2 - 11\omega_9^2\omega_{12}cs^2\omega_5^2 + 12\omega_9^2\omega_5 - 12\omega_9 cs^2\omega_5^2 - 24\omega_9\omega_{12}cs^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_5 + 36\omega_{12}cs^2\omega_5^2 + 6\omega_9\omega_{12}\omega_5^2 + 12\omega_9^2 cs^2\omega_5 - 12v_1^2\omega_9\omega_5^2 - 12\omega_9^2 cs^2\omega_5 - 3v_1^2\omega_9^2\omega_{12}\omega_5^2 + 12\omega_9\omega_5^2 - 18\omega_9\omega_{12}cs^2\omega_5^2 - 24\omega_9^2\omega_{12}cs^2)\frac{\rho v_1}{12\omega_9^2\omega_{12}\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}^2_x\text{D}_y v_2} = (3\omega_9^2\omega_{12}\omega_5 + 12v_1^2\omega_{12}\omega_5 + 12v_1^2\omega_9^2\omega_5 - 36\omega_9^2 cs^2 - 36\omega_9 cs^2\omega_5 - 11\omega_9^2\omega_{12}cs^2\omega_5 + 18\omega_9^2\omega_{12}cs^2 - 6v_1^2\omega_9\omega_{12}\omega_5 - 12\omega_9\omega_5 - 12\omega_{12}\omega_5 + 36\omega_9^2 cs^2\omega_5 + 12\omega_9^2 + 36\omega_{12}cs^2\omega_5 + 12\omega_9\omega_5 + 6v_1^2\omega_9^2\omega_{12} - 3v_1^2\omega_9^2\omega_{12}\omega_5 - 12v_1^2\omega_9\omega_5 - 18\omega_9\omega_{12}cs^2\omega_5 + 6\omega_9\omega_{12}\omega_5 - 12v_1^2\omega_9^2 - 6\omega_9^2\omega_{12})\frac{\rho v_1}{12\omega_9^2\omega_{12}\omega_5}$

$C^{(1),\text{CLBM2}}_{\text{D}^2_x\text{D}_y v_2} = (36cs^2\omega_{12}\omega_5 + 3\omega_9^2\omega_{12}\omega_5 + 36\omega_9^2 cs^2\omega_5 + 12v_1^2\omega_{12}\omega_5 + 12v_1^2\omega_9^2\omega_5 - 18\omega_9 cs^2\omega_{12}\omega_5 - 6v_1^2\omega_9\omega_{12}\omega_5 - 12\omega_9^2\omega_5 - 12\omega_{12}\omega_5 + 12\omega_9^2 + 12\omega_9\omega_5 + 18\omega_9^2 cs^2\omega_{12} + 6v_1^2\omega_9^2\omega_{12} - 3v_1^2\omega_9^2\omega_{12}\omega_5 - 12v_1^2\omega_9\omega_5 - 11\omega_9^2 cs^2\omega_{12}\omega_5 + 6\omega_9\omega_{12}\omega_5 - 36\omega_9 cs^2\omega_5 - 12v_1^2\omega_9^2 - 6\omega_9^2\omega_{12} - 36\omega_9^2 cs^2)\frac{\rho v_1}{12\omega_9^2\omega_{12}\omega_5}$

$C^{(1),\text{CuLBM1}}_{\text{D}^2_x\text{D}_y v_2} = (-6\omega_9\omega_4^2 - 12\omega_9\omega_1 - 36cs^2\omega_4^2 + 36cs^2\omega_4^2\omega_1 + 12\omega_4\omega_1 - 6v_1^2\omega_9\omega_4\omega_1 + 12v_1^2\omega_9\omega_1 + 6v_1^2\omega_9\omega_4^2 - 11\omega_9 cs^2\omega_4^2\omega_1 + 3\omega_9\omega_4^2\omega_1 - 12v_1^2\omega_4\omega_1 + 18\omega_9 cs^2\omega_4^2 - 18\omega_9 cs^2\omega_4\omega_1 + 6\omega_9\omega_4\omega_1 + 12v_1^2\omega_4^2\omega_1 + 12\omega_4^2 + 36cs^2\omega_1 - 36cs^2\omega_4\omega_1 - 12\omega_4^2\omega_1 - 3v_1^2\omega_9\omega_4^2\omega_1 - 12v_1^2\omega_4^2)\frac{\rho v_1}{12\omega_9\omega_4^2\omega_1}$

$C^{(1),\text{CuLBM2}}_{\text{D}^2_x\text{D}_y v_2} = (-8\omega_3\omega_4\omega_1^2 - 24v_2^2\omega_3\omega_4\omega_2^2 - 6\omega_4\omega_1^2\omega_2^2 + 18v_2^2\omega_3\omega_4\omega_1\omega_2^2 + 8v_1^2\omega_3\omega_4\omega_2^2 + 16\omega_3\omega_4\omega_1^2 cs^2 + 6v_1^2\omega_3\omega_1^2\omega_2^2 - 4\omega_3\omega_4\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1\omega_2^2 + 12\omega_3\omega_4\omega_1 cs^2\omega_2^2 - 24\omega_4\omega_1 cs^2\omega_2^2 + 4\omega_3\omega_4\omega_1 cs^2\omega_2 - 8v_1^2\omega_4\omega_1\omega_2^2 - 8\omega_3\omega_4\omega_1\omega_2^2 + 4\omega_4\omega_1^2\omega_2 - 36\omega_3\omega_1 cs^2\omega_2^2 + 12\omega_3\omega_1\omega_2^2 + 12v_2^2\omega_3\omega_4\omega_1\omega_2 - 12\omega_3\omega_4\omega_1^2 cs^2\omega_2 + 18\omega_4\omega_1^2 cs^2\omega_2^2 - 18v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 6\omega_3\omega_1^2\omega_2^2 - 2v_1^2\omega_3\omega_4\omega_1^2\omega_2 + 12v_2^2\omega_3\omega_4\omega_1^2 + 6v_1^2\omega_4\omega_1^2\omega_2^2 + 4v_1^2\omega_3\omega_4\omega_1^2 + 3\omega_3\omega_4\omega_1^2\omega_2^2 + 18\omega_3\omega_1^2 cs^2\omega_2^2 - 4v_1^2\omega_4\omega_1^2\omega_2 + 8\omega_3\omega_4\omega_1^2\omega_2 - 12v_1^2\omega_3\omega_1\omega_2^2 - 3v_1^2\omega_3\omega_4\omega_1^2\omega_2^2 + 16\omega_3\omega_4 cs^2\omega_2^2 + 8\omega_4\omega_1\omega_2^2 - 11\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 - 12\omega_4\omega_1^2 cs^2\omega_2)\frac{\rho v_1}{12\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C^{(1)}_{\text{D}_x\text{D}^2_y\rho}$ **at** $\frac{\partial^3\rho}{\partial x_1\partial x_2^2}$:

$C^{(1),\text{SRT}}_{\text{D}_x\text{D}^2_y\rho} = (-12 - \omega^2 + 12\omega)\frac{cs^4}{6\omega^2}$

$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}^2_y\rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}^2_y\rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}^2_y\rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}^2_y\rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}^2_y\rho} = (-12 + 12\omega_1 - \omega_1^2)\frac{cs^4}{6\omega_1^2}$

$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}^2_y\rho} =$
$(-14cs^4\omega_2^2 + 6v_2^2\omega_1 cs^2\omega_2 - 3v_2^4\omega_1^2\omega_2 - 2v_2^2\omega_1^2 - 4v_2^2\omega_2^2 - 2\omega_1^2 cs^2 + 15v_2^2\omega_1 cs^2\omega_2^2 + 3v_2^2\omega_1^2\omega_2 + 14\omega_1 cs^4\omega_2^2 + 2\omega_1^2 cs^2\omega_2 - 18v_2^2 cs^2\omega_2^2 - 2v_2^2\omega_1\omega_2 + 12v_2^2\omega_1^2 cs^2 + 2\omega_1^2 cs^4 + 2cs^2\omega_2^2 - \omega_1^2 cs^4\omega_2^2 + 3v_2^4\omega_1\omega_2^2 + 2v_2^4\omega_1\omega_2 - 2\omega_1 cs^2\omega_2^2 - 2\omega_1^2 cs^4\omega_2 - 15v_2^2\omega_1^2 cs^2\omega_2 - 3v_2^2\omega_1\omega_2^2 + 2v_2^4\omega_1^2 + 4v_2^2\omega_2^2)\frac{1}{6\omega_1^2\omega_2^2}$

coefficient $C^{(1)}_{\text{D}_x\text{D}^2_y v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2}$:

$C^{(1),\text{SRT}}_{\text{D}_x\text{D}^2_y v_1} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}^2_y v_1} = (-12\omega_9\omega_{12} + 12\omega_5^2 - 12\omega_{12}\omega_5 + 12\omega_9\omega_5 - \omega_9\omega_{12}\omega_5^2 + 12\omega_9\omega_{12}\omega_5 - 12\omega_9\omega_5^2)\frac{\rho v_1 cs^2}{6\omega_9\omega_{12}\omega_5^2}$

$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}^2_y v_1} = (-12\omega_9\omega_{12} + 12\omega_5^2 - 12\omega_{12}\omega_5 + 12\omega_9\omega_5 - \omega_9\omega_{12}\omega_5^2 + 12\omega_9\omega_{12}\omega_5 - 12\omega_9\omega_5^2)\frac{\rho v_1 cs^2}{6\omega_9\omega_{12}\omega_2^2}$

$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}^2_y v_1} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}^2_y v_1} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}^2_y v_1} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}^2_y v_1} = \frac{-\rho v_1 cs^2}{6}$

coefficient $C^{(1)}_{\text{D}_x\text{D}^2_y v_2}$ **at** $\frac{\partial^3 v_2}{\partial x_1 \partial x_2^2}$:

$C^{(1),\text{SRT}}_{\text{D}_x\text{D}^2_y v_2} = 0$

$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}^2_y v_2} = (-2\omega_{15} - \omega_5^2 + \omega_{15}\omega_5 + 2\omega_5)\frac{\rho v_2 cs^2}{\omega_{15}\omega_5^2}$

$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}^2_y v_2} = (-2\omega_{15} - \omega_5^2 + \omega_{15}\omega_5 + 2\omega_5)\frac{\rho v_2 cs^2}{\omega_{15}\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}^2_y v_2} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}^2_y v_2} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}^2_y v_2} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}^2_y v_2} = (-5\omega_1\omega_2^2 + 6\omega_2^2 - 2\omega_1\omega_2 + 8v_2^2\omega_1^2 + 8\omega_1^2 cs^2 - 11v_2^2\omega_1^2\omega_2 - 9\omega_1^2 cs^2\omega_2 + 6v_2^2\omega_1\omega_2 - 10cs^2\omega_2^2 + 5\omega_1^2\omega_2 + 2\omega_1 cs^2\omega_2 + 9\omega_1 cs^2\omega_2^2 + 11v_2^2\omega_1\omega_2^2 - 14v_2^2\omega_2^2 - 4\omega_1^2)\frac{\rho v_2}{6\omega_1^2\omega_2^2}$

coefficient $C^{(1)}_{\text{D}^3_y \rho}$ **at** $\frac{\partial^3 \rho}{\partial x_2^3}$:

$C^{(1),\text{SRT}}_{\text{D}^3_y \rho} = (-1 + 3cs^2 + v_2^2)\frac{v_1 v_2}{12}$

$C^{(1),\text{MRT1}}_{\text{D}^3_y \rho} = (-12\omega_{15} + 18\omega_{10} cs^2\omega_5 - 6\omega_{15}v_2^2\omega_5 - 6\omega_{10}\omega_5 + 12\omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10}\omega_5 - 36\omega_{10}cs^2 + 12\omega_{10} - 18\omega_{15}cs^2\omega_5 + 6v_2^2\omega_{10}\omega_5 + 3\omega_{15}\omega_{10}cs^2\omega_5 + 6\omega_{15}\omega_5 - 12v_2^2\omega_{10} + 36\omega_{15}cs^2 - \omega_{15}\omega_{10}\omega_5)\frac{v_1 v_2}{12\omega_{15}\omega_{10}\omega_5}$

$C^{(1),\text{MRT2}}_{\text{D}^3_y\rho} = (-12\omega_{15} - 18\omega_{15}cs^2\omega_5 - 6\omega_{15}v_2^2\omega_5 - 6\omega_{10}\omega_5 + 12\omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10}\omega_5 + 36\omega_{15}cs^2 + 3\omega_{15}cs^2\omega_{10}\omega_5 + 12\omega_{10} + 18cs^2\omega_{10}\omega_5 + 6v_2^2\omega_{10}\omega_5 + 6\omega_{15}\omega_5 - 36cs^2\omega_{10} - 12v_2^2\omega_{10} - \omega_{15}\omega_{10}\omega_5)\frac{v_1 v_2}{12\omega_{15}\omega_{10}\omega_5}$

$C^{(1),\text{CLBM1}}_{\text{D}^3_y\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_1 v_2}{12}$

$C^{(1),\text{CLBM2}}_{\text{D}^3_y\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_1 v_2}{12}$

$C^{(1),\text{CuLBM1}}_{\text{D}^3_y\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_1 v_2}{12}$

$C^{(1),\text{CuLBM2}}_{\text{D}^3_y\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_1 v_2}{12}$

coefficient $C^{(1)}_{\text{D}^3_y v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_2^3}$**:**

$C^{(1),\text{SRT}}_{\text{D}^3_y v_1} = (6 + \omega^2 - 3cs^2\omega^2 + 18cs^2\omega - 18cs^2 - v_2^2\omega^2 + 6v_2^2\omega - 6\omega - 6v_2^2)\frac{\rho v_2}{6\omega^2}$

$C^{(1),\text{MRT1}}_{\text{D}^3_y v_1} =$
$(3cs^2\omega_5^2 - \omega_{15}v_2^2\omega_5^2 + 3\omega_{15}v_2^2\omega_5 - 6cs^2\omega_5 - 3\omega_5^2 + 15\omega_{15}cs^2\omega_5 - 6v_2^2\omega_5 - 3\omega_{15}\omega_5 - 12\omega_{15}cs^2 + \omega_{15}\omega_5^2 + 3v_2^2\omega_5^2 + 6\omega_5 - 3\omega_{15}cs^2\omega_5^2)\frac{\rho v_2}{6\omega_{15}\omega_5^2}$

$C^{(1),\text{MRT2}}_{\text{D}^3_y v_1} =$
$(-3\omega_{15}cs^2\omega_5^2 - \omega_{15}v_2^2\omega_5^2 + 15\omega_{15}cs^2\omega_5 + 3\omega_{15}v_2^2\omega_5 - 12\omega_{15}cs^2 - 3\omega_5^2 - 6v_2^2\omega_5 - 6cs^2\omega_5 - 3\omega_{15}\omega_5 + \omega_{15}\omega_5^2 + 3v_2^2\omega_5^2 + 3cs^2\omega_5^2 + 6\omega_5)\frac{\rho v_2}{6\omega_{15}\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}^3_y v_1} = (6 - 3\omega_{15}cs^2\omega_5 - 3\omega_{15} - \omega_{15}v_2^2\omega_5 - 18cs^2 + 3\omega_{15}v_2^2 + 3v_2^2\omega_5 + \omega_{15}\omega_5 - 6v_2^2 - 3\omega_5 + 9cs^2\omega_5 + 9\omega_{15}cs^2)\frac{\rho v_2}{6\omega_{15}\omega_5}$

$C^{(1),\text{CLBM2}}_{\text{D}^3_y v_1} = (6 - 3\omega_{15} + 9\omega_{15}cs^2 - \omega_{15}v_2^2\omega_5 + 3\omega_{15}v_2^2 + 9cs^2\omega_5 - 18cs^2 - 3\omega_{15}cs^2\omega_5 + 3v_2^2\omega_5 + \omega_{15}\omega_5 - 6v_2^2 - 3\omega_5)\frac{\rho v_2}{6\omega_{15}\omega_5}$

$C^{(1),\text{CuLBM1}}_{\text{D}^3_y v_1} = (6 + 3v_2^2\omega_1 + 9cs^2\omega_1 - v_2^2\omega_7\omega_1 - 18cs^2 - 3cs^2\omega_7\omega_1 - 3\omega_7 + 9cs^2\omega_7 + 3v_2^2\omega_7 + \omega_7\omega_1 - 3\omega_1 - 6v_2^2)\frac{\rho v_2}{6\omega_7\omega_1}$

$C^{(1),\text{CuLBM2}}_{\text{D}^3_y v_1} = (-6\omega_3\omega_4 - 18\omega_3cs^2 - 3\omega_4\omega_1 + 18\omega_3\omega_4cs^2 + 6\omega_3 - 6v_2^2\omega_4 - 3\omega_3\omega_1 - 18\omega_4cs^2 + 2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1cs^2 + 6\omega_4 + 3v_2^2\omega_3\omega_1 - 6\omega_3\omega_4\omega_1cs^2 - 2v_2^2\omega_3\omega_4\omega_1 + 6v_2^2\omega_3\omega_4 + 9\omega_3\omega_1cs^2 - 6v_2^2\omega_3 + 3v_2^2\omega_4\omega_1)\frac{\rho v_2}{12\omega_3\omega_4\omega_1}$

coefficient $C^{(1)}_{\text{D}^3_y v_2}$ **at** $\frac{\partial^3 v_2}{\partial x_2^3}$**:**

$C^{(1),\text{SRT}}_{\text{D}^3_y v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_1}{12}$

$C^{(1),\text{MRT1}}_{\text{D}^3_y v_2} = (-12\omega_{15} + 6\omega_{10}cs^2\omega_5 - 18\omega_{15}v_2^2\omega_5 - 6\omega_{10}\omega_5 + 36\omega_{15}v_2^2 + 3\omega_{15}v_2^2\omega_{10}\omega_5 - 12\omega_{10}cs^2 + 12\omega_{10} - 6\omega_{15}cs^2\omega_5 + 18v_2^2\omega_{10}\omega_5 + \omega_{15}\omega_{10}cs^2\omega_5 + 6\omega_{15}\omega_5 - 36v_2^2\omega_{10} + 12\omega_{15}cs^2 - \omega_{15}\omega_{10}\omega_5)\frac{\rho v_1}{12\omega_{15}\omega_{10}\omega_5}$

$C^{(1),\text{MRT2}}_{\text{D}^3_y v_2} = (-12\omega_{15} - 6\omega_{15}cs^2\omega_5 - 18\omega_{15}v_2^2\omega_5 - 6\omega_{10}\omega_5 + 36\omega_{15}v_2^2 + 3\omega_{15}v_2^2\omega_{10}\omega_5 + 12\omega_{15}cs^2 + \omega_{15}cs^2\omega_{10}\omega_5 + 12\omega_{10} + 6cs^2\omega_{10}\omega_5 + 18v_2^2\omega_{10}\omega_5 + 6\omega_{15}\omega_5 - 12cs^2\omega_{10} - 36v_2^2\omega_{10} - \omega_{15}\omega_{10}\omega_5)\frac{\rho v_1}{12\omega_{15}\omega_{10}\omega_5}$

$C^{(1),\text{CLBM1}}_{\text{D}^3_y v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_1}{12}$

$C^{(1),\text{CLBM2}}_{\text{D}^3_y v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_1}{12}$

$C^{(1),\text{CuLBM1}}_{\text{D}^3_y v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_1}{12}$

$C^{(1),\text{CuLBM2}}_{\text{D}^3_y v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_1}{12}$

coefficient $C^{(1)}_{\text{D}^2_x \text{D}_z\rho}$ **at** $\frac{\partial^3 \rho}{\partial x_1^2 \partial x_3}$**:**

$C^{(1),\text{SRT}}_{\text{D}_x^2 \text{D}_z \rho} = 0$

$C^{(1),\text{MRT1}}_{\text{D}_x^2 \text{D}_z \rho} = (\omega_9 \omega_6 + 3\omega_6 \omega_{13} cs^2 + v_1^2 \omega_6 \omega_{13} + 3\omega_9^2 \omega_6 cs^2 - 3\omega_9 \omega_6 \omega_{13} cs^2 - v_1^2 \omega_9 \omega_6 - v_1^2 \omega_9 \omega_6 \omega_{13} - \omega_6 \omega_{13} - 3\omega_9^2 cs^2 + \omega_9^2 + 3\omega_9 \omega_{13} cs^2 + v_1^2 \omega_9^2 \omega_6 - \omega_9 \omega_{13} + \omega_9 \omega_6 \omega_{13} + v_1^2 \omega_9 \omega_{13} - v_1^2 \omega_9^2 - \omega_9^2 \omega_6 - 3\omega_9 \omega_6 cs^2) \frac{v_1 v_3}{\omega_9^2 \omega_6 \omega_{13}}$

$C^{(1),\text{MRT2}}_{\text{D}_x^2 \text{D}_z \rho} = (\omega_9 \omega_6 + 3\omega_9 cs^2 \omega_{13} + v_1^2 \omega_6 \omega_{13} - v_1^2 \omega_9 \omega_6 + 3\omega_9^2 cs^2 \omega_6 - v_1^2 \omega_9 \omega_6 \omega_{13} - \omega_6 \omega_{13} + \omega_9^2 - 3\omega_9 cs^2 \omega_6 - 3\omega_9^2 cs^2 + 3cs^2 \omega_6 \omega_{13} + v_1^2 \omega_9^2 \omega_6 - \omega_9 \omega_{13} + \omega_9 \omega_6 \omega_{13} + v_1^2 \omega_9 \omega_{13} - 3\omega_9 cs^2 \omega_6 \omega_{13} - v_1^2 \omega_9^2 - \omega_9^2 \omega_6) \frac{v_1 v_3}{\omega_9^2 \omega_6 \omega_{13}}$

$C^{(1),\text{CLBM1}}_{\text{D}_x^2 \text{D}_z \rho} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_x^2 \text{D}_z \rho} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_x^2 \text{D}_z \rho} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_x^2 \text{D}_z \rho} = (-4v_1^2 \omega_1 \omega_2 + 2v_3^2 \omega_1^2 - 3\omega_1 \omega_2^2 + 2v_3^2 \omega_1 \omega_2 + 2v_1^2 \omega_2^2 + 3v_3^2 \omega_1 \omega_2^2 + 2\omega_2^2 + 2\omega_1 \omega_2 + 12\omega_1^2 cs^2 - 9\omega_1^2 cs^2 \omega_2 + 2v_1^2 \omega_1^2 - 4v_3^2 \omega_2^2 - 6cs^2 \omega_2^2 + 3\omega_1^2 \omega_2 - 6\omega_1 cs^2 \omega_2 + 9\omega_1 cs^2 \omega_2^2 - 3v_3^2 \omega_1^2 \omega_2 - 4\omega_1^2) \frac{v_1 v_3}{6\omega_1^2 \omega_2^2}$

coefficient $C^{(1)}_{\text{D}_x^2 \text{D}_z v_1}$ at $\frac{\partial^3 v_1}{\partial x_1^2 \partial x_3}$:

$C^{(1),\text{SRT}}_{\text{D}_x^2 \text{D}_z v_1} = 0$

$C^{(1),\text{MRT1}}_{\text{D}_x^2 \text{D}_z v_1} = (\omega_9 \omega_6 + \omega_6 \omega_{13} cs^2 + 3v_1^2 \omega_6 \omega_{13} + \omega_9^2 \omega_6 cs^2 - \omega_9 \omega_6 \omega_{13} cs^2 - 3v_1^2 \omega_9 \omega_6 - 3v_1^2 \omega_9 \omega_6 \omega_{13} - \omega_6 \omega_{13} - \omega_9^2 cs^2 + \omega_9^2 + \omega_9 \omega_{13} cs^2 + 3v_1^2 \omega_9^2 \omega_6 - \omega_9 \omega_{13} + \omega_9 \omega_6 \omega_{13} + 3v_1^2 \omega_9 \omega_{13} - 3v_1^2 \omega_9^2 - \omega_9^2 \omega_6 - \omega_9 \omega_6 cs^2) \frac{\rho v_3}{\omega_9^2 \omega_6 \omega_{13}}$

$C^{(1),\text{MRT2}}_{\text{D}_x^2 \text{D}_z v_1} = (\omega_9 \omega_6 + \omega_9 cs^2 \omega_{13} + 3v_1^2 \omega_6 \omega_{13} - 3v_1^2 \omega_9 \omega_6 + \omega_9^2 cs^2 \omega_6 - 3v_1^2 \omega_9 \omega_6 \omega_{13} - \omega_6 \omega_{13} + \omega_9^2 - \omega_9 cs^2 \omega_6 - \omega_9^2 cs^2 + cs^2 \omega_6 \omega_{13} + 3v_1^2 \omega_9^2 \omega_6 - \omega_9 \omega_{13} + \omega_9 \omega_6 \omega_{13} + 3v_1^2 \omega_9 \omega_{13} - \omega_9 cs^2 \omega_6 \omega_{13} - 3v_1^2 \omega_9^2 - \omega_9^2 \omega_6) \frac{\rho v_3}{\omega_9^2 \omega_6 \omega_{13}}$

$C^{(1),\text{CLBM1}}_{\text{D}_x^2 \text{D}_z v_1} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_x^2 \text{D}_z v_1} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_x^2 \text{D}_z v_1} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_x^2 \text{D}_z v_1} = (8\omega_3 \omega_1^2 cs^2 - 4\omega_3 \omega_1 cs^2 \omega_2 + 4\omega_3 \omega_1 \omega_2 - 4\omega_3 \omega_1^2 - v_3^2 \omega_3 \omega_1^2 \omega_2 - 2\omega_1 \omega_2^2 + 2v_3^2 \omega_1 \omega_2^2 + 6v_1^2 \omega_3 \omega_1^2 - 6\omega_1^2 cs^2 \omega_2 + 3\omega_3 \omega_1 cs^2 \omega_2^2 + 2v_3^2 \omega_3 \omega_1^2 - \omega_3 \omega_1 \omega_2^2 + 2\omega_1^2 \omega_2 + v_3^2 \omega_3 \omega_1 \omega_2^2 - 12v_1^2 \omega_3 \omega_1 \omega_2 + 6\omega_1 cs^2 \omega_2^2 - 3\omega_3 \omega_1^2 cs^2 \omega_2 - 2v_3^2 \omega_1^2 \omega_2 - 2v_3^2 \omega_3 \omega_2^2 + 6v_1^2 \omega_3 \omega_2^2 + \omega_3 \omega_1^2 \omega_2 - 4\omega_3 cs^2 \omega_2^2) \frac{\rho v_3}{6\omega_3 \omega_1^2 \omega_2^2}$

coefficient $C^{(1)}_{\text{D}_x^2 \text{D}_z v_3}$ at $\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3}$:

$C^{(1),\text{SRT}}_{\text{D}_x^2 \text{D}_z v_3} = (12 + 12v_1^2 \omega + 3\omega^2 - 11cs^2 \omega^2 + 36cs^2 \omega - 3v_1^2 \omega^2 - 12v_1^2 - 36cs^2 - 12\omega) \frac{\rho v_1}{12\omega^2}$

$C^{(1),\text{MRT1}}_{\text{D}_x^2 \text{D}_z v_3} = (-11\omega_9^2 \omega_6^2 \omega_{13} cs^2 - 12\omega_9 \omega_6^2 cs^2 - 6\omega_9^2 \omega_6 \omega_{13} - 12v_1^2 \omega_9 \omega_6^2 + 6\omega_9 \omega_6^2 \omega_{13} - 12\omega_9^2 \omega_6 cs^2 - 3v_1^2 \omega_9^2 \omega_6^2 \omega_{13} - 24\omega_9 \omega_6 \omega_{13} cs^2 - 24\omega_9^2 \omega_{13} cs^2 + 12\omega_9 \omega_6^2 - 6v_1^2 \omega_9 \omega_6^2 \omega_{13} - 18\omega_9 \omega_6^2 \omega_{13} cs^2 - 12\omega_6^2 \omega_{13} - 12\omega_9^2 \omega_6^2 + 6v_1^2 \omega_9^2 \omega_6 \omega_{13} - 12v_1^2 \omega_9^2 \omega_6 + 12v_1^2 \omega_9^2 \omega_6^2 + 36\omega_6^2 \omega_{13} cs^2 + 12v_1^2 \omega_6^2 \omega_{13} + 12\omega_9^2 \omega_6^2 cs^2 + 42\omega_9^2 \omega_6 \omega_{13} cs^2 + 12\omega_9^2 \omega_6 + 3\omega_9^2 \omega_6^2 \omega_{13}) \frac{\rho v_1}{12\omega_9^2 \omega_6^2 \omega_{13}}$

$C^{(1),\text{MRT2}}_{\text{D}_x^2 \text{D}_z v_3} = (-18\omega_9 cs^2 \omega_6^2 \omega_{13} - 6\omega_9^2 \omega_6 \omega_{13} - 12v_1^2 \omega_9 \omega_6^2 + 12\omega_9^2 cs^2 \omega_6^2 + 6\omega_9 \omega_6^2 \omega_{13} + 36cs^2 \omega_6^2 \omega_{13} - 3v_1^2 \omega_9^2 \omega_6^2 \omega_{13} - 12\omega_9^2 cs^2 \omega_6 + 42\omega_9^2 cs^2 \omega_6 \omega_{13} + 12\omega_9 \omega_6^2 - 6v_1^2 \omega_9 \omega_6^2 \omega_{13} - 12\omega_6^2 \omega_{13} - 12\omega_9^2 \omega_6^2 - 11\omega_9^2 cs^2 \omega_6^2 \omega_{13} + 6v_1^2 \omega_9^2 \omega_6 \omega_{13} - 12v_1^2 \omega_9^2 \omega_6 + 12v_1^2 \omega_9^2 \omega_6^2 + 12v_1^2 \omega_6^2 \omega_{13} - 24\omega_9 cs^2 \omega_6 \omega_{13} - 12\omega_9 cs^2 \omega_6^2 - 24\omega_9^2 cs^2 \omega_{13} + 12\omega_9^2 \omega_6 + 3\omega_9^2 \omega_6^2 \omega_{13}) \frac{\rho v_1}{12\omega_9^2 \omega_6^2 \omega_{13}}$

$C^{(1),\text{CLBM1}}_{\text{D}_x^2 \text{D}_z v_3} = (6v_1^2 \omega_9^2 \omega_{13} + 12\omega_9 \omega_6 - 18\omega_9 \omega_6 \omega_{13} cs^2 + 18\omega_9^2 \omega_{13} cs^2 + 3\omega_9^2 \omega_6 \omega_{13} + 12v_1^2 \omega_6 \omega_{13} - 36\omega_9^2 cs^2 + 36\omega_6 \omega_{13} cs^2 - 12v_1^2 \omega_9 \omega_6 - 6\omega_9^2 \omega_{13} - 6v_1^2 \omega_9 \omega_6 \omega_{13} - 12\omega_6 \omega_{13} + 36\omega_9^2 \omega_6 cs^2 + 12\omega_9^2 - 11\omega_9^2 \omega_6 \omega_{13} cs^2 - 3v_1^2 \omega_9^2 \omega_6 \omega_{13} + 12v_1^2 \omega_9^2 \omega_6 - 36\omega_9 \omega_6 cs^2 + 6\omega_9 \omega_6 \omega_{13} - 12v_1^2 \omega_9^2 - 12\omega_9^2 \omega_6) \frac{\rho v_1}{12\omega_9^2 \omega_6 \omega_{13}}$

$$C^{(1),\text{CLBM2}}_{\text{D}^2_x\text{D}_z v_3} = (36cs^2\omega_6\omega_{13}+6v_1^2\omega_9^2\omega_{13}+12\omega_9\omega_6+3\omega_9^2\omega_6\omega_{13}+12v_1^2\omega_6\omega_{13}+18\omega_9^2cs^2\omega_{13}-36\omega_9cs^2\omega_6-18\omega_9cs^2\omega_6\omega_{13}-12v_1^2\omega_9\omega_6-6\omega_9^2\omega_{13}-6v_1^2\omega_9\omega_6\omega_{13}-12\omega_6\omega_{13}+36\omega_9^2cs^2\omega_6+12\omega_9^2-3v_1^2\omega_9^2\omega_6\omega_{13}+12v_1^2\omega_9^2\omega_6+6\omega_9\omega_6\omega_{13}-11\omega_9^2cs^2\omega_6\omega_{13}-12v_1^2\omega_9^2-12\omega_9^2\omega_6-36\omega_9^2cs^2)\frac{\rho v_1}{12\omega_9^2\omega_6\omega_{13}}$$

$$C^{(1),\text{CuLBM1}}_{\text{D}^2_x\text{D}_z v_3} = (12v_1^2\omega_{12}\omega_2+3\omega_{12}\omega_4^2\omega_2-36cs^2\omega_4^2+12v_1^2\omega_4^2\omega_2-6v_1^2\omega_{12}\omega_4\omega_2+18\omega_{12}cs^2\omega_4^2-12\omega_{12}\omega_2-12\omega_4^2\omega_2-36cs^2\omega_4\omega_2-11\omega_{12}cs^2\omega_4^2\omega_2+12\omega_4\omega_2+36cs^2\omega_4^2\omega_2-18\omega_{12}cs^2\omega_4\omega_2+12\omega_4^2-3v_1^2\omega_{12}\omega_4^2\omega_2+6v_1^2\omega_{12}\omega_4^2-12v_1^2\omega_4^2\omega_2+36\omega_{12}cs^2\omega_2-6\omega_{12}\omega_4^2+6\omega_{12}\omega_4\omega_2-12v_1^2\omega_4^2)\frac{\rho v_1}{12\omega_{12}\omega_4^2\omega_2}$$

$$C^{(1),\text{CuLBM2}}_{\text{D}^2_x\text{D}_z v_3} = (-8\omega_3\omega_4\omega_1^2-6\omega_4\omega_1^2\omega_2^2+8v_1^2\omega_3\omega_4\omega_2^2+16\omega_3\omega_4\omega_1^2cs^2+6v_1^2\omega_3\omega_4\omega_1^2\omega_2^2-4\omega_3\omega_4\omega_1\omega_2+2v_1^2\omega_3\omega_4\omega_1\omega_2^2+12\omega_3\omega_4\omega_1cs^2\omega_2^2-24\omega_4\omega_1cs^2\omega_2^2+4\omega_3\omega_4\omega_1cs^2\omega_2-18v_3^2\omega_3\omega_4\omega_1^2\omega_2-8v_1^2\omega_4\omega_1\omega_2^2-8\omega_3\omega_4\omega_1\omega_2^2-24v_3^2\omega_3\omega_4\omega_2^2+4\omega_4\omega_1^2\omega_2-36\omega_3\omega_1\omega_2^2+12\omega_3\omega_1\omega_2^2-12\omega_3\omega_4\omega_1^2cs^2\omega_2^2+18\omega_4\omega_1^2cs^2\omega_2^2-6\omega_3\omega_1^2\omega_2^2-2v_1^2\omega_3\omega_4\omega_1^2\omega_2+6v_1^2\omega_4\omega_1^2\omega_2^2+4v_1^2\omega_3\omega_4\omega_1^2+12v_3^2\omega_3\omega_4\omega_1\omega_2+3\omega_3\omega_4\omega_1^2\omega_2^2+18\omega_3\omega_1^2cs^2\omega_2^2-4v_1^2\omega_4\omega_1^2\omega_2+18v_3^2\omega_3\omega_4\omega_1\omega_2^2+8\omega_3\omega_4\omega_1^2\omega_2+12v_3^2\omega_3\omega_4\omega_1^2-12v_1^2\omega_3\omega_1\omega_2^2-3v_1^2\omega_3\omega_4\omega_1^2\omega_2^2+16\omega_3\omega_4cs^2\omega_2^2+8\omega_4\omega_1\omega_2^2-11\omega_3\omega_4\omega_1^2cs^2\omega_2^2-12\omega_4\omega_1^2cs^2\omega_2)\frac{\rho v_1}{12\omega_3\omega_4\omega_1^2\omega_2^2}$$

coefficient $C^{(1)}_{\text{D}_x\text{D}_y\text{D}_z \rho}$ **at** $\frac{\partial^3 \rho}{\partial x_1 \partial x_2 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}_x\text{D}_y\text{D}_z \rho} = 0$$

$$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}_y\text{D}_z \rho} = 0$$

$$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}_y\text{D}_z \rho} = 0$$

$$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}_y\text{D}_z \rho} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}_y\text{D}_z \rho} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}_y\text{D}_z \rho} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}_y\text{D}_z \rho} = (v_3^2\omega_1^2-2v_3^2\omega_1\omega_2-2\omega_2^2+4\omega_1\omega_2+v_2^2\omega_1^2+6\omega_1^2cs^2-2v_2^2\omega_1\omega_2+v_3^2\omega_2^2+6cs^2\omega_2^2-12\omega_1cs^2\omega_2+v_2^2\omega_2^2-2\omega_1^2)\frac{v_2 v_3}{3\omega_1^2\omega_2^2}$$

coefficient $C^{(1)}_{\text{D}_x\text{D}_y\text{D}_z v_2}$ **at** $\frac{\partial^3 v_2}{\partial x_1 \partial x_2 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}_y\text{D}_z v_2} = (-\omega_6\omega_8-\omega_6\omega_5^2+\omega_6\omega_5+\omega_5^2-\omega_8\omega_5+\omega_6\omega_8\omega_5)\frac{\rho v_3 cs^2}{\omega_6\omega_8\omega_5^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}_y\text{D}_z v_2} = (-\omega_6\omega_8-\omega_6\omega_5^2+\omega_6\omega_5+\omega_5^2-\omega_8\omega_5+\omega_6\omega_8\omega_5)\frac{\rho cs^2 v_3}{\omega_6\omega_8\omega_5^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}_y\text{D}_z v_2} = (-4\omega_3\omega_4\omega_1^2+6v_2^2\omega_3\omega_4\omega_2^2-3\omega_4\omega_1^2\omega_2^2+8\omega_3\omega_4\omega_1^2cs^2-4v_3^2\omega_4\omega_1\omega_2^2+4\omega_3\omega_4\omega_1\omega_2+3\omega_3\omega_4\omega_1cs^2\omega_2^2-12\omega_4\omega_1cs^2\omega_2^2-4\omega_3\omega_4\omega_1cs^2\omega_2-v_3^2\omega_3\omega_4\omega_1^2\omega_2^2-3v_3^2\omega_3\omega_1^2\omega_2^2-\omega_3\omega_4\omega_1\omega_2^2-2v_3^2\omega_3\omega_4\omega_2^2+2\omega_4\omega_1^2\omega_2+18\omega_3\omega_1cs^2\omega_2^2-6\omega_3\omega_1\omega_2^2-12v_2^2\omega_3\omega_4\omega_1\omega_2-3\omega_3\omega_4\omega_1^2cs^2\omega_2+9\omega_4\omega_1^2cs^2\omega_2^2+3\omega_3\omega_1^2\omega_2^2+6v_3^2\omega_3\omega_4\omega_1^2+6v_3^2\omega_3\omega_1\omega_2^2-9\omega_3\omega_1^2cs^2\omega_2^2-2v_3^2\omega_4\omega_1\omega_2+v_3^2\omega_3\omega_4\omega_1\omega_2^2+3v_3^2\omega_4\omega_1^2\omega_2^2+\omega_3\omega_4\omega_1^2\omega_2+2v_3^2\omega_3\omega_4\omega_1^2-4\omega_3\omega_4cs^2\omega_2^2+4\omega_4\omega_1\omega_2^2-6\omega_4\omega_1^2cs^2\omega_2)\frac{\rho v_3}{6\omega_3\omega_4\omega_1^2\omega_2^2}$$

coefficient $C^{(1)}_{\text{D}_x\text{D}_y\text{D}_z v_3}$ **at** $\frac{\partial^3 v_3}{\partial x_1 \partial x_2 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}_y\text{D}_z v_3} = (-\omega_6\omega_8+\omega_6\omega_5-\omega_6^2\omega_5-\omega_8\omega_5+\omega_6^2+\omega_6\omega_8\omega_5)\frac{\rho v_2 cs^2}{\omega_6^2\omega_8\omega_5}$$

$$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}_y\text{D}_z v_3} = (-\omega_6\omega_8+\omega_6\omega_5-\omega_6^2\omega_5-\omega_8\omega_5+\omega_6^2+\omega_6\omega_8\omega_5)\frac{\rho v_2 cs^2}{\omega_6^2\omega_8\omega_5}$$

$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3}^{(1),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3}^{(1),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3}^{(1),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3}^{(1),\mathrm{CuLBM2}} = (-4\omega_3\omega_4\omega_1^2 - 2v_2^2\omega_3\omega_4\omega_2^2 - 3\omega_4\omega_1^2\omega_2^2 + v_2^2\omega_3\omega_4\omega_1\omega_2^2 + 8\omega_3\omega_4\omega_1^2 cs^2 + 4\omega_3\omega_4\omega_1\omega_2 - 3v_2^2\omega_3\omega_1^2\omega_2^2 + 3\omega_3\omega_4\omega_1 cs^2\omega_2^2 - 12\omega_4\omega_1 cs^2\omega_2^2 - 4\omega_3\omega_4\omega_1 cs^2\omega_2 - 4v_2^2\omega_4\omega_1\omega_2^2 - \omega_3\omega_4\omega_1\omega_2^2 + 6v_3^2\omega_3\omega_4\omega_2^2 + 2\omega_4\omega_1^2\omega_2 + 18\omega_3\omega_1 cs^2\omega_2^2 - 6\omega_3\omega_1\omega_2^2 - 3\omega_3\omega_4\omega_1^2 cs^2\omega_2 + 9\omega_4\omega_1^2 cs^2\omega_2^2 - v_2^2\omega_3\omega_4\omega_1^2\omega_2 + 3\omega_3\omega_1^2\omega_2^2 + 2v_2^2\omega_3\omega_4\omega_1^2 + 3v_2^2\omega_4\omega_1^2\omega_2^2 - 12v_3^2\omega_3\omega_4\omega_1\omega_2 - 9\omega_3\omega_1^2 cs^2\omega_2^2 + \omega_3\omega_4\omega_1^2\omega_2 + 6v_3^2\omega_3\omega_4\omega_1^2 + 6v_2^2\omega_3\omega_1\omega_2^2 - 4\omega_3\omega_4 cs^2\omega_2^2 - 2v_2^2\omega_4\omega_1^2\omega_2 + 4\omega_4\omega_1\omega_2^2 - 6\omega_4\omega_1^2 cs^2\omega_2)\frac{\rho v_2}{6\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1)}$ **at** $\frac{\partial^3 v_1}{\partial x_2^2 \partial x_3}$:

$C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1),\mathrm{MRT1}} = (-\omega_6\omega_8 - \omega_6\omega_5^2 + \omega_6\omega_5 + \omega_5^2 - \omega_8\omega_5 + \omega_6\omega_8\omega_5)\frac{\rho v_3 cs^2}{\omega_6\omega_8\omega_5^2}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1),\mathrm{MRT2}} = (-\omega_6\omega_8 - \omega_6\omega_5^2 + \omega_6\omega_5 + \omega_5^2 - \omega_8\omega_5 + \omega_6\omega_8\omega_5)\frac{\rho cs^2 v_3}{\omega_6\omega_8\omega_5^2}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_1}^{(1),\mathrm{CuLBM2}} = (-v_3^2\omega_3\omega_1 - 2v_3^2\omega_4 + 6\omega_3 cs^2 - \omega_4\omega_1 - 2\omega_3 + v_3^2\omega_4\omega_1 + \omega_3\omega_1 - 6\omega_4 cs^2 + 3\omega_4\omega_1 cs^2 + 2\omega_4 + 2v_3^2\omega_3 - 3\omega_3\omega_1 cs^2)\frac{\rho v_3}{4\omega_3\omega_4\omega_1}$

coefficient $C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1)}$ **at** $\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3}$:

$C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{SRT}} = \frac{-\rho v_1 cs^2}{6}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{MRT1}} = (-6\omega_6\omega_8 - \omega_6\omega_7\omega_8\omega_5 + 6\omega_7\omega_5 - 6\omega_6\omega_7\omega_5 + 6\omega_6\omega_7 - 6\omega_8\omega_5 + 6\omega_6\omega_8\omega_5)\frac{\rho v_1 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{MRT2}} = (-6\omega_6\omega_8 - \omega_6\omega_7\omega_8\omega_5 + 6\omega_7\omega_5 - 6\omega_6\omega_7\omega_5 + 6\omega_6\omega_7 - 6\omega_8\omega_5 + 6\omega_6\omega_8\omega_5)\frac{\rho v_1 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{CLBM1}} = \frac{-\rho v_1 cs^2}{6}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{CLBM2}} = \frac{-\rho v_1 cs^2}{6}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{CuLBM1}} = \frac{-\rho v_1 cs^2}{6}$

$C_{\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{CuLBM2}} = \frac{-\rho v_1 cs^2}{6}$

coefficient $C_{\mathrm{D}_x\mathrm{D}_z^2\rho}^{(1)}$ **at** $\frac{\partial^3\rho}{\partial x_1 \partial x_3^2}$:

$C_{\mathrm{D}_x\mathrm{D}_z^2\rho}^{(1),\mathrm{SRT}} = (-12 - \omega^2 + 12\omega)\frac{cs^4}{6\omega^2}$

$C_{\mathrm{D}_x\mathrm{D}_z^2\rho}^{(1),\mathrm{MRT1}} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$

$C_{\mathrm{D}_x\mathrm{D}_z^2\rho}^{(1),\mathrm{MRT2}} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$

$$C^{(1),\text{CLBM1}}_{\mathrm{D}_x \mathrm{D}_z^2 \rho} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}_x \mathrm{D}_z^2 \rho} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x \mathrm{D}_z^2 \rho} = (-12 - \omega_2^2 + 12\omega_2)\frac{cs^4}{6\omega_2^2}$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x \mathrm{D}_z^2 \rho} =$$
$$(-14cs^4\omega_2^2 - 4v_3^4\omega_2^2 + 3v_3^4\omega_1\omega_2^2 + 15v_3^2\omega_1 cs^2\omega_2^2 - 2v_3^2\omega_1^2 - 2v_3^2\omega_1\omega_2 + 12v_3^2\omega_1^2 cs^2 - 3v_3^2\omega_1\omega_2^2 - 2\omega_1^2 cs^2 + 14\omega_1 cs^4\omega_2^2 + 6v_3^2\omega_1 cs^2\omega_2 + 2\omega_1^2 cs^2\omega_2 + 2v_3^4\omega_1\omega_2 + 2\omega_1^2 cs^4 - 3v_3^4\omega_1^2\omega_2 + 4v_3^2\omega_2^2 + 2cs^2\omega_2^2 - \omega_1^2 cs^4\omega_2 + 2v_3^4\omega_1^2 - 15v_3^2\omega_1^2 cs^2\omega_2 - 18v_3^2 cs^2\omega_2^2 - 2\omega_1 cs^2\omega_2^2 + 3v_3^2\omega_1^2\omega_2 - 2\omega_1^2 cs^4\omega_2)\frac{1}{6\omega_1^2\omega_2^2}$$

coefficient $C^{(1)}_{\mathrm{D}_x \mathrm{D}_z^2 v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_x \mathrm{D}_z^2 v_1} = \frac{-\rho v_1 cs^2}{6}$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}_x \mathrm{D}_z^2 v_1} = (12\omega_9\omega_6 - \omega_9\omega_6^2\omega_{13} - 12\omega_6\omega_{13} - 12\omega_9\omega_6^2 - 12\omega_9\omega_{13} + 12\omega_9\omega_6\omega_{13} + 12\omega_6^2)\frac{\rho v_1 cs^2}{6\omega_9\omega_6^2\omega_{13}}$$

$$C^{(1),\text{MRT2}}_{\mathrm{D}_x \mathrm{D}_z^2 v_1} = (12\omega_9\omega_6 - \omega_9\omega_6^2\omega_{13} - 12\omega_6\omega_{13} - 12\omega_9\omega_6^2 - 12\omega_9\omega_{13} + 12\omega_9\omega_6\omega_{13} + 12\omega_6^2)\frac{\rho v_1 cs^2}{6\omega_9\omega_6^2\omega_{13}}$$

$$C^{(1),\text{CLBM1}}_{\mathrm{D}_x \mathrm{D}_z^2 v_1} = \frac{-\rho v_1 cs^2}{6}$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}_x \mathrm{D}_z^2 v_1} = \frac{-\rho v_1 cs^2}{6}$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x \mathrm{D}_z^2 v_1} = \frac{-\rho v_1 cs^2}{6}$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x \mathrm{D}_z^2 v_1} = \frac{-\rho v_1 cs^2}{6}$$

coefficient $C^{(1)}_{\mathrm{D}_x \mathrm{D}_z^2 v_3}$ **at** $\frac{\partial^3 v_3}{\partial x_1 \partial x_3^2}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_x \mathrm{D}_z^2 v_3} = 0$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}_x \mathrm{D}_z^2 v_3} = (-2\omega_{18} + 2\omega_6 + \omega_{18}\omega_6 - \omega_6^2)\frac{\rho v_3 cs^2}{\omega_{18}\omega_6^2}$$

$$C^{(1),\text{MRT2}}_{\mathrm{D}_x \mathrm{D}_z^2 v_3} = (-2\omega_{18} + 2\omega_6 + \omega_{18}\omega_6 - \omega_6^2)\frac{\rho cs^2 v_3}{\omega_{18}\omega_6^2}$$

$$C^{(1),\text{CLBM1}}_{\mathrm{D}_x \mathrm{D}_z^2 v_3} = 0$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}_x \mathrm{D}_z^2 v_3} = 0$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x \mathrm{D}_z^2 v_3} = 0$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x \mathrm{D}_z^2 v_3} = (8v_3^2\omega_1^2 - 5\omega_1\omega_2^2 + 6v_3^2\omega_1\omega_2 + 11v_3^2\omega_1\omega_2^2 + 6\omega_2^2 - 2\omega_1\omega_2 + 8\omega_1^2 cs^2 - 9\omega_1^2 cs^2\omega_2 - 14v_3^2\omega_2^2 - 10cs^2\omega_2^2 + 5\omega_1^2\omega_2 + 2\omega_1 cs^2\omega_2 + 9\omega_1 cs^2\omega_2^2 - 11v_3^2\omega_1^2\omega_2 - 4\omega_1^2)\frac{\rho v_3}{6\omega_1^2\omega_2^2}$$

coefficient $C^{(1)}_{\mathrm{D}_y \mathrm{D}_z^2 v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_2 \partial x_3^2}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_y \mathrm{D}_z^2 v_1} = 0$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}_y \mathrm{D}_z^2 v_1} = (-\omega_6\omega_8 + \omega_6\omega_5 - \omega_6^2\omega_5 - \omega_8\omega_5 + \omega_6^2 + \omega_6\omega_8\omega_5)\frac{\rho v_2 cs^2}{\omega_6^2\omega_8\omega_5}$$

$$C^{(1),\text{MRT2}}_{\mathrm{D}_y \mathrm{D}_z^2 v_1} = (-\omega_6\omega_8 + \omega_6\omega_5 - \omega_6^2\omega_5 - \omega_8\omega_5 + \omega_6^2 + \omega_6\omega_8\omega_5)\frac{\rho v_2 cs^2}{\omega_6^2\omega_8\omega_5}$$

$C^{(1),\text{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_1} = 0$

$C^{(1),\text{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_1} = 0$

$C^{(1),\text{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_1} = 0$

$C^{(1),\text{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_1} = (6\omega_3 cs^2 - \omega_4\omega_1 - 2\omega_3 - 2v_2^2\omega_4 + \omega_3\omega_1 - 6\omega_4 cs^2 + 3\omega_4\omega_1 cs^2 + 2\omega_4 - v_2^2\omega_3\omega_1 - 3\omega_3\omega_1 cs^2 + 2v_2^2\omega_3 + v_2^2\omega_4\omega_1)\frac{\rho v_2}{4\omega_3\omega_4\omega_1}$

coefficient $C^{(1)}_{\mathrm{D}_y\mathrm{D}_z^2 v_2}$ at $\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2}$:

$C^{(1),\text{SRT}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-6\omega_6\omega_8 - \omega_6\omega_7\omega_8\omega_5 + 6\omega_7\omega_5 - 6\omega_6\omega_7\omega_5 + 6\omega_6\omega_7 - 6\omega_8\omega_5 + 6\omega_6\omega_8\omega_5)\frac{\rho v_1 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$

$C^{(1),\text{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-6\omega_6\omega_8 - \omega_6\omega_7\omega_8\omega_5 + 6\omega_7\omega_5 - 6\omega_6\omega_7\omega_5 + 6\omega_6\omega_7 - 6\omega_8\omega_5 + 6\omega_6\omega_8\omega_5)\frac{\rho v_1 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$

$C^{(1),\text{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_1 cs^2}{6}$

$C^{(1),\text{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_1 cs^2}{6}$

coefficient $C^{(1)}_{\mathrm{D}_z^3 \rho}$ at $\frac{\partial^3 \rho}{\partial x_3^3}$:

$C^{(1),\text{SRT}}_{\mathrm{D}_z^3 \rho} = (-1 + 3cs^2 + v_3^2)\frac{v_1 v_3}{12}$

$C^{(1),\text{MRT1}}_{\mathrm{D}_z^3 \rho} = (-12\omega_{18} - 36\omega_{11}cs^2 - 18\omega_{18}\omega_6 cs^2 + 12\omega_{18}v_3^2 + 18\omega_6\omega_{11}cs^2 - 12v_3^2\omega_{11} + 6\omega_6 v_3^2\omega_{11} + 6\omega_{18}\omega_6 - \omega_{18}\omega_6\omega_{11} + 3\omega_{18}\omega_6\omega_{11}cs^2 + 12\omega_{11} - 6\omega_{18}\omega_6 v_3^2 + 36\omega_{18}cs^2 - 6\omega_6\omega_{11} + \omega_{18}\omega_6 v_3^2\omega_{11})\frac{v_1 v_3}{12\omega_{18}\omega_6\omega_{11}}$

$C^{(1),\text{MRT2}}_{\mathrm{D}_z^3 \rho} = (-12\omega_{18} + 36\omega_{18}cs^2 - 36cs^2\omega_{11} + 12\omega_{18}v_3^2 + 18cs^2\omega_6\omega_{11} - 12v_3^2\omega_{11} - 18\omega_{18}cs^2\omega_6 + 6\omega_6 v_3^2\omega_{11} + 6\omega_{18}\omega_6 - \omega_{18}\omega_6\omega_{11} + 3\omega_{18}cs^2\omega_6\omega_{11} + 12\omega_{11} - 6\omega_{18}\omega_6 v_3^2 - 6\omega_6\omega_{11} + \omega_{18}\omega_6 v_3^2\omega_{11})\frac{v_1 v_3}{12\omega_{18}\omega_6\omega_{11}}$

$C^{(1),\text{CLBM1}}_{\mathrm{D}_z^3 \rho} = (-1 + 3cs^2 + v_3^2)\frac{v_1 v_3}{12}$

$C^{(1),\text{CLBM2}}_{\mathrm{D}_z^3 \rho} = (-1 + 3cs^2 + v_3^2)\frac{v_1 v_3}{12}$

$C^{(1),\text{CuLBM1}}_{\mathrm{D}_z^3 \rho} = (-1 + 3cs^2 + v_3^2)\frac{v_1 v_3}{12}$

$C^{(1),\text{CuLBM2}}_{\mathrm{D}_z^3 \rho} = (-1 + v_3^2 + 3cs^2)\frac{v_1 v_3}{12}$

coefficient $C^{(1)}_{\mathrm{D}_z^3 v_1}$ at $\frac{\partial^3 v_1}{\partial x_3^3}$:

$C^{(1),\text{SRT}}_{\mathrm{D}_z^3 v_1} = (6 + \omega^2 - 3cs^2\omega^2 + 18cs^2\omega + 6v_3^2\omega - 18cs^2 - 6v_3^2 - 6\omega - v_3^2\omega^2)\frac{\rho v_3}{6\omega^2}$

$C^{(1),\text{MRT1}}_{\mathrm{D}_z^3 v_1} =$
$(\omega_{18}\omega_6^2 + 15\omega_{18}\omega_6 cs^2 + 6\omega_6 - \omega_{18}\omega_6^2 v_3^2 - 6\omega_6 cs^2 + 3\omega_6^2 v_3^2 - 3\omega_{18}\omega_6 - 6\omega_6 v_3^2 + 3\omega_6^2 cs^2 + 3\omega_{18}\omega_6 v_3^2 - 12\omega_{18}cs^2 - 3\omega_6^2 - 3\omega_{18}\omega_6^2 cs^2)\frac{\rho v_3}{6\omega_{18}\omega_6^2}$

$C^{(1),\text{MRT2}}_{\mathrm{D}_z^3 v_1} =$
$(-12\omega_{18}cs^2 - 3\omega_{18}cs^2\omega_6^2 + \omega_{18}\omega_6^2 + 6\omega_6 - 6cs^2\omega_6 - \omega_{18}\omega_6^2 v_3^2 + 3cs^2\omega_6^2 + 3\omega_6^2 v_3^2 + 15\omega_{18}cs^2\omega_6 - 3\omega_{18}\omega_6 - 6\omega_6 v_3^2 + 3\omega_{18}\omega_6 v_3^2 - 3\omega_6^2)\frac{\rho v_3}{6\omega_{18}\omega_6^2}$

$C^{(1),\text{CLBM1}}_{\text{D}^3_z v_1} = (6 - 3\omega_{18} + 9\omega_6 cs^2 + 3\omega_{18}v_3^2 - 3\omega_6 - 18cs^2 - 3\omega_{18}\omega_6 cs^2 + \omega_{18}\omega_6 + 3\omega_6 v_3^2 + 9\omega_{18}cs^2 - 6v_3^2 - \omega_{18}\omega_6 v_3^2)\frac{\rho v_3}{6\omega_{18}\omega_6}$

$C^{(1),\text{CLBM2}}_{\text{D}^3_z v_1} = (6 - 3\omega_{18} + 3\omega_{18}v_3^2 - 3\omega_6 + 9\omega_{18}cs^2 + \omega_{18}\omega_6 - 18cs^2 + 3\omega_6 v_3^2 - 3\omega_{18}cs^2\omega_6 - 6v_3^2 - \omega_{18}\omega_6 v_3^2 + 9cs^2\omega_6)\frac{\rho v_3}{6\omega_{18}\omega_6}$

$C^{(1),\text{CuLBM1}}_{\text{D}^3_z v_1} = (6 - 3cs^2\omega_8\omega_2 - 18cs^2 + 9cs^2\omega_2 - v_3^2\omega_8\omega_2 + 3v_3^2\omega_8 - 6v_3^2 - 3\omega_8 + 3v_3^2\omega_2 + 9cs^2\omega_8 - 3\omega_2 + \omega_8\omega_2)\frac{\rho v_3}{6\omega_8\omega_2}$

$C^{(1),\text{CuLBM2}}_{\text{D}^3_z v_1} = (3v_3^2\omega_3\omega_1 - 6\omega_3\omega_4 - 6v_3^2\omega_4 - 18\omega_3 cs^2 - 3\omega_4\omega_1 + 18\omega_3\omega_4 cs^2 + 6\omega_3 + 3v_3^2\omega_4\omega_1 - 3\omega_3\omega_1 + 6v_3^2\omega_3\omega_4 - 18\omega_4 cs^2 + 2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1 cs^2 + 6\omega_4 - 6v_3^2\omega_3 - 2v_3^2\omega_3\omega_4\omega_1 - 6\omega_3\omega_4\omega_1 cs^2 + 9\omega_3\omega_1 cs^2)\frac{\rho v_3}{12\omega_3\omega_4\omega_1}$

coefficient $C^{(1)}_{\text{D}^3_z v_3}$ at $\frac{\partial^3 v_3}{\partial x_3^3}$:

$C^{(1),\text{SRT}}_{\text{D}^3_z v_3} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_1}{12}$

$C^{(1),\text{MRT1}}_{\text{D}^3_z v_3} = (-12\omega_{18} - 12\omega_{11}cs^2 - 6\omega_{18}\omega_6 cs^2 + 36\omega_{18}v_3^2 + 6\omega_6\omega_{11}cs^2 - 36v_3^2\omega_{11} + 18\omega_6 v_3^2\omega_{11} + 6\omega_{18}\omega_6 - \omega_{18}\omega_6\omega_{11} + \omega_{18}\omega_6\omega_{11}cs^2 + 12\omega_{11} - 18\omega_{18}\omega_6 v_3^2 + 12\omega_{18}cs^2 - 6\omega_6\omega_{11} + 3\omega_{18}\omega_6 v_3^2\omega_{11})\frac{\rho v_1}{12\omega_{18}\omega_6\omega_{11}}$

$C^{(1),\text{MRT2}}_{\text{D}^3_z v_3} = (-12\omega_{18} + 12\omega_{18}cs^2 - 12cs^2\omega_{11} + 36\omega_{18}v_3^2 + 6cs^2\omega_6\omega_{11} - 36v_3^2\omega_{11} - 6\omega_{18}cs^2\omega_6 + 18\omega_6 v_3^2\omega_{11} + 6\omega_{18}\omega_6 - \omega_{18}\omega_6\omega_{11} + \omega_{18}cs^2\omega_6\omega_{11} + 12\omega_{11} - 18\omega_{18}\omega_6 v_3^2 - 6\omega_6\omega_{11} + 3\omega_{18}\omega_6 v_3^2\omega_{11})\frac{\rho v_1}{12\omega_{18}\omega_6\omega_{11}}$

$C^{(1),\text{CLBM1}}_{\text{D}^3_z v_3} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_1}{12}$

$C^{(1),\text{CLBM2}}_{\text{D}^3_z v_3} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_1}{12}$

$C^{(1),\text{CuLBM1}}_{\text{D}^3_z v_3} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_1}{12}$

$C^{(1),\text{CuLBM2}}_{\text{D}^3_z v_3} = (-1 + 3v_3^2 + cs^2)\frac{\rho v_1}{12}$

coefficient $C^{(1)}_{\text{D}^4_x \rho}$ at $\frac{\partial^4 \rho}{\partial x_1^4}$:

$C^{(1),\text{SRT}}_{\text{D}^4_x \rho} = (12 - 1008v_1^2 cs^2\omega + 234v_1^2\omega + 6cs^2\omega^3 + 8\omega^2 - 78cs^2\omega^2 - \omega^3 + 10v_1^2\omega^3 + 144v_1^4 + 198cs^2\omega - 34v_1^2 cs^2\omega^3 + 404v_1^2 cs^2\omega^2 + 144cs^4 - 98v_1^2\omega^2 + 82cs^4\omega^2 - 156v_1^2 - 132cs^2 - 216v_1^4\omega - 5cs^4\omega^3 + 672v_1^2 cs^2 - 18\omega + 90v_1^4\omega^2 - 9v_1^4\omega^3 - 216cs^4\omega)\frac{v_1}{12\omega^3}$

$C^{(1),\text{MRT1}}_{\text{D}^4_x \rho} = (12 - 132cs^2 - 18\omega_9 + 6\omega_9^3 cs^2 + 404v_1^2\omega_9^2 cs^2 - 216v_1^4\omega_9 + 90v_1^4\omega_9^2 - 216\omega_9 cs^4 + 144v_1^4 - 9v_1^4\omega_9^3 + 672v_1^2 cs^2 - 34v_1^2\omega_9^3 cs^2 - 78\omega_9^2 cs^2 - 156v_1^2 + 8\omega_9^2 + 234v_1^2\omega_9 + 198\omega_9 cs^2 - \omega_9^3 + 82\omega_9^2 cs^4 - 1008v_1^2\omega_9 cs^2 + 10v_1^2\omega_9^3 + 144cs^4 - 98v_1^2\omega_9^2 - 5\omega_9^3 cs^4)\frac{v_1}{12\omega_9^3}$

$C^{(1),\text{MRT2}}_{\text{D}^4_x \rho} = (12 - 18\omega_9 - 5\omega_9^3 cs^4 - 1008v_1^2\omega_9 cs^2 + 144cs^4 - 216v_1^4\omega_9 + 90v_1^4\omega_9^2 + 82\omega_9^2 cs^4 + 144v_1^4 - 9v_1^4\omega_9^3 + 198\omega_9 cs^2 - 156v_1^2 + 672v_1^2 cs^2 + 8\omega_9^2 + 234v_1^2\omega_9 - 34v_1^2\omega_9^3 cs^2 - 78\omega_9^2 cs^2 - 216\omega_9 cs^4 - \omega_9^3 + 6\omega_9^3 cs^2 + 404v_1^2\omega_9^2 cs^2 + 10v_1^2\omega_9^3 - 132cs^2 - 98v_1^2\omega_9^2)\frac{v_1}{12\omega_9^3}$

$C^{(1),\text{CLBM1}}_{\text{D}^4_x \rho} = (12 - 216\omega_9 cs^4 - 18\omega_9 + 672v_1^2 cs^2 - 78\omega_9^2 cs^2 - 34v_1^2\omega_9^3 cs^2 - 216v_1^4\omega_9 + 90v_1^4\omega_9^2 - 132cs^2 + 144v_1^4 + 404v_1^2\omega_9^2 cs^2 + 6\omega_9^3 cs^2 - 9v_1^4\omega_9^3 - 156v_1^2 - 1008v_1^2\omega_9 cs^2 + 8\omega_9^2 + 234v_1^2\omega_9 + 144cs^4 - \omega_9^3 - 5\omega_9^3 cs^4 + 10v_1^2\omega_9^3 + 198\omega_9 cs^2 + 82\omega_9^2 cs^4 - 98v_1^2\omega_9^2)\frac{v_1}{12\omega_9^3}$

$C^{(1),\text{CLBM2}}_{\text{D}^4_x \rho} = (12 + 198\omega_9 cs^2 - 18\omega_9 + 82\omega_9^2 cs^4 - 216v_1^4\omega_9 + 90v_1^4\omega_9^2 - 1008v_1^2\omega_9 cs^2 + 144v_1^4 + 144cs^4 - 9v_1^4\omega_9^3 - 5\omega_9^3 cs^4 - 156v_1^2 - 132cs^2 + 8\omega_9^2 + 234v_1^2\omega_9 - \omega_9^3 + 6\omega_9^3 cs^2 + 404v_1^2\omega_9^2 cs^2 - 216\omega_9 cs^4 + 10v_1^2\omega_9^3 - 98v_1^2\omega_9^2 + 672v_1^2 cs^2 - 34v_1^2\omega_9^3 cs^2 - 78\omega_9^2 cs^2)\frac{v_1}{12\omega_9^3}$

$C^{(1),\text{CuLBM1}}_{\text{D}^4_x \rho} = (12 + 672v_1^2 cs^2 - 1008v_1^2 cs^2\omega_4 + 6cs^2\omega_4^3 - 78cs^2\omega_4^2 - 216v_1^4\omega_4 + 198cs^2\omega_4 + 144v_1^4 - 34v_1^2 cs^2\omega_4^3 + 90v_1^4\omega_4^2 - 132cs^2 - 9v_1^4\omega_4^3 + 404v_1^2 cs^2\omega_4^2 + 82cs^4\omega_4^2 - 156v_1^2 + 234v_1^2\omega_4 - 18\omega_4 + 8\omega_4^2 - 5cs^4\omega_4^3 - \omega_4^3 + 144cs^4 + 10v_1^2\omega_4^3 - 216cs^4\omega_4 - 98v_1^2\omega_4^2)\frac{v_1}{12\omega_4^3}$

$C^{(1),\text{CuLBM2}}_{\text{D}^4_x \rho} = (94v_1^2\omega_3\omega_1^3\omega_2 - 196v_1^2\omega_3\omega_1^2\omega_2^3 + 16\omega_1^2 cs^2\omega_2^2 - 78\omega_3\omega_1^3 cs^2\omega_2^2 - 464v_1^2\omega_3\omega_1^3 cs^2\omega_2 - 120\omega_3\omega_1^2 cs^4\omega_2^2 + 656v_1^2\omega_3\omega_1 cs^2\omega_2^2 + 24v_1^4\omega_3\omega_1^3 + 18\omega_3\omega_1^3 cs^2\omega_2^3 + 280v_1^2\omega_3\omega_1^2\omega_2^2 - 1472v_1^2\omega_3\omega_1 cs^2\omega_2^3 + 164\omega_3\omega_1^2 cs^4\omega_2^3 + 4\omega_3\omega_1^3 + 24\omega_1 cs^4\omega_2^3 + 168v_1^4\omega_3\omega_1\omega_2 - 102v_1^2\omega_3\omega_1^3 cs^2\omega_2^3 + 8v_1^2\omega_1 cs^2\omega_2^3 - 28\omega_3\omega_1\omega_2^3 + 320\omega_3\omega_1 cs^2\omega_2^3 - 104v_1^2\omega_3\omega_1^2\omega_2 - 52\omega_3\omega_1^3 cs^2 + 30v_1^2\omega_3\omega_1^3\omega_2^3 + 24\omega_3^3 cs^4\omega_2 - 28v_1^2\omega_3\omega_1^3 + 760v_1^2\omega_3 cs^2\omega_2^3 + 404v_1^2\omega_3\omega_1^3 cs^2\omega_2^2 + 72\omega_3\omega_1^2 cs^4\omega_2 - 300v_1^4\omega_3\omega_1\omega_2^3 - 98v_1^2\omega_3\omega_1^3\omega_2^2 + 216\omega_3 cs^4\omega_2^3 - 80\omega_3\omega_1 cs^2\omega_2^2 + 8v_1^2\omega_1^3 cs^2\omega_2 + 8\omega_3\omega_1\omega_2^2 + 122\omega_3\omega_1^3 cs^2\omega_2 - 15\omega_3\omega_1^3 cs^4\omega_2 - 84v_1^4\omega_3\omega_1^3\omega_2 + 72\omega_3\omega_1^3 cs^4 + 180v_1^4\omega_3\omega_1^2\omega_2^3 + 144v_1^4\omega_3\omega_2 + 16\omega_3\omega_2^3 - 156\omega_3\omega_1^2 cs^2\omega_2^3 - 16\omega_3\omega_1^2\omega_2^2 - 264v_1^4\omega_3\omega_1^2\omega_2^2 +$

$$440v_1^2\omega_3\omega_1^2 cs^2\omega_2 - 48\omega_1^2 cs^4\omega_2^2 + 82\omega_3\omega_1^3 cs^4\omega_2^2 - 16v_1^2\omega_1^2 cs^2\omega_2^2 + 16\omega_3\omega_1^2\omega_2^3 - 10\omega_3\omega_1^3\omega_2 + 152\omega_3\omega_1^2 cs^2\omega_2^2 - 8\omega_1^3 cs^2\omega_2 + 8\omega_3\omega_1^3\omega_2^2 -$$
$$80\omega_3\omega_1^2 cs^2\omega_2 - 160v_1^2\omega_3\omega_2^3 - 176v_1^2\omega_3\omega_1\omega_2^2 - 1088v_1^2\omega_3\omega_1^2 cs^2\omega_2^2 - 184\omega_3 cs^2\omega_2^3 + 96v_1^4\omega_3\omega_1^2\omega_2 - 27v_1^4\omega_3\omega_1^3\omega_2^2 + 72\omega_3\omega_1 cs^4\omega_2^2 - 156\omega_3\omega_1^3 cs^4\omega_2 +$$
$$328v_1^2\omega_3\omega_1\omega_2^3 - 8\omega_1 cs^4\omega_2^3 - 3\omega_3\omega_1^3\omega_2^2 + 8\omega_3\omega_1^2\omega_2 + 160v_1^2\omega_3\omega_1^3 cs^2 - 372\omega_3\omega_1 cs^4\omega_2^3 + 90v_1^4\omega_3\omega_1^3\omega_2^2 + 808v_1^2\omega_3\omega_1^2 cs^2\omega_2^3)\frac{v_1}{36\omega_3\omega_1^3\omega_2^3}$$

coefficient $C^{(1)}_{\mathrm{D}_x^4 v_1}$ at $\frac{\partial^4 v_1}{\partial x_1^4}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x^4 v_1} = (12 - 648v_1^2 cs^2\omega + 378v_1^2\omega + 2cs^2\omega^3 + 8\omega^2 - 22cs^2\omega^2 - \omega^3 + 14v_1^2\omega^3 + 504v_1^4 + 54cs^2\omega - 18v_1^2 cs^2\omega^3 + 252v_1^2 cs^2\omega^2 + 24cs^4 - 154v_1^2\omega^2 + 14cs^4\omega^2 - 252v_1^2 - 36cs^2 - 756v_1^4\omega - cs^4\omega^3 + 432v_1^2 cs^2 - 18\omega + 310v_1^4\omega^2 - 29v_1^4\omega^3 - 36cs^4\omega)\frac{\rho}{12\omega^3}$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x^4 v_1} = (12 - 36cs^2 - 18\omega_9 + 2\omega_9^3 cs^2 + 252v_1^2\omega_9^2 cs^2 - 756v_1^4\omega_9 + 310v_1^4\omega_9^3 - 36\omega_9 cs^4 + 504v_1^4 - 29v_1^4\omega_9^3 + 432v_1^2 cs^2 - 18v_1^2\omega_9^3 cs^2 - 22\omega_9^2 cs^2 - 252v_1^2 + 8\omega_9^2 + 378v_1^2\omega_9 + 54\omega_9 cs^2 - \omega_9^3 + 14\omega_9^2 cs^4 - 648v_1^2\omega_9 cs^2 + 14v_1^2\omega_9^3 + 24cs^4 - 154v_1^2\omega_9^2 - \omega_9^3 cs^4)\frac{\rho}{12\omega_9^3}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x^4 v_1} = (12 - 18\omega_9 - \omega_9^3 cs^4 - 648v_1^2\omega_9 cs^2 + 24cs^4 - 756v_1^4\omega_9 + 310v_1^4\omega_2^2 + 14\omega_9^2 cs^4 + 504v_1^4 - 29v_1^4\omega_9^3 + 54\omega_9 cs^2 - 252v_1^2 + 432v_1^2 cs^2 + 8\omega_9^2 + 378v_1^2\omega_9 - 18v_1^2\omega_9^3 cs^2 - 22\omega_9^2 cs^2 - 36\omega_9 cs^4 - \omega_9^3 + 2\omega_9^3 cs^2 + 252v_1^2\omega_9^2 cs^2 + 14v_1^2\omega_9^3 - 36cs^2 - 154v_1^2\omega_9^2)\frac{\rho}{12\omega_9^3}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x^4 v_1} = (12 - 36\omega_9 cs^4 - 18\omega_9 + 432v_1^2 cs^2 - 22\omega_9^2 cs^2 - 18v_1^2\omega_9^3 cs^2 - 756v_1^4\omega_9 + 310v_1^4\omega_9^3 - 36cs^2 + 504v_1^4 + 252v_1^2\omega_9^2 cs^2 + 2\omega_9^3 cs^2 - 29v_1^4\omega_9^3 - 252v_1^2 - 648v_1^2\omega_9 cs^2 + 8\omega_9^2 + 378v_1^2\omega_9 + 24cs^4 - \omega_9^3 - \omega_9^3 cs^4 + 14v_1^2\omega_9^3 + 54\omega_9 cs^2 + 14\omega_9^2 cs^4 - 154v_1^2\omega_9^2)\frac{\rho}{12\omega_9^3}$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x^4 v_1} = (12 + 54\omega_9 cs^2 - 18\omega_9 + 14\omega_9^2 cs^4 - 756v_1^4\omega_9 + 310v_1^4\omega_9^2 - 648v_1^2\omega_9 cs^2 + 504v_1^4 + 24cs^4 - 29v_1^4\omega_9^3 - \omega_9^3 cs^4 - 252v_1^2 - 36cs^2 + 8\omega_9^2 + 378v_1^2\omega_9 - \omega_9^3 + 2\omega_9^3 cs^2 + 252v_1^2\omega_9^2 cs^2 - 36\omega_9 cs^4 + 14v_1^2\omega_9^3 - 154v_1^2\omega_9^2 + 432v_1^2 cs^2 - 18v_1^2\omega_9^3 cs^2 - 22\omega_9^2 cs^2)\frac{\rho}{12\omega_9^3}$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x^4 v_1} = (12 + 432v_1^2 cs^2 - 648v_1^2 cs^2\omega_4 + 2cs^2\omega_4^3 - 22cs^2\omega_4^2 - 756v_1^4\omega_4 + 54cs^2\omega_4 + 504v_1^4 - 18v_1^2 cs^2\omega_4^3 + 310v_1^4\omega_4^2 - 36cs^2 - 29v_1^4\omega_4^3 + 252v_1^2 cs^2\omega_4^2 + 14cs^4\omega_4^2 - 252v_1^2 + 378v_1^2\omega_4 - 18\omega_4 + 8\omega_4^2 - cs^4\omega_4^3 - \omega_4^3 + 24cs^4 + 14v_1^2\omega_4^3 - 36cs^4\omega_4 - 154v_1^2\omega_4^2)\frac{\rho}{12\omega_4^3}$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x^4 v_1} = (174v_1^2\omega_3\omega_1^3\omega_2 - 308v_1^2\omega_3\omega_1^2\omega_2^3 + 16\omega_1^2 cs^2\omega_2^2 - 22\omega_3\omega_1^3 cs^2\omega_2^2 - 360v_1^2\omega_3\omega_1^3 cs^2\omega_2 - 8\omega_3\omega_1^2 cs^4\omega_2^2 + 336v_1^2\omega_3\omega_1 cs^2\omega_2^2 +$
$96v_1^4\omega_3\omega_1^3 + 6\omega_3\omega_1^3 cs^2\omega_2^3 + 408v_1^2\omega_3\omega_1^2\omega_2^2 - 1008v_1^2\omega_3\omega_1 cs^2\omega_2^3 + 28\omega_3\omega_1^2 cs^4\omega_2^3 + 4\omega_3\omega_1^3 + 8\omega_1 cs^4\omega_2^3 + 552v_1^4\omega_3\omega_1\omega_2^2 - 54v_1^2\omega_3\omega_1^3 cs^2\omega_2^3 +$
$24v_1^2\omega_1 cs^2\omega_2^3 - 28\omega_3\omega_1\omega_2^3 + 96\omega_3\omega_1 cs^2\omega_2^3 - 168v_1^2\omega_3\omega_1^2\omega_2 - 20\omega_3\omega_1^3 cs^2 + 42v_1^2\omega_3\omega_1^2\omega_2^3 + 8\omega_1^3 cs^4\omega_2 - 60v_1^2\omega_3\omega_1^3 + 552v_1^2\omega_3 cs^2\omega_2^3 +$
$252v_1^2\omega_3\omega_1^3 cs^2\omega_2^2 + 8\omega_3\omega_1^2 cs^4\omega_2 - 1068v_1^4\omega_3\omega_1\omega_2^3 - 154v_1^2\omega_3\omega_1^3\omega_2^2 + 40\omega_3 cs^4\omega_2^3 - 16\omega_3\omega_1 cs^2\omega_2^2 + 24v_1^2\omega_1^3 cs^2\omega_2 + 8\omega_3\omega_1\omega_2^2 + 42\omega_3\omega_1^3 cs^2\omega_2 -$
$3\omega_3\omega_1^3 cs^4\omega_2^2 - 312v_1^4\omega_3\omega_1^3\omega_2 + 16\omega_3\omega_1^3 cs^4 + 620v_1^4\omega_3\omega_1^2\omega_2^3 + 528v_1^4\omega_3\omega_2^3 + 16\omega_3\omega_2^3 - 44\omega_3\omega_1^2 cs^2\omega_2^3 - 16\omega_3\omega_1^2\omega_2^3 - 888v_1^4\omega_3\omega_1^2\omega_2^2 +$
$264v_1^2\omega_3\omega_1^2 cs^2\omega_2 - 16\omega_1^2 cs^4\omega_2^2 + 14\omega_3\omega_1^3 cs^4\omega_2^2 - 48v_1^2\omega_1^2 cs^2\omega_2^2 + 16\omega_3\omega_1^2\omega_2^3 - 10\omega_3\omega_1^3\omega_2 + 24\omega_3\omega_1^2 cs^2\omega_2^2 - 8\omega_1^3 cs^2\omega_2 + 8\omega_3\omega_1^3\omega_2^2 -$
$16\omega_3\omega_1^2 cs^2\omega_2 - 288v_1^2\omega_3\omega_2^3 - 240v_1^2\omega_3\omega_1\omega_2^2 - 576v_1^2\omega_3\omega_1^2 cs^2\omega_2^2 - 56\omega_3 cs^2\omega_2^3 + 336v_1^4\omega_3\omega_1^2\omega_2 - 87v_1^4\omega_3\omega_1^3\omega_2^2 + 8\omega_3\omega_1 cs^4\omega_2^2 - 32\omega_3\omega_1^3 cs^4\omega_2 +$
$552v_1^2\omega_3\omega_1\omega_2^3 - 8\omega_1 cs^2\omega_2^3 - 3\omega_3\omega_1^3\omega_2^2 + 8\omega_3\omega_1^2\omega_2 + 144v_1^2\omega_3\omega_1^3 cs^2 - 68\omega_3\omega_1 cs^4\omega_2^2 + 310v_1^2\omega_3\omega_1^3\omega_2^2 + 504v_1^2\omega_3\omega_1^2 cs^2\omega_2^3)\frac{\rho}{36\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\mathrm{D}_x^3 \mathrm{D}_y \rho}$ at $\frac{\partial^4\rho}{\partial x_1^3 \partial x_2}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x^3 \mathrm{D}_y \rho} = 0$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x^3 \mathrm{D}_y \rho} = (-4v_1^2\omega_9^3\omega_5^2 + 20v_1^4\omega_9\omega_{12}^2\omega_5 - 24v_1^2\omega_9^3 cs^2\omega_5 + 8\omega_{12}^2 cs^4\omega_5^2 + 8\omega_9^3\omega_{12} cs^4\omega_5 + 8\omega_9^2\omega_{12}^2 cs^2\omega_5 + 51v_1^2\omega_9^2\omega_{12}^2 cs^2\omega_5^2 +$
$96v_1^2\omega_{12}^2 cs^2\omega_5^2 - 4\omega_3^3 cs^4\omega_5 - 20v_1^2\omega_9^3\omega_{12}\omega_5 + 8\omega_9^2\omega_{12} cs^4\omega_5^2 - 36v_1^2\omega_9^3\omega_{12} cs^2 + 20v_1^2\omega_9\omega_{12}\omega_5^2 - 4v_1^4\omega_9^2\omega_5^2 + 4\omega_9^2\omega_{12}^2 cs^4 + 4\omega_9\omega_{12}\omega_5 cs^2\omega_5^2 -$
$16v_1^4\omega_9^2\omega_{12}\omega_5 + 4\omega_9\omega_{12}^2 cs^4\omega_5 - 13v_1^2\omega_9^2\omega_{12}^2\omega_5^2 - 4v_1^4\omega_9^3\omega_5 - 12\omega_9\omega_{12}^2 cs^4\omega_5^2 + 20v_1^2\omega_9^2\omega_{12}^2\omega_5 - 72v_1^2\omega_9\omega_{12} cs^2\omega_5^2 + 4v_1^4\omega_9^3\omega_5^2 +$
$36v_1^2\omega_9^2\omega_{12}^2 cs^2 + 4v_1^4\omega_9^3\omega_5^2 + 32v_1^4\omega_9^3\omega_{12}\omega_5^2 + 13v_1^2\omega_9^3\omega_{12}\omega_5^2 + 4\omega_9^3 cs^4\omega_5^2 - 84v_1^2\omega_9^2\omega_{12}^2 cs^2\omega_5 + 4v_1^2\omega_9^3\omega_5 - 4\omega_9\omega_{12} cs^4 + 4\omega_9^2 cs^2\omega_5^2 -$
$36v_1^4\omega_9\omega_{12}^2\omega_5^2 + 24v_1^2\omega_9^3 cs^2\omega_5^2 - 4\omega_9^2\omega_{12}^2 cs^2\omega_5^2 - 4\omega_9^3\omega_{12} cs^4\omega_5^2 - 144v_1^2\omega_9\omega_{12}^2 cs^2\omega_5^2 - 20v_1^2\omega_9\omega_{12}^2\omega_5 - 4\omega_9\omega_{12} cs^4\omega_5^2 - 20v_1^4\omega_9\omega_{12}\omega_5^2 -$
$4\omega_9\omega_{12}^2 cs^2\omega_5 + 8v_1^4\omega_9^2\omega_{12}^2 + 20v_1^4\omega_9^3\omega_{12}\omega_5 + 4\omega_9^3\omega_{12} cs^2\omega_5 - 8\omega_{12}^2 cs^2\omega_5^2 + 16v_1^2\omega_9^2\omega_{12}\omega_5 - 8\omega_9^2\omega_{12} cs^4\omega_5 - 8\omega_9^3\omega_{12} cs^2\omega_5 - 48v_1^2\omega_9^2\omega_{12} cs^2\omega_5 -$
$24v_1^2\omega_{12}^2\omega_5^2 + 4\omega_9^3 cs^2\omega_5 - 51v_1^2\omega_9^3\omega_{12} cs^2\omega_5^2 - 8\omega_9^2\omega_{12} cs^4\omega_5^2 - 8v_1^4\omega_9^3\omega_{12} + 13v_1^4\omega_9^2\omega_{12}^2\omega_5 - 24v_1^2\omega_9^2 cs^2\omega_5^2 + 84v_1^2\omega_9^3\omega_{12} cs^2\omega_5 - 4\omega_9^3 cs^2\omega_5 -$
$20v_1^4\omega_9^2\omega_{12}^2\omega_5 - 32v_1^2\omega_9^2\omega_{12}\omega_5 - 8v_1^2\omega_9^2\omega_{12}^2 - 4\omega_9^2 cs^4\omega_5^2 + 4\omega_9^3\omega_{12} cs^2\omega_5^2 + 4\omega_9^2\omega_{12}^2 cs^4\omega_5 + 120v_1^2\omega_9^2\omega_{12} cs^2\omega_5^2 + 12\omega_9\omega_{12}^2 cs^2\omega_5^2 -$
$13v_1^4\omega_9^3\omega_{12}\omega_5^2 - 4\omega_9^2\omega_{12}^2 cs^2 + 24v_1^4\omega_{12}^2\omega_5^2 + 72v_1^2\omega_9\omega_{12}^2 cs^2\omega_5 + 36v_1^2\omega_9\omega_{12}^2\omega_5^2 + 8v_1^2\omega_9^3\omega_{12})\frac{v_2}{4\omega_9^3\omega_{12}^2\omega_5^2}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x^3 \mathrm{D}_y \rho} = (-4v_1^2\omega_9^3\omega_5^2 + 20v_1^4\omega_9\omega_{12}^2\omega_5 - 24v_1^2\omega_9^3 cs^2\omega_5 + 84v_1^2\omega_9^3\omega_{12} cs^2\omega_5 - 4\omega_9^3 cs^2\omega_5^2 - 4\omega_9^2\omega_{12}^2 cs^2 - 20v_1^2\omega_9^3\omega_{12}\omega_5 - 4\omega_9^2 cs^4\omega_5^2 +$
$120v_1^2\omega_9^2\omega_{12} cs^2\omega_5^2 + 20v_1^2\omega_9\omega_{12}\omega_5^2 - 4v_1^4\omega_9^2\omega_5^2 + 4\omega_9^3\omega_{12} cs^2\omega_5^2 + 4\omega_9^2\omega_{12}^2 cs^4\omega_5 + 12\omega_9\omega_{12}^2 cs^2\omega_5^2 - 16v_1^4\omega_9^2\omega_{12}\omega_5 - 13v_1^2\omega_9^2\omega_{12}^2\omega_5^2 -$
$4v_1^4\omega_9^3\omega_5 + 72v_1^2\omega_9\omega_{12}^2 cs^2\omega_5 + 4\omega_9^3\omega_{12} cs^2 + 20v_1^2\omega_9^2\omega_{12}^2\omega_5 + 4v_1^4\omega_9^3\omega_5^2 - 4\omega_9\omega_{12} cs^4\omega_5^2 - 144v_1^2\omega_9\omega_{12}^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}^2 cs^2\omega_5 + 4v_1^2\omega_9^3\omega_5^2 +$
$32v_1^4\omega_9^3\omega_{12}\omega_5^2 - 8\omega_{12}^2 cs^2\omega_5^2 + 13v_1^2\omega_9^3\omega_{12}\omega_5^2 - 48v_1^2\omega_9^2\omega_{12} cs^2\omega_5 - 8\omega_9^2\omega_{12}^2 cs^4\omega_5 - 8\omega_9^3\omega_{12} cs^2\omega_5 - 8\omega_9^2\omega_{12} cs^2\omega_5^2 + 4v_1^2\omega_9^3\omega_5 + 4\omega_9^3 cs^2\omega_5 -$
$51v_1^2\omega_9^3\omega_{12} cs^2\omega_5^2 - 36v_1^4\omega_9\omega_{12}^2\omega_5^2 - 72v_1^2\omega_9\omega_{12} cs^2\omega_5^2 - 12\omega_9\omega_{12}^2 cs^4\omega_5^2 - 20v_1^2\omega_9\omega_{12}^2\omega_5 - 4\omega_9^3\omega_{12} cs^4 - 20v_1^4\omega_9\omega_{12}\omega_5^2 + 8v_1^4\omega_9^2\omega_{12} +$
$20v_1^4\omega_9^3\omega_{12}\omega_5 + 36v_1^2\omega_9^2\omega_{12}^2 cs^2 + 4\omega_9^3 cs^4\omega_5^2 + 16v_1^2\omega_9^2\omega_{12}\omega_5 - 84v_1^2\omega_9^2\omega_{12}^2 cs^2\omega_5 - 24v_1^2\omega_{12}^2\omega_5^2 + 4\omega_9^2 cs^2\omega_5^2 + 24v_1^2\omega_9^3 cs^2\omega_5^2 - 8v_1^4\omega_9^3\omega_{12} +$
$13v_1^4\omega_9^2\omega_{12}^2\omega_5 - 4\omega_9^2\omega_{12}^2 cs^2\omega_5^2 - 4\omega_9^3\omega_{12} cs^4\omega_5^2 + 4\omega_9^2\omega_{12}^2 cs^4 - 24v_1^2\omega_9^3 cs^2\omega_5 + 8\omega_{12}^2 cs^4\omega_5^2 - 20v_1^4\omega_9^2\omega_{12}^2\omega_5 + 8\omega_9^3\omega_{12} cs^4\omega_5 + 8\omega_9^2\omega_{12}^2 cs^2\omega_5 +$

$8\omega_9^2\omega_{12}cs^4\omega_5^2 + 51v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2 + 96v_1^2\omega_{12}^2cs^2\omega_5^2 - 4\omega_9^3cs^4\omega_5 - 32v_1^2\omega_9^2\omega_{12}\omega_5^2 - 8v_1^2\omega_9^2\omega_{12}^2 + 4\omega_9\omega_{12}cs^2\omega_5^2 - 13v_1^4\omega_9^3\omega_{12}\omega_5^2 + 4\omega_9\omega_{12}^2cs^4\omega_5 + 24v_1^4\omega_{12}^2\omega_5^2 - 36v_1^2\omega_9^3\omega_{12}cs^2 + 36v_1^2\omega_9\omega_{12}^2\omega_5^2 + 8v_1^2\omega_9^3\omega_{12})\frac{v_2}{4\omega_9^3\omega_{12}^2\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}_x^3\text{D}_y\rho} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_x^3\text{D}_y\rho} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_x^3\text{D}_y\rho} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_x^3\text{D}_y\rho} = (48v_1^2\omega_3^2\omega_1\omega_2^2 - 4v_2^2\omega_3^2\omega_1^2cs^2\omega_2 + \omega_3^2\omega_1^3\omega_2^2 + 8v_2^2\omega_3\omega_1cs^2\omega_2^3 - 4v_2^2\omega_3^2\omega_1^3 + 5\omega_3^2\omega_1^2cs^2\omega_2^3 - 18\omega_3\omega_1^3cs^2\omega_2^2 - 36\omega_1^3cs^4\omega_2^2 - 72v_1^2v_2^2\omega_3^2\omega_2^3 - 12v_2^2\omega_3^3cs^2\omega_2^2 - 12\omega_3\omega_1^2cs^4\omega_2^2 - 8v_2^2\omega_3^2\omega_1\omega_2^2 + 20\omega_2^2cs^2\omega_2^3 - 4\omega_3^2\omega_1^4\omega_2 - 34\omega_3^2\omega_1^2cs^2\omega_2^2 + 216v_1^2\omega_3^2\omega_1^3cs^2 - 12\omega_1^2cs^2\omega_2^3 - 4v_2^2\omega_3\omega_1^3cs^2\omega_2 + 24v_1^2\omega_3^2\omega_2^3 - 60v_1^2\omega_3^2\omega_1\omega_2^3 - 8v_2^2\omega_3\omega_1\omega_2^3 + 6\omega_3^3\omega_1^3cs^4\omega_2^2 - 54\omega_3\omega_1^2cs^4\omega_2^3 + 16v_2^2\omega_3^2\omega_1^3cs^2 - 36v_1^4\omega_3^3\omega_1^3\omega_2 + 72\omega_3^2\omega_1^3cs^4 - 84\omega_3^2\omega_1^3cs^4\omega_2 + 216v_1^2\omega_3^2\omega_1^2cs^2\omega_2^2 - 4\omega_3^2\omega_1^2\omega_2^2 + 40\omega_3^2\omega_1^2cs^2\omega_2 + 96v_1^2v_2^2\omega_3^2\omega_1\omega_2^3 - 8\omega_3\omega_1cs^2\omega_2^3 - 2v_2^2\omega_3^2\omega_1^2cs^2\omega_2^3 + 18v_2^2\omega_3\omega_1cs^2\omega_2^2 + 42\omega_3^2\omega_1cs^4\omega_2^3 - 72v_1^2\omega_3^2\omega_1^2cs^2\omega_2^3 + 48v_1^4\omega_3^2\omega_2^3 + 72v_1^4\omega_3^2\omega_1^2\omega_2^2 - 2v_2^2\omega_3^2\omega_1^2cs^2\omega_2^2 + 24v_1^2v_2^2\omega_3^2\omega_1\omega_2^2 - 8\omega_3^2\omega_2^3 - 4\omega_3^2\omega_1^3\omega_2 + 4\omega_3\omega_1^3cs^2\omega_2 - \omega_3^2\omega_1^2\omega_2^2 + 42\omega_3^2\omega_1^2cs^4\omega_2^2 - 48v_1^2\omega_3^3\omega_1^3 + 12v_2^2\omega_1^2cs^2\omega_2^3 - 216v_1^2\omega_3^2\omega_1cs^2\omega_2^2 + 4v_2^2\omega_3^2\omega_1^2\omega_2^2 + 36\omega_1^2cs^4\omega_2^3 - 72v_1^4\omega_3^2\omega_1\omega_2^2 - 324v_1^2\omega_3^2\omega_1^3cs^2\omega_2 + 22v_2^2\omega_3^2\omega_1cs^2\omega_2^2 - 48v_1^2v_2^2\omega_3^2\omega_1^2\omega_2^2 - 24v_1^2\omega_3^2\omega_1^2\omega_2 + 18\omega_3\omega_1^2cs^2\omega_2^3 - 5\omega_3^2\omega_1^3cs^2\omega_2^2 - 52\omega_3^2\omega_1^3cs^2 + 8\omega_3^2\omega_1\omega_2^3 - v_2^2\omega_3^2\omega_1^3\omega_2^2 + 8v_2^2\omega_3^2\omega_2^3 - 36v_1^4\omega_3^2\omega_1\omega_2^3 + 108v_1^2\omega_3^3\omega_1cs^2\omega_2^3 + 54\omega_3\omega_1^3cs^4\omega_2^2 - 6\omega_3^2\omega_1^2cs^4\omega_2^3 + 12\omega_1^3cs^2\omega_2^2 + 8\omega_3^2\omega_1\omega_2^2 - 20v_2^2\omega_3^2\omega_1^3cs^2\omega_2 - 20v_2^2\omega_3^2cs^2\omega_2^3 + 24v_1^2v_2^2\omega_3^2\omega_1^3 + 4\omega_3\omega_1^2cs^2\omega_2^2 - 48v_1^2v_2^2\omega_3^2\omega_1^3\omega_2 + 8v_2^2\omega_3^2\omega_1cs^2\omega_2^2 - 24v_1^2\omega_3^2\omega_1^3\omega_2 - 24v_1^2v_2^2\omega_3^2\omega_1^2\omega_2^3 - 36\omega_3^2cs^4\omega_2^3 - 22\omega_3^2\omega_1cs^2\omega_2^3 - 18v_2^2\omega_3\omega_1^2cs^2\omega_2^3 + 2v_2^2\omega_3^2\omega_1^3cs^2\omega_2^2 + 24v_1^4\omega_3^2\omega_2^3 + 24v_1^2v_2^2\omega_3^2\omega_1^3\omega_2^2 + 24v_1^2\omega_3^2\omega_1^2\omega_2^3 + 84v_1^2\omega_3^3\omega_1^3\omega_2 + 4v_2^2\omega_3^2\omega_1^3\omega_2 + v_2^2\omega_3^2\omega_1^2\omega_2^3 + 4\omega_3^2\omega_1^3 - 12\omega_3\omega_1^3cs^4\omega_2 + 24v_1^2v_2^2\omega_3^2\omega_1^2\omega_2 + 56\omega_3^2\omega_1^3cs^2\omega_2 - 24v_1^2\omega_3^2\omega_1^2\omega_2^2 - 4v_2^2\omega_3\omega_1^2cs^2\omega_2^2 - 8\omega_3^2\omega_1cs^2\omega_2^2 - 36\omega_3^2\omega_1^2cs^4\omega_2 + 24\omega_3\omega_1cs^4\omega_2^3 + 4v_2^2\omega_3^2\omega_1^2\omega_2^2 + 72v_1^2\omega_3^2\omega_1^2cs^2\omega_2^2)\frac{v_2}{36\omega_3^2\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\text{D}_x^3\text{D}_y v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2}$:

$C^{(1),\text{SRT}}_{\text{D}_x^3\text{D}_y v_1} = 0$

$C^{(1),\text{MRT1}}_{\text{D}_x^3\text{D}_y v_1} = (8\omega_9^2\omega_5^2 + 16v_1^2\omega_9^3\omega_5^2 - 44\omega_9^2\omega_{12}^2cs^2\omega_5 + 16\omega_9\omega_{12}\omega_5 + 68v_1^2\omega_9^3\omega_{12}\omega_5 - 64v_1^2\omega_9\omega_{12}\omega_5^2 + 8\omega_9^3\omega_5 - 32\omega_9\omega_{12}cs^2\omega_5^2 + 43v_1^2\omega_9^2\omega_{12}^2\omega_5^2 - 24\omega_9\omega_{12}^2\omega_5 - 68v_1^2\omega_9^2\omega_{12}\omega_5 + 48\omega_9\omega_{12}^2\omega_5^2 - 16v_1^2\omega_9^2\omega_5^2 - 8\omega_9^2\omega_5^2 - 43v_1^2\omega_9^3\omega_{12}\omega_5^2 - 40\omega_9^2\omega_{12}\omega_5^2 - 16v_1^2\omega_9^3\omega_5 - 16\omega_9^2cs^2\omega_5^2 + 25\omega_9^2\omega_{12}cs^2\omega_5^2 - 17\omega_9^2\omega_{12}^2\omega_5 - 12\omega_9^2\omega_{12}^2 + 64v_1^2\omega_9\omega_{12}^2\omega_5 + 32\omega_9\omega_{12}cs^2\omega_5 - 20\omega_9^3\omega_{12}cs^2 + 48\omega_{12}^2cs^2\omega_5^2 + 12\omega_9^3\omega_{12} - 48v_1^2\omega_9^2\omega_{12}\omega_5 - 28\omega_9^3\omega_{12}\omega_5 + 44\omega_9^3\omega_{12}cs^2\omega_5 + 24\omega_9\omega_{12}\omega_5^2 + 80v_1^2\omega_{12}^2\omega_5^2 - 16\omega_9^3cs^2\omega_5 + 56\omega_9^2\omega_{12}cs^2\omega_5^2 + 16\omega_9^3cs^2\omega_5^2 - 16\omega_9\omega_{12}cs^2\omega_5 + 17\omega_9^3\omega_{12}\omega_5^2 + 104v_1^2\omega_9^2\omega_{12}\omega_5^2 + 28v_1^2\omega_9^3\omega_{12}^2 - 25\omega_9^3\omega_{12}cs^2\omega_5^2 - 72\omega_9\omega_{12}^2cs^2\omega_5^2 - 32\omega_{12}^2\omega_5^2 + 20\omega_9^2\omega_{12}cs^2 + 28\omega_9^2\omega_{12}^2\omega_5 - 120v_1^2\omega_9\omega_{12}^2\omega_5^2 - 28v_1^2\omega_9^3\omega_{12})\frac{\rho v_1 v_2}{4\omega_9^3\omega_{12}^2\omega_5^2}$

$C^{(1),\text{MRT2}}_{\text{D}_x^3\text{D}_y v_1} = (8\omega_9^2\omega_5^2 - 16\omega_9^2\omega_{12}cs^2\omega_5 + 16v_1^2\omega_9^3\omega_5^2 + 16\omega_9^3cs^2\omega_5^2 + 20\omega_9^2\omega_{12}^2cs^2 + 16\omega_9\omega_{12}\omega_5 + 68v_1^2\omega_9^3\omega_{12}\omega_5 - 64v_1^2\omega_9\omega_{12}\omega_5^2 - 25\omega_9^3\omega_{12}cs^2\omega_5^2 - 72\omega_9\omega_{12}^2cs^2\omega_5^2 + 8\omega_9^3\omega_5 + 43v_1^2\omega_9^2\omega_{12}^2\omega_5^2 - 24\omega_9\omega_{12}^2\omega_5 - 20\omega_9^3\omega_{12}cs^2 - 68v_1^2\omega_9^2\omega_{12}\omega_5 + 48\omega_9\omega_{12}^2\omega_5^2 + 32\omega_9\omega_{12}cs^2\omega_5 - 16v_1^2\omega_9^2\omega_5^2 - 8\omega_9^2\omega_5^2 + 48\omega_{12}^2cs^2\omega_5^2 - 43v_1^2\omega_9^3\omega_{12}\omega_5^2 - 40\omega_9^2\omega_{12}\omega_5^2 + 44\omega_9^3\omega_{12}cs^2\omega_5 + 56\omega_9^2\omega_{12}cs^2\omega_5^2 - 16v_1^2\omega_9^3\omega_5 - 16\omega_9^3cs^2\omega_5 - 17\omega_9^2\omega_{12}^2\omega_5 - 12\omega_9^2\omega_{12}^2 + 64v_1^2\omega_9\omega_{12}^2\omega_5 + 12\omega_9^3\omega_{12} - 48v_1^2\omega_9^2\omega_{12}\omega_5 - 28\omega_9^3\omega_{12}\omega_5 + 24\omega_9\omega_{12}\omega_5^2 + 80v_1^2\omega_{12}^2\omega_5^2 - 16\omega_9^3cs^2\omega_5 + 25\omega_9^2\omega_{12}cs^2\omega_5^2 - 44\omega_9^2\omega_{12}cs^2\omega_5 + 17\omega_9^3\omega_{12}\omega_5^2 + 104v_1^2\omega_9^2\omega_{12}\omega_5^2 + 28v_1^2\omega_9^3\omega_{12}^2 - 32\omega_9\omega_{12}cs^2\omega_5^2 - 32\omega_{12}^2\omega_5^2 + 28\omega_9^2\omega_{12}^2\omega_5 - 120v_1^2\omega_9\omega_{12}^2\omega_5^2 - 28v_1^2\omega_9^3\omega_{12})\frac{\rho v_1 v_2}{4\omega_9^3\omega_{12}^2\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}_x^3\text{D}_y v_1} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_x^3\text{D}_y v_1} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_x^3\text{D}_y v_1} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_x^3\text{D}_y v_1} = (-66v_1^2\omega_3\omega_1^3\omega_2 - 18\omega_1^2cs^2\omega_2^2 - 12\omega_1\omega_2^3 + 15\omega_3\omega_1^3cs^2\omega_2^2 - 6v_2^2\omega_1^2\omega_2^2 - 5v_2^2\omega_3\omega_1^2\omega_2^3 - 18v_2^2\omega_3\omega_1^3\omega_2 - 27\omega_1^2cs^2\omega_2^3 + 132v_1^2\omega_3\omega_1^2\omega_2^2 - 9v_2^2\omega_3\omega_1^2\omega_2^2 - 9v_2^2\omega_1^2\omega_2^3 - 6v_2^2\omega_3\omega_1^3\omega_2 - 36\omega_3\omega_1^3 - 24v_2^2\omega_3\omega_2^3 + 6v_2^2\omega_3\omega_1^2\omega_2 + 9v_2^2\omega_1^3\omega_2^2 + 3\omega_3\omega_1\omega_2^3 + 27\omega_3\omega_1cs^2\omega_2^3 - 12v_1^2\omega_3\omega_1^2\omega_2 + 84\omega_3\omega_1^3cs^2 + 48v_1^2\omega_3\omega_1^3 + 5v_2^2\omega_3\omega_1^3\omega_2^2 - 54\omega_3\omega_1cs^2\omega_2^2 + 42\omega_3\omega_1\omega_2^3 - 108\omega_3\omega_1^3cs^2\omega_2 - 12\omega_3\omega_2^3 - 15\omega_3\omega_1^2cs^2\omega_2^3 - 9\omega_1^3\omega_2^2 - 51\omega_3\omega_1^2\omega_2^2 + 27\omega_1^3cs^2\omega_2^2 + 5\omega_3\omega_1^2\omega_2^3 + 48\omega_3\omega_1^3\omega_2 + 81\omega_3\omega_1^2cs^2\omega_2^2 + 6\omega_1^2\omega_2^2 - 18\omega_3\omega_1^3cs^2\omega_2 - 5\omega_3\omega_1^3\omega_2^2 - 18\omega_3\omega_1^2cs^2\omega_2 + 84v_1^2\omega_3\omega_2^3 - 120v_1^2\omega_3\omega_1\omega_2^2 - 12\omega_3cs^2\omega_2^3 + 6v_2^2\omega_3\omega_1\omega_2^2 + 12v_2^2\omega_1\omega_2^3 - 66v_1^2\omega_3\omega_1\omega_2^3 + 36\omega_1cs^2\omega_2^3 + 6\omega_1^3\omega_2 + 12v_2^2\omega_3\omega_1^3 + 6\omega_3\omega_1^2\omega_2 + 9\omega_1^2\omega_2^3 + 27v_2^2\omega_3\omega_1\omega_2^3)\frac{\rho v_1 v_2}{18\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\text{D}_x^3\text{D}_y v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2}$:

$C^{(1),\text{SRT}}_{\text{D}_x^3\text{D}_y v_2} = (54v_1^2cs^2\omega - 54v_1^2\omega - 12cs^2\omega^2 - 4v_1^2\omega^3 - 36v_1^4 + 36cs^2\omega + 12v_1^2cs^2\omega^3 - 42v_1^2cs^2\omega^2 + 36cs^4 + 26v_1^2\omega^2 + 20cs^4\omega^2 + 36v_1^2 - 24cs^2 + 54v_1^4\omega - cs^4\omega^3 - 36v_1^2cs^2 - 26v_1^4\omega^2 + 4v_1^4\omega^3 - 54cs^4\omega)\frac{\rho}{12\omega^3}$

$C^{(1),\text{MRT1}}_{\text{D}_x^3\text{D}_y v_2} = (12v_1^2\omega_9^3\omega_5^2 + 12\omega_9^3\omega_{12}cs^4\omega_5 - 18v_1^4\omega_9^3\omega_{12}^2\omega_5^2 + 102v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5 + 162v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2 + 24v_1^2\omega_9^3\omega_{12}\omega_5 - 5\omega_9^3\omega_{12}^2cs^2\omega_5^2 +$

$$12\omega_9^2\omega_{12}cs^4\omega_5^2 - 19v_1^2\omega_9^2\omega_{12}\omega_5^3 + 4v_1^4\omega_9^3\omega_{12}\omega_5^3 + 12\omega_{12}^2cs^4\omega_5^3 - 12v_1^2\omega_9^3\omega_5^3 - 12v_1^4\omega_9^2\omega_5^3 - 12v_1^2\omega_9^2\omega_{12}\omega_5^2 + 36v_1^2\omega_9\omega_{12}\omega_5^3 - 6\omega_9^2\omega_{12}cs^4\omega_5^3 +$$
$$252v_1^2\omega_{12}^2cs^2\omega_5^3 + 60v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 12\omega_9\omega_{12}^2cs^4\omega_5^2 - 12v_1^4\omega_9^2\omega_5^3 + 27v_1^2\omega_9^3\omega_{12}\omega_5^3 + 12v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2 - \omega_9^2\omega_{12}cs^4\omega_5^3 + 6\omega_9^3\omega_{12}cs^4\omega_5^3 +$$
$$12v_1^2\omega_9^3cs^2\omega_5^3 - 90v_1^4\omega_9\omega_{12}\omega_5^3 - 24v_1^4\omega_9\omega_{12}\omega_5^2 - 48v_1^2\omega_9^3\omega_{12}\omega_5^2 - 48v_1^2\omega_9^2\omega_{12}cs^2\omega_5^2 + 6\omega_9^3\omega_{12}^2\omega_5\omega_5 - 36v_1^2\omega_9\omega_{12}cs^2\omega_5^3 + 12v_1^4\omega_9^3\omega_5^3 -$$
$$12\omega_9\omega_{12}^2cs^4\omega_5^3 + 60v_1^4\omega_9\omega_{12}\omega_5^3 + 12v_1^2\omega_9^2\omega_5^3 - 12v_1^2\omega_9^3cs^2\omega_5^2 - 6\omega_9^2\omega_{12}cs^2\omega_5^2 - 18\omega_9^3\omega_{12}cs^4\omega_5^2 - 81v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 12v_1^4\omega_9^3\omega_{12}\omega_5 +$$
$$18v_1^2\omega_9^3\omega_{12}^2\omega_5^2 - 108v_1^2\omega_9\omega_{12}^2cs^2\omega_5^2 - 12\omega_{12}^2cs^2\omega_5^3 + 12\omega_9^3\omega_{12}^2cs^4 + 19v_1^4\omega_9^2\omega_{12}\omega_5^3 - 24v_1^4\omega_9\omega_{12}\omega_5 + 6\omega_9^2\omega_{12}cs^2\omega_5^3 - \omega_9^3\omega_{12}cs^4\omega_5^3 -$$
$$21v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 - 72v_1^4\omega_{12}^2\omega_5^3 - 306v_1^4\omega_9\omega_{12}^2cs^2\omega_5^3 - 12\omega_9^3\omega_{12}cs^2\omega_5 - 4v_1^4\omega_9^3\omega_{12}\omega_5^3 + 30v_1^4\omega_9^3\omega_{12}cs^2\omega_5^2 - 12\omega_9^2\omega_{12}cs^2\omega_5^3 + 13\omega_9^3\omega_{12}cs^4\omega_5^3 +$$
$$12v_1^4\omega_9^2\omega_{12}\omega_5^2 - 36v_1^4\omega_9\omega_{12}\omega_5^3 - 12v_1^2\omega_9^3\omega_{12}cs^2\omega_5 - 24\omega_9^3\omega_{12}cs^4\omega_5 - 27v_1^4\omega_9^3\omega_{12}\omega_5^3 + 12\omega_9\omega_{12}^2cs^2\omega_5^3 + 90v_1^2\omega_9\omega_{12}\omega_5^3 + 24v_1^4\omega_9\omega_{12}\omega_5^3 +$$
$$72v_1^4\omega_{12}^2\omega_5^3 + 18\omega_9^3\omega_{12}cs^2\omega_5^2 + 6\omega_9^2\omega_{12}^2cs^4\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}cs^2\omega_5^3 + 12\omega_9\omega_{12}^2cs^2\omega_5^3 + 48v_1^4\omega_9^3\omega_{12}\omega_5^3 - 12v_1^2\omega_9^2cs^2\omega_5^3 + 54v_1^2\omega_9^2\omega_{12}cs^2\omega_5^3 -$$
$$48v_1^2\omega_9^3\omega_{12}^2cs^2 - 6\omega_9^2\omega_{12}cs^2\omega_5^3 - 12v_1^4\omega_9^3\omega_{12}\omega_5 + \omega_9^2\omega_{12}^2cs^4\omega_5^3 - 60v_1^2\omega_9^2\omega_{12}\omega_5^3)\dfrac{\rho}{12\omega_9^3\omega_{12}^2\omega_5^3}$$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}^3_x\mathrm{D}_yv_2} = (-24\omega_9^3\omega_{12}^2cs^4\omega_5 + 12v_1^2\omega_9^3\omega_5^2 - 12v_1^2\omega_9^3\omega_{12}cs^2\omega_5 + 12\omega_9\omega_{12}^2cs^2\omega_5^2 - 18v_1^4\omega_9^3\omega_{12}\omega_5^2 + 24v_1^2\omega_9^3\omega_{12}\omega_5 - 48v_1^2\omega_9^3\omega_{12}cs^2 -$
$12v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2 - 19v_1^2\omega_9^3\omega_{12}\omega_5^3 + 18\omega_9^3\omega_{12}cs^2\omega_5^3 + 6\omega_9^2\omega_{12}cs^4\omega_5^2 + 4v_1^4\omega_9^3\omega_{12}\omega_5^3 + 12\omega_9\omega_{12}^2cs^2\omega_5^2 - 12v_1^2\omega_9^3cs^2\omega_5^2 - 12v_1^2\omega_9^3\omega_5^3 -$
$12v_1^4\omega_9^3\omega_5^3 - 6\omega_9\omega_{12}^2cs^2\omega_5^3 - 12v_1^2\omega_9^2\omega_{12}^2\omega_5^3 + \omega_9^2\omega_{12}^2cs^4\omega_5^3 + 54v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 + 36v_1^2\omega_9\omega_{12}\omega_5^3 - 12v_1^4\omega_9^3\omega_5^3 - 108v_1^2\omega_9\omega_{12}^2cs^2\omega_5^2 +$
$27v_1^2\omega_9^3\omega_{12}\omega_5^3 - 12\omega_{12}^2cs^2\omega_5^3 - 21v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 - 90v_1^4\omega_9\omega_{12}^2\omega_5^3 + 6\omega_9^2\omega_{12}cs^2\omega_5^3 - 24v_1^4\omega_9^3\omega_{12}\omega_5^2 - \omega_9^3\omega_{12}^2cs^4\omega_5^3 - 48v_1^2\omega_9^3\omega_{12}\omega_5^2 -$
$306v_1^2\omega_9\omega_{12}^2cs^2\omega_5^2 + 12v_1^4\omega_9^3\omega_5^3 - 12\omega_9^3\omega_{12}cs^2\omega_5 - 12\omega_9^2\omega_{12}cs^2\omega_5^2 + 60v_1^4\omega_9\omega_{12}\omega_5^3 + 13\omega_9^3\omega_{12}cs^4\omega_5^3 + 30v_1^4\omega_9^3\omega_{12}cs^2\omega_5^2 + 12v_1^2\omega_9^3\omega_5^3 +$
$12\omega_9^3\omega_{12}^2cs^4 + 12v_1^4\omega_9^3\omega_{12}\omega_5 + 18v_1^2\omega_9^3\omega_{12}^2\omega_5^2 - 12\omega_9\omega_{12}^2cs^4\omega_5^3 - \omega_9^2\omega_{12}cs^2\omega_5^3 + 6\omega_9^3\omega_{12}cs^4\omega_5^3 + 12v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 19v_1^4\omega_9^2\omega_{12}\omega_5^3 -$
$24v_1^4\omega_9^3\omega_{12}\omega_5 - 72v_1^4\omega_{12}^2\omega_5^3 + 12v_1^2\omega_9^3cs^2\omega_5^3 + 6\omega_9^2\omega_{12}cs^2\omega_5 - 48v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5 - 12\omega_9\omega_{12}^2cs^4\omega_5^3 - 4v_1^4\omega_9^3\omega_{12}\omega_5^3 - 36v_1^2\omega_9\omega_{12}cs^2\omega_5^3 -$
$12v_1^2\omega_9^3cs^2\omega_5^2 - 81v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 12v_1^4\omega_9^2\omega_{12}\omega_5^2 - 6\omega_9^2\omega_{12}cs^2\omega_5^2 - 36v_1^4\omega_9\omega_{12}\omega_5^3 - 18\omega_9^3\omega_{12}cs^4\omega_5^2 - 27v_1^4\omega_9^3\omega_{12}\omega_5^3 + 102v_1^2\omega_9^3\omega_{12}cs^2\omega_5 +$
$12\omega_9^3\omega_{12}cs^4\omega_5 - 5\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 90v_1^2\omega_9\omega_{12}^2\omega_5^3 + 12\omega_9^2\omega_{12}cs^4\omega_5^2 + 162v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2 + 24v_1^2\omega_9\omega_{12}\omega_5^2 + 72v_1^4\omega_{12}^2\omega_5^3 + 48v_1^4\omega_9\omega_{12}\omega_5^3 +$
$12\omega_{12}^2cs^4\omega_5^3 - 12v_1^4\omega_9^3\omega_{12}^2\omega_5 + 252v_1^2\omega_{12}^2cs^2\omega_5^3 + 60v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 60v_1^2\omega_9^2\omega_{12}\omega_5^3 - 6\omega_9\omega_{12}cs^4\omega_5^3)\dfrac{\rho}{12\omega_9^3\omega_{12}^2\omega_5^3}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}^3_x\mathrm{D}_yv_2} =$
$(-12\omega_{12}^2cs^2\omega_5^3 - 36v_1^2\omega_9\omega_{12}^2cs^2\omega_5^2 + 36v_1^2\omega_9^3\omega_5^2 - 6v_1^4\omega_9^3\omega_{12}^2\omega_5^3 - \omega_9^3\omega_{12}^2cs^4\omega_5^3 + 6\omega_9^2\omega_{12}cs^2\omega_5^3 - 99v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 - 19v_1^2\omega_9^2\omega_{12}^2\omega_5^3 + 4v_1^4\omega_9^3\omega_{12}^2\omega_5^3 -$
$12\omega_9^3\omega_{12}cs^2\omega_5 - 36v_1^2\omega_9^3\omega_5^3 - 306v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3 - 36v_1^4\omega_9^3\omega_5^3 + 36v_1^2\omega_9\omega_{12}\omega_5^3 + 54v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 + 13\omega_9^3\omega_{12}cs^4\omega_5^3 - 12\omega_9^2\omega_{12}cs^2\omega_5^2 - 36v_1^4\omega_9^3\omega_5^2 +$
$12\omega_9\omega_{12}^2cs^2\omega_5^3 + 36v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 + 39v_1^2\omega_9^3\omega_{12}\omega_5^3 - 24\omega_9^3\omega_{12}^2cs^4\omega_5 + 6\omega_9^2\omega_{12}cs^4\omega_5^2 + 18\omega_9^3\omega_{12}cs^2\omega_5^3 + 36v_1^2\omega_9^2\omega_{12}cs^2\omega_5^2 - 90v_1^4\omega_9\omega_{12}^2\omega_5^3 -$
$36v_1^2\omega_9^3\omega_{12}\omega_5^2 - 108v_1^2\omega_9^3cs^2\omega_5^2 + 12\omega_9\omega_{12}^2cs^2\omega_5^3 + 36v_1^4\omega_9^3\omega_5^3 + 72v_1^4\omega_9\omega_{12}\omega_5^3 + 36v_1^2\omega_9^3\omega_5^3 + 198v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 + \omega_9^2\omega_{12}^2cs^4\omega_5^3 - 6\omega_9^3\omega_{12}cs^2\omega_5^3 +$
$12\omega_9^3\omega_{12}cs^4\omega_5 - 18v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 6v_1^2\omega_9^3\omega_{12}^2\omega_5^3 + 19v_1^4\omega_9^2\omega_{12}\omega_5^3 + 18v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 72v_1^2\omega_{12}^2\omega_5^3 + 12\omega_9\omega_{12}cs^4\omega_5^3 - 5\omega_9^3\omega_{12}^2cs^2\omega_5^2 +$
$12\omega_{12}^2cs^4\omega_5^3 - 4v_1^2\omega_9^3\omega_{12}^2\omega_5^3 - 6\omega_9\omega_{12}cs^4\omega_5^3 + 252v_1^2\omega_{12}^2cs^2\omega_5^3 + 60v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 36v_1^4\omega_9\omega_{12}\omega_5^3 - 39v_1^4\omega_9^3\omega_{12}\omega_5^3 - 12\omega_9\omega_{12}^2cs^4\omega_5^2 +$
$12\omega_9^3\omega_{12}^2cs^4 + 90v_1^2\omega_9\omega_{12}^2\omega_5^3 + 108v_1^2\omega_9^3cs^2\omega_5^3 + 72v_1^4\omega_{12}^2\omega_5^3 + 12v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 + 6\omega_9^2\omega_{12}cs^4\omega_5^3 - \omega_9^2\omega_{12}cs^2\omega_5^3 - 108v_1^2\omega_9\omega_{12}cs^2\omega_5^3 -$
$12\omega_9\omega_{12}^2cs^4\omega_5^3 + 36v_1^2\omega_9^3\omega_{12}\omega_5^2 + 6\omega_9^2\omega_{12}^2cs^2\omega_5 - 18\omega_9^3\omega_{12}cs^4\omega_5^3 - 6\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 3v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 72v_1^2\omega_9^2\omega_{12}\omega_5^3 - 108v_1^2\omega_9^3cs^2\omega_5^2)\dfrac{\rho}{12\omega_9^3\omega_{12}^2\omega_5^3}$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}^3_x\mathrm{D}_yv_2} = (36v_1^2\omega_9^3\omega_5^2 + 6\omega_9^2cs^4\omega_{12}^2\omega_5^2 + 252v_1^2cs^2\omega_{12}^2\omega_5^3 + 60v_1^2\omega_9^2cs^2\omega_{12}^2\omega_5^3 - 6v_1^4\omega_9^3\omega_{12}^2\omega_5^2 - 24\omega_9^3cs^4\omega_{12}^2\omega_5 - 19v_1^2\omega_9^2\omega_{12}^2\omega_5^3 +$
$4v_1^4\omega_9^3\omega_{12}^2\omega_5^3 + 18v_1^2\omega_9^2cs^2\omega_{12}^2\omega_5^2 + \omega_9^2cs^4\omega_{12}^2\omega_5^3 - 5\omega_9^3cs^2\omega_{12}^2\omega_5^2 - 36v_1^2\omega_9^3\omega_5^3 - 36v_1^4\omega_9^2\omega_5^3 - 18v_1^2\omega_9^2cs^2\omega_{12}^2\omega_5 + 36v_1^2\omega_9\omega_{12}\omega_5^3 -$
$6\omega_9^2cs^2\omega_{12}^2\omega_5^2 - \omega_9^3cs^4\omega_{12}^2\omega_5^3 - 36v_1^2\omega_9^3\omega_5^3 - 3v_1^2\omega_9^3cs^2\omega_{12}^2\omega_5^2 + 39v_1^2\omega_9^3\omega_{12}\omega_5^3 + 108v_1^2\omega_9^3cs^2\omega_5^3 - 90v_1^4\omega_9\omega_{12}^2\omega_5^3 + 6\omega_9^3cs^2\omega_{12}^2\omega_5 -$
$36v_1^2\omega_9^3\omega_{12}\omega_5^3 - 108v_1^2\omega_9^3cs^2\omega_5^2 + 12v_1^2\omega_9^3cs^2\omega_{12}^2\omega_5^2 + 36v_1^4\omega_9^3\omega_5^3 + 13\omega_9^3cs^4\omega_{12}^2\omega_5^2 - \omega_9^2cs^2\omega_{12}^2\omega_5^3 + 72v_1^4\omega_9\omega_{12}\omega_5^3 + 36v_1^2\omega_9^3\omega_5^3 -$
$108v_1^2\omega_9cs^2\omega_{12}^2\omega_5^3 + 6v_1^2\omega_9^3\omega_{12}^2\omega_5^2 + 6\omega_9^2cs^2\omega_{12}^2\omega_5^3 - 99v_1^2\omega_9^3cs^2\omega_{12}\omega_5^3 - 18\omega_9^3cs^4\omega_{12}^2\omega_5^3 + 19v_1^4\omega_9^2\omega_{12}\omega_5^3 - 72v_1^2\omega_{12}^2\omega_5^3 - 12\omega_9cs^4\omega_{12}^2\omega_5^2 -$
$306v_1^2\omega_9cs^2\omega_{12}^2\omega_5^3 + 6\omega_9^3cs^4\omega_{12}^2\omega_5 + 54v_1^2\omega_9^3cs^2\omega_{12}^2\omega_5 - 12\omega_9^2cs^2\omega_{12}\omega_5^3 - 4v_1^2\omega_9^3\omega_{12}^2\omega_5^3 - 36v_1^2\omega_9cs^2\omega_{12}^2\omega_5^2 - 12\omega_9cs^4\omega_{12}^2\omega_5^3 - 12cs^2\omega_{12}^2\omega_5^3 -$
$12\omega_9^3cs^2\omega_{12}\omega_5 - 36v_1^4\omega_9\omega_{12}\omega_5^3 - 39v_1^4\omega_9^3\omega_{12}\omega_5^3 + 18\omega_9^3cs^2\omega_{12}\omega_5^3 + 36v_1^2\omega_9^3cs^2\omega_{12}\omega_5^3 - 6\omega_9^2cs^4\omega_{12}^2\omega_5^3 + 90v_1^2\omega_9\omega_{12}^2\omega_5^3 + 36v_1^2\omega_9^3cs^2\omega_{12}\omega_5 +$
$72v_1^4\omega_{12}^2\omega_5^3 + 12\omega_9cs^2\omega_{12}^2\omega_5^2 + 12\omega_9cs^4\omega_{12}^2\omega_5^2 + 198v_1^2\omega_9^2cs^2\omega_{12}\omega_5^3 - 6\omega_9^3cs^2\omega_{12}\omega_5^3 + 36v_1^4\omega_9^3\omega_{12}\omega_5^2 + 12\omega_9cs^2\omega_{12}^2\omega_5^3 + 12cs^4\omega_{12}^2\omega_5^3 -$
$108v_1^2\omega_9^2cs^2\omega_5^3 + 12\omega_9^3cs^4\omega_{12}^2 - 72v_1^2\omega_9^3\omega_{12}\omega_5^3 + 12\omega_9^3cs^4\omega_{12}\omega_5)\dfrac{\rho}{12\omega_9^3\omega_{12}^2\omega_5^3}$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}^3_x\mathrm{D}_yv_2} = (-36v_1^2\omega_9^2cs^2\omega_4\omega_1^2 - 12\omega_9^2cs^4\omega_4\omega_1^3 - 12\omega_9^2cs^2\omega_1^3 + 72v_1^4\omega_9\omega_4^2\omega_1^3 - 18\omega_9cs^4\omega_4^2\omega_1^2 - 99v_1^2\omega_9cs^2\omega_4^2\omega_1^2 - 12\omega_9cs^2\omega_4^2\omega_1^2 -$
$4v_1^4\omega_9^2\omega_4^3\omega_1^3 + 54v_1^2\omega_9cs^2\omega_4^3\omega_1^2 + 6\omega_9cs^4\omega_4^3\omega_1^3 - 90v_1^4\omega_9^2\omega_4\omega_1^3 - 12\omega_9^2cs^4\omega_4\omega_1^2 - 306v_1^2\omega_9^2cs^2\omega_4\omega_1^3 + 6v_1^2\omega_9^2\omega_4\omega_1^2 - 12\omega_9cs^2\omega_4^2\omega_1 +$
$6\omega_9cs^2\omega_4^2\omega_1^3 + 12\omega_9^2cs^2\omega_4\omega_1^3 + 18\omega_9cs^2\omega_4^2\omega_1^2 - 19v_1^2\omega_9^2\omega_4^2\omega_1^3 + 36v_1^2\omega_9cs^2\omega_4^3\omega_1 - 39v_1^4\omega_9\omega_4^3\omega_1^3 + 12\omega_9cs^4\omega_4^2\omega_1^2 + 198v_1^2\omega_9cs^2\omega_4^3\omega_1^3 +$
$36v_1^2\omega_9\omega_4\omega_1^3 - 6\omega_9cs^2\omega_4^3\omega_1^3 + 12\omega_9^2cs^2\omega_4\omega_1^2 + 36v_1^2\omega_9cs^2\omega_4^2\omega_1^2 - 6\omega_9cs^4\omega_4^2\omega_1^3 + 12\omega_9cs^4\omega_4^3\omega_1 + 36v_1^4\omega_9\omega_4^3\omega_1^2 - 72v_1^2\omega_9\omega_4^2\omega_1^3 - 6\omega_9^2cs^2\omega_4^2\omega_1^2 -$
$36v_1^4\omega_4^2\omega_1^3 - 36v_1^2\omega_9^3\omega_4\omega_1^3 + 13\omega_9cs^4\omega_4^3\omega_1^3 + 108v_1^2cs^2\omega_4^3\omega_1^3 + 12v_1^2\omega_9^2cs^2\omega_4^3\omega_1^3 + 4v_1^4\omega_9^3\omega_4^3\omega_1^3 + 6\omega_9cs^2\omega_4^3\omega_1 - \omega_9^2cs^2\omega_4^3\omega_1^3 + 90v_1^2\omega_9^3\omega_4\omega_1^3 +$
$12\omega_9cs^4\omega_4^3 - 6v_1^4\omega_9\omega_4^3\omega_1^2 - 108v_1^2\omega_9cs^2\omega_4\omega_1^3 + 36v_1^2\omega_4^3\omega_1^2 + 72v_1^4\omega_4^2\omega_1^3 - 3v_1^2\omega_9cs^2\omega_4^3\omega_1^2 - 108v_1^2cs^2\omega_4^2\omega_1^2 - \omega_9cs^4\omega_4^3\omega_1^3 + 252v_1^2\omega_9cs^2\omega_1^3 +$
$12\omega_9cs^4\omega_4^3 + 19v_1^4\omega_9^2\omega_4^2\omega_1^3 - 18v_1^2\omega_9cs^2\omega_4^3\omega_1 + 6\omega_9cs^4\omega_4^2\omega_1^2 + 60v_1^2\omega_9cs^2\omega_4^2\omega_1^3 - 108v_1^2cs^2\omega_4^2\omega_1^3 + 36v_1^2\omega_4^3\omega_1^3 + 36v_1^4\omega_4^3\omega_1^3 - 5\omega_9cs^2\omega_4^3\omega_1^2 +$
$39v_1^2\omega_9\omega_4^3\omega_1^3 + 18v_1^2\omega_9cs^2\omega_4^2\omega_1^2 + \omega_9^2cs^4\omega_4^3\omega_1^3 - 24\omega_9cs^4\omega_4^3\omega_1 - 36v_1^4\omega_9\omega_4\omega_1^3 - 36v_1^2\omega_9\omega_4^3\omega_1^2 - 72v_1^2\omega_9^3\omega_1^3 - 36v_1^4\omega_4^3\omega_1^2)\dfrac{\rho}{12\omega_9^3\omega_4^3\omega_1^3}$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}^3_x\mathrm{D}_yv_2} = (80\omega_3^2\omega_4^2cs^4\omega_2^3 + 48v_2^2\omega_3^3\omega_4^2\omega_2^3 + 36v_1^4\omega_3^3\omega_4\omega_1^3\omega_2^2 + 8\omega_3^2\omega_4^2\omega_1^3 + 288v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 - 54v_1^2\omega_4^2\omega_1^3\omega_2^3 + 16\omega_3\omega_4^2\omega_1^3cs^4\omega_2 -$
$60v_1^4\omega_3\omega_4^2\omega_1^3\omega_2^2 + 16\omega_3^3\omega_4^2\omega_1\omega_2^3 + 48v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 540v_1^2\omega_3\omega_4\omega_1^2cs^2\omega_2^3 - 36v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 108v_1^2\omega_3\omega_4\omega_1^2cs^2\omega_2^2 + 72v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 +$
$54v_1^4\omega_3^2\omega_1^3\omega_2^3 + 60v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 12v_2^2\omega_3\omega_4^2\omega_1cs^2\omega_2^3 - 48v_1^2\omega_3^2\omega_4^2\omega_2^3 - 172\omega_3\omega_4^2\omega_1cs^4\omega_2^3 + 144v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 24v_1^4\omega_3\omega_4^2\omega_1^3\omega_2 -$
$297v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 + 36v_1^2\omega_4^2\omega_1^3\omega_2^3 - 72\omega_3\omega_4\omega_1cs^2\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1\omega_2^3 + 216v_1^4\omega_3\omega_4^2\omega_1^2\omega_2^3 - 117v_1^4\omega_3^2\omega_4\omega_1^3\omega_2^3 - 40\omega_3\omega_4^2\omega_1^3cs^2 +$
$16\omega_3\omega_4^2\omega_1cs^4\omega_2^3 + 64\omega_3^3\omega_4^2\omega_1^2cs^2\omega_2 - 96v_2^2\omega_3\omega_4^2\omega_1cs^2\omega_2^3 + 48v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 216v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1cs^4\omega_2^2 + 24v_1^2\omega_3\omega_4^2\omega_1^3\omega_2 +$
$144v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 48v_1^4\omega_3^2\omega_4^2\omega_1^3 - 12v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2 + 648v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 - 28\omega_3^2\omega_4^2\omega_1cs^4\omega_2 + 168v_1^4\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 117v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 +$
$264v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 144v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 336v_1^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 108v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 36\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 - 288v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 108v_1^2\omega_3\omega_4^2\omega_1^3\omega_2^2 -$
$2\omega_3^2\omega_4^2\omega_1cs^4\omega_2 - 492v_1^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2 + 36v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 72\omega_3^2\omega_4^2\omega_1cs^4\omega_2^3 - 12v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 96v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 108v_1^4\omega_3\omega_4^2\omega_1^3\omega_2^2 +$
$72v_1^2\omega_4^2\omega_1^2\omega_2^3 - 216v_1^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 18\omega_3\omega_4^2\omega_1^3cs^4\omega_2^3 - 288v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 48v_2^2\omega_3\omega_4^2\omega_1\omega_2^3 - 12\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 - 18\omega_3\omega_4\omega_1^3cs^2\omega_2^3 +$

$72v_1^2\omega_3\omega_4^2\omega_1cs^2\omega_2^3 - 36v_1^4\omega_3^2\omega_4\omega_1^2\omega_2^2 - 144v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 288v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 6\omega_3^2\omega_4\omega_1^3cs^4\omega_2^3 - 324v_1^2\omega_3^2\omega_1^2cs^2\omega_2^3 - 432v_1^2v_2^2\omega_3^2\omega_4^2\omega_2^3 +$
$117v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 852v_1^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 288v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 40\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 - 36\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 + 288v_1^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 96v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^2 -$
$48v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 72v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 + 24v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 72v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 36\omega_3\omega_4^2\omega_1^3cs^4\omega_2^2 - 117v_1^4\omega_3\omega_4^2\omega_1^3\omega_2^3 + 54v_1^4\omega_4^2\omega_1^3\omega_2^3 +$
$72v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 + 240v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 72\omega_3^2\omega_4\omega_1cs^4\omega_2^3 + 144v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 36v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 - 492v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 - 56\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2 -$
$96v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 - 297v_1^2\omega_3^2\omega_4\omega_1^3cs^2\omega_2^3 - 16\omega_3\omega_4^2\omega_1cs^2\omega_2^3 - 32\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 108v_1^2\omega_3\omega_4\omega_1^3cs^2\omega_2^2 + 6v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 54v_1^2\omega_3^2\omega_1^3\omega_2^3 +$
$468v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 - 144v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 72v_1^4\omega_3^2\omega_4\omega_1\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 192v_1^4\omega_3^2\omega_4^2\omega_2^3 + 36\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 - 36v_1^4\omega_3\omega_4\omega_1^3\omega_2^2 -$
$8\omega_3^2\omega_4^2\omega_1^2\omega_2 + 174v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 108v_1^2\omega_3^2\omega_4\omega_1^3cs^2\omega_2^2 + 8\omega_3^2\omega_4^2cs^2\omega_2^3 - 108v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 + 576v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 -$
$16\omega_3^2\omega_4^2\omega_2^3 - 16\omega_3\omega_4^2\omega_1^3cs^2\omega_2 + 204v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 36v_1^4\omega_4^2\omega_1^3\omega_2^2 - 24v_2^2\omega_3^2\omega_4^2\omega_1^3 + 108v_1^4\omega_3\omega_4\omega_1^3\omega_2^3 - 96v_1^2\omega_3^2\omega_4^2\omega_1^3 + 2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 -$
$108v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 24v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 48\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 + 324v_1^2\omega_3\omega_4\omega_1^3cs^2\omega_2^3 + 40v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 108v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 - 2\omega_3^2\omega_4^2\omega_1^3\omega_2 -$
$24v_1^4\omega_3\omega_4^2\omega_1\omega_2 - 8\omega_3^2\omega_4^2\omega_1^3\omega_2 + 144v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^3 + 38v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 108v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 432v_1^2\omega_3^2\omega_4^2cs^2\omega_2^3 + 40\omega_3\omega_4^2\omega_1^2cs^4\omega_2^2 + 24v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 +$
$48v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 - 108v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 12v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 162v_1^2\omega_3^2\omega_4^3cs^2\omega_2^3 + 86\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^3 + 24v_1^2\omega_3\omega_4^2\omega_1\omega_2^3 + 36\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 -$
$72v_1^4\omega_4^2\omega_1^2\omega_2^3 - 86v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 96v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 36\omega_3\omega_4^2\omega_1^2cs^4\omega_2^3 + 162v_1^2\omega_4^2\omega_1^3cs^2\omega_2^3 + 72v_2^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 + 24v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^3 -$
$6v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 72\omega_3^2\omega_4\omega_1^2cs^2\omega_2^3 - 180v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2 - 24v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2cs^2\omega_2^3 - 18\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 - 144v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 +$
$32\omega_3^2\omega_4^2\omega_1^3cs^4 + 24v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 + 18\omega_3^2\omega_4\omega_1^3cs^4\omega_2^3 + 180v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 + 264v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 + 20\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^2) \frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^2}$

coefficient $C_{D_x^2 D_y^2 \rho}^{(1)}$ at $\frac{\partial^4 \rho}{\partial x_1^2 \partial x_2^2}$:

$C_{D_x^2 D_y^2 \rho}^{(1),SRT} = (24 + 36v_1^2\omega + 5cs^2\omega^3 + 14\omega^2 - 46cs^2\omega^2 - \omega^3 + v_1^2\omega^3 + 108cs^2\omega - 14v_1^2\omega^2 - 24v_1^2 - 72cs^2 - 36\omega)\frac{v_1cs^2}{12\omega^3}$

$C_{D_x^2 D_y^2 \rho}^{(1),MRT1} = (12\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2 + 36\omega_{15}\omega_{12}^2cs^4\omega_5^3\omega_{21} +$
$6v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} + 24\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^3cs^2\omega_5^3\omega_{21} +$
$150\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^2\omega_{21} + 2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 + 36\omega_{15}\omega_9\omega_{12}^3v_2^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 - 12\omega_9^3\omega_{12}^2cs^2\omega_5^2 -$
$72\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5\omega_{21} + 30\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3\omega_{21} + 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 2\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_9^3v_2^2cs^2\omega_5^3\omega_{21} + 18\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} +$
$72\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5\omega_{21} + 24\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3 +$
$18\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} + 180\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3 -$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 6\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3 - 48\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 - 12\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} +$
$18\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 36\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} - 36\omega_9\omega_{12}^2cs^4\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3v_2^2cs^2\omega_5\omega_{21} + 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} -$
$54\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 42\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^2\omega_{21} - 6v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3 -$
$18\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3 + 6\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^3cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5^3 -$
$12v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} - 6\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} - 6\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^3cs^2\omega_5^3\omega_{21} -$
$36\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5\omega_{21} - 24\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^2v_2^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3 -$
$6\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 72\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21} + 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21} - 36\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} -$
$12\omega_{15}\omega_9\omega_{12}cs^2\omega_5^2 - 96\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5\omega_{21} + 12v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3 - 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} +$
$18\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 12\omega_{15}\omega_9cs^2\omega_5^3\omega_{21} + 12\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 6v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 +$
$36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 5\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} + 72\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5\omega_{21} - 6v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3\omega_{21} +$
$12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3 + 12\omega_{15}\omega_9^3cs^4\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2 - 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3 - 18\omega_9^2\omega_{12}cs^4\omega_5^3 - 12\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} -$
$6\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 36\omega_{15}\omega_9^2\omega_{12}cs^4\omega_5^3 + 12\omega_{15}\omega_9cs^4\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} +$
$12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^4\omega_5\omega_{21} + 18\omega_{15}\omega_9\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^2 - 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 18\omega_{15}\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3 -$
$12\omega_{15}v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} + 36\omega_9^3\omega_{12}^2cs^4\omega_5^2 - 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3 + 12v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 12\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 + 18\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} +$
$12\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^2v_2^2cs^2\omega_5^3\omega_{21} + \omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} -$
$\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} - 42\omega_{15}\omega_9\omega_{12}cs^4\omega_5^3\omega_{21} - 12\omega_{15}\omega_9cs^4\omega_5^3\omega_{21} - 24\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 12\omega_9^3\omega_{12}^2v_2^2\omega_5^2 -$
$12v_1^2\omega_9^2\omega_{12}cs^2\omega_5^3\omega_{21} - 6\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 36\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2 + 12\omega_{15}\omega_9^3cs^2\omega_5^2\omega_{21} - 88\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} -$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 + 36\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 + 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 36\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} -$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^2cs^2\omega_5^3\omega_{21} - 84\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}cs^2\omega_5\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3 -$
$12\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 + 108\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3 + 36\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3 +$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2 + 6\omega_9^2\omega_{12}^2v_2^2\omega_5^3 + 12\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}cs^4\omega_5^3\omega_{21} - 18\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3)\frac{v_1}{12\omega_{15}\omega_9^3\omega_{12}^2\omega_5^3\omega_{21}}$

$C_{D_x^2 D_y^2 \rho}^{(1),MRT2} = (-12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3cs^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} + 6v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} +$
$6v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 5\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3\omega_{21} + 36\omega_{15}\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9^2\omega_{12}cs^2\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} -$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 - 12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 - 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} + 36\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} + 72\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5\omega_{21} +$
$36\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^2 + 12\omega_{15}\omega_9^3cs^4\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} +$
$12\omega_{15}\omega_9^3cs^4\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} + 24\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 + 18\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} +$
$12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3 + 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3 - 36\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3 - 18\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2 +$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 - 12\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} - \omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} - 42\omega_{15}\omega_9\omega_{12}cs^4\omega_5^3\omega_{21} - 12\omega_{15}\omega_9cs^4\omega_5^3\omega_{21} +$
$12\omega_{15}v_1^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^2v_2^2cs^2\omega_5^3\omega_{21} + \omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5^3 -$
$12v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 12v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_9^2\omega_{12}cs^4\omega_5^3 + 12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} +$
$12\omega_{15}\omega_9^3cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2 - 88\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 18\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 84\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} +$
$24\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5\omega_{21} - 36\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 - 24\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9cs^2\omega_5^3\omega_{21} +$
$18\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 + 36\omega_9^3\omega_{12}^2cs^4\omega_5^2 + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 12\omega_{15}\omega_9\omega_{12}cs^4\omega_5^3\omega_{21} + 108\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} +$
$12\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^3 + 12\omega_{15}v_1^2\omega_9^2\omega_{12}cs^2\omega_5^3 - 18\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} + 150\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^2\omega_{21} +$

$$12\omega_{15}v_1^2\omega_9^3cs^2\omega_5^3\omega_{21} + 12\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 12\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} + 36\omega_{15}\omega_{12}^2cs^4\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} -$$
$$6v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 2\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} - 6v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 + 6\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3 +$$
$$36\omega_{15}\omega_9^3v_2^2cs^2\omega_5^3\omega_{21} + 18\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 + 72\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 2\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} +$$
$$36\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} - 72\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5\omega_{21} + 30\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3\omega_{21} + 18\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} -$$
$$12\omega_{15}v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 -$$
$$48\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^2 - 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2 + 12v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 - 96\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_{21} + 12v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 +$$
$$180\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5\omega_{21} - 54\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 42\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^2\omega_{21} +$$
$$36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2 - 36\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} - 36\omega_9^2\omega_{12}^2cs^4\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3v_2^2cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} -$$
$$12\omega_{15}\omega_{12}^2cs^2\omega_5^3\omega_{21} - 24\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 12\omega_9^3\omega_{12}v_2^2\omega_5^2 - 12\omega_9^3\omega_{12}cs^2\omega_5^2 - 6\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 6\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} -$$
$$12\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 6\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} -$$
$$6\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^3cs^2\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 6\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 - 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3 -$$
$$12\omega_{15}v_1^2\omega_9^3cs^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^3\omega_{21} - 12\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} -$$
$$12\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 - 12\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 12\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3 + 18\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 +$$
$$6\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 6\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 72\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21})\frac{v_1}{12\omega_{15}\omega_9^3\omega_{12}^2\omega_5^3\omega_{21}}$$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2\rho}^{(1),\mathrm{CLBM1}} = (12\omega_{15}\omega_9^3\omega_{12}\omega_5^2 + 12\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} + 36\omega_{15}\omega_{12}^2cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2\omega_{21} + 18\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^3\omega_{12}\omega_5\omega_{21} -$
$18\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} + 12\omega_9^2\omega_{12}^2\omega_5\omega_{21} - 36\omega_{15}\omega_9^3cs^2\omega_5\omega_{21} + 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_5^2 + 12\omega_{15}\omega_9^2\omega_5^2\omega_{21} - \omega_{15}\omega_9^3\omega_{12}^2\omega_5^2\omega_{21} + 6\omega_9^3\omega_{12}^2\omega_5^2 +$
$12\omega_{15}v_1^2\omega_{12}^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{21} + 18\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 18\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5\omega_{21} - 12\omega_9^3\omega_{12}^2\omega_5 - 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_5^2\omega_{21} -$
$36\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5 + 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_5 + 12\omega_{15}v_1^2\omega_9^3\omega_5^2\omega_{21} + 36\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_{21} +$
$6\omega_{15}\omega_9^2\omega_{12}^2\omega_5^2 - 18\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^2 - 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} + 2\omega_{15}\omega_9^3\omega_{12}^2\omega_5^2\omega_{21} - 40\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}^2\omega_{21} -$
$36\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5^2 - 12\omega_{15}\omega_9^3\omega_{12}\omega_5 - 12v_1^2\omega_9^3\omega_{12}^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_5\omega_{21} - 6\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2\omega_{21} + 36\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5 -$
$6v_1^2\omega_9^3\omega_{12}^2\omega_5^2 + 5\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2\omega_{21} + 6v_1^2\omega_9^2\omega_{12}^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_5^2\omega_{21} +$
$12\omega_{15}\omega_9^3\omega_{12}^2\omega_5 - 6\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_5^2 - 36\omega_{15}\omega_9^3\omega_{12}cs^2\omega_{21} + 36\omega_{15}\omega_9^2\omega_{12}cs^2\omega_5^2 + 18\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5\omega_{21} - 18\omega_9^3\omega_{12}^2cs^2\omega_5^2 - 36\omega_{15}\omega_9cs^2\omega_5^2\omega_{21} -$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_{21} - 12\omega_{15}\omega_9\omega_{12}\omega_5^2 - 12\omega_{15}v_1^2\omega_9^3\omega_5\omega_{21} + \omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5 + 54\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} -$
$18\omega_{15}\omega_9^2\omega_{12}^2\omega_5\omega_{21} + 36\omega_{15}\omega_9^3cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2\omega_5^2\omega_{21} + 54\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2 + 12\omega_{15}\omega_9^3\omega_{12}^2\omega_5\omega_{21} -$
$2\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^3\omega_{12}^2\omega_5 - 12\omega_{15}v_1^2\omega_9^2\omega_5^2\omega_{21} + 36\omega_9^3\omega_{12}^2cs^2\omega_5 - 36\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} + 12v_1^2\omega_9^3\omega_{12}^2\omega_5 - 12\omega_{15}\omega_{12}^2\omega_5^2\omega_{21} -$
$36\omega_{15}\omega_9\omega_{12}\omega_{12}cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2 - 6\omega_9^2\omega_{12}^2\omega_5^2\omega_{21} + 54\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{21} + 6\omega_{15}\omega_9^3\omega_{12}\omega_5^2\omega_{21})\frac{v_1cs^2}{12\omega_{15}\omega_9^3\omega_{12}^2\omega_5^2\omega_{21}}$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2\rho}^{(1),\mathrm{CLBM2}} = (36\omega_{15}\omega_9^2cs^2\omega_{12}\omega_5^2 - 40\omega_{15}\omega_9^3cs^2\omega_{12}^2\omega_5\omega_{21} - 36\omega_{15}\omega_9^3cs^2\omega_{12}\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}\omega_5^2 + 12\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} -$
$36\omega_{15}\omega_9cs^2\omega_{12}^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^3\omega_{12}\omega_5\omega_{21} - 36\omega_{15}\omega_9^3cs^2\omega_5\omega_{21} + 12\omega_9^2\omega_{12}^2\omega_5\omega_{21} + 36\omega_{15}\omega_9^3cs^2\omega_{12}\omega_5 +$
$6\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2 + 12\omega_{15}\omega_9^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^3cs^2\omega_{12}\omega_5^2\omega_{21} - 18\omega_9^3cs^2\omega_{12}^2\omega_5^2 - \omega_{15}\omega_9^3\omega_{12}^2\omega_5^2\omega_{21} + 6\omega_9^3\omega_{12}^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}^2\omega_5^2\omega_{21} +$
$12\omega_{15}\omega_9^2\omega_{12}^2\omega_{21} - 6\omega_{15}\omega_9cs^2\omega_{12}^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5\omega_{21} - 12\omega_9^3\omega_{12}^2\omega_5 - 12\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_{21} -$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5 + 12\omega_{15}v_1^2\omega_9^3\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2\omega_5^2 + 36\omega_9^3cs^2\omega_{12}\omega_5 + 2\omega_{15}\omega_9^3\omega_{12}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}\omega_{21} +$
$36\omega_{15}cs^2\omega_{12}^2\omega_5\omega_{21} - 36\omega_{15}\omega_9^3cs^2\omega_{12}^2\omega_5 - 12\omega_{15}\omega_9^3\omega_{12}\omega_5 + 18\omega_9^2cs^2\omega_{12}^2\omega_5\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}\omega_5 + 18\omega_9^2cs^2\omega_{12}^2\omega_5^2\omega_{21} - 12v_1^2\omega_9^3\omega_{12}^2\omega_5\omega_{21} + 12\omega_{15}\omega_9\omega_5\omega_{21} -$
$6\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2\omega_{21} - 6v_1^2\omega_9^3\omega_{12}^2\omega_5^2 - 36\omega_{15}\omega_{12}cs^2\omega_{12}^2\omega_{21} + 18\omega_{15}\omega_9^3cs^2\omega_{12}^2\omega_5 - 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2\omega_{21} - 36\omega_9^2cs^2\omega_{12}^2\omega_5\omega_{21} +$
$6v_1^2\omega_9^2\omega_{12}^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}\omega_5 - 6\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5^2 - 36\omega_{15}\omega_9^2cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5\omega_{21} -$
$12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}\omega_5 - 12\omega_{15}v_1^2\omega_9^3\omega_5\omega_{21} + \omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5 - 18\omega_{15}\omega_9^2\omega_{12}^2\omega_5\omega_{21} - 36\omega_{15}\omega_9cs^2\omega_{12}\omega_5^2\omega_{21} +$
$12\omega_{15}\omega_9\omega_{12}^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_5^2 + 54\omega_{15}\omega_9^3cs^2\omega_{12}\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}\omega_5\omega_{21} + 54\omega_{15}\omega_9^3cs^2\omega_{12}^2\omega_5\omega_{21} - 2\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_5^2\omega_{21} -$
$6\omega_{15}\omega_9^3\omega_{12}^2\omega_5 + 36\omega_{15}\omega_9^3cs^2\omega_{12}^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9cs^2\omega_{12}^2\omega_5 + 5\omega_{15}\omega_9^3cs^2\omega_{12}^2\omega_5^2\omega_{21} + 54\omega_{15}\omega_9^3cs^2\omega_{12}\omega_5^2\omega_{21} + 12v_1^2\omega_9^3\omega_{12}^2\omega_5 -$
$12\omega_{15}\omega_{12}^2\omega_5^2\omega_{21} - 6\omega_9^2\omega_{12}^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3cs^2\omega_{12}^2\omega_5 - 12\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{21} + 36\omega_{15}\omega_9^3cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^3\omega_{12}\omega_5^2\omega_{21})\frac{v_1cs^2}{12\omega_{15}\omega_9^3\omega_{12}^2\omega_5^2\omega_{21}}$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2\rho}^{(1),\mathrm{CuLBM1}} = (36cs^2\omega_4^3\omega_1^2 + 6v_1^2\omega_9^2\omega_4^2\omega_1 + 18\omega_9cs^2\omega_4^2\omega_1^2 - 6\omega_9\omega_4^2\omega_1^2 + 36\omega_9^2cs^2\omega_1^2 + 12\omega_9\omega_4^3 + 18\omega_9^2\omega_4\omega_1^2 - 18\omega_9\omega_4^3\omega_1 + v_1^2\omega_9\omega_4^3\omega_1^2 +$
$54\omega_9cs^2\omega_4^3\omega_1 + 6\omega_9\omega_4^3\omega_1^2 - 12v_1^2\omega_9\omega_4^3\omega_1 - 18\omega_9cs^2\omega_4^3\omega_1 - 36\omega_9^2cs^2\omega_4^2 - 36cs^2\omega_4^2\omega_1^2 + 36\omega_9^2cs^2\omega_4^3 + 4v_1^2\omega_9^2\omega_4^2\omega_1^2 + 36\omega_9\omega_9cs^2\omega_4^2\omega_1 -$
$12\omega_9\omega_4^2\omega_1 - 54\omega_9^2cs^2\omega_4\omega_1 - 12v_1^2\omega_9\omega_4^3 - 36cs^2\omega_4^3\omega_1 - 18v_1^2\omega_9\omega_4\omega_1^2 + 18v_1^2\omega_9\omega_4^3\omega_1 + 12\omega_9^2cs^2\omega_4^2 - 12\omega_9^2\omega_1^2 - \omega_9^2\omega_4^2\omega_1 + 12\omega_4^3\omega_1 +$
$12v_1^2\omega_9^2\omega_4^3 - 40\omega_9^2cs^2\omega_4^3\omega_1 - 6\omega_9^2\omega_4^2\omega_1 - 36\omega_9cs^2\omega_4^3 + 6v_1^2\omega_9\omega_4^2\omega_1^2 + 12v_1^2\omega_4^3\omega_1^2 + 12\omega_4^2\omega_1^2 - 12v_1^2\omega_9^2\omega_4^2 - 12v_1^2\omega_4^3\omega_1 - 12\omega_9^2\omega_4^3 + 12v_1^2\omega_9^2\omega_1^2 +$
$5\omega_9^2cs^2\omega_4^3\omega_1^2 - 4\omega_9^2\omega_4^2\omega_1^2 + 12v_1^2\omega_9\omega_4^2\omega_1 + 12\omega_9^2\omega_4^2 - 12\omega_4^3\omega_1^2 - 12v_1^2\omega_4^2\omega_1^2 - 6v_1^2\omega_9\omega_4^3\omega_1^2 + 18\omega_9cs^2\omega_4^2\omega_1 + 12\omega_9\omega_4^2\omega_1)\frac{v_1cs^2}{12\omega_9^2\omega_4^3\omega_1^2}$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2\rho}^{(1),\mathrm{CuLBM2}} = (24v_2^2\omega_3^2\omega_4^2\omega_2^3 - 36\omega_4^2\omega_1^3cs^4\omega_2^2 + 4\omega_3^2\omega_4^2\omega_1^3 - 12\omega_3\omega_4^2\omega_1^3cs^4\omega_2 - 4\omega_3^2\omega_4^2\omega_1\omega_2^2 + 36\omega_3^2\omega_1^2cs^2\omega_2^3 + 3v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^3 +$
$54\omega_4^3\omega_1^3cs^4\omega_2^3 + 324v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 4v_1^2\omega_3^2\omega_4^2\omega_2^3 + 78\omega_3^2\omega_4^2\omega_1cs^4\omega_2^3 - 12v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 9v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 + 24v_2^4\omega_3^2\omega_4^2\omega_1^3 - 4\omega_3^2\omega_4^2\omega_1\omega_2^3 +$
$54\omega_4^2\omega_1^3cs^4\omega_2^3 - 52\omega_3^2\omega_4^2\omega_1^3cs^2 - 84\omega_3\omega_4^2\omega_1cs^4\omega_2^3 + 4\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 - 72\omega_3^2\omega_4^2\omega_1cs^4\omega_2^2 - 324v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 36v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 -$
$102\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2 + 8v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 24\omega_4^2\omega_1^2cs^2\omega_2^3 + 16v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 28v_1^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 36\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 - 30v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 +$
$35\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2 - 20v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 108\omega_3^2\omega_4\omega_1cs^4\omega_2^3cs^2\omega_2^3 + 36v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 4v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 24v_1^2\omega_4^2\omega_1^3cs^2\omega_2^3 -$
$27\omega_3\omega_4^2\omega_1^3cs^4\omega_2^3 + 12v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 16\omega_3^2\omega_4\omega_1cs^2\omega_2^2 + 9\omega_3\omega_4\omega_1^3cs^2\omega_2^3 - 28v_1^2\omega_3^2\omega_4\omega_1cs^2\omega_2^3 + 72\omega_3^2\omega_4\omega_1\omega_2^3 + 4v_1^2\omega_3^2\omega_4\omega_1\omega_2^2 +$
$15\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2 - 36v_1^2\omega_3^2\omega_1^2cs^2\omega_2^3 + 36v_1^2v_2^2\omega_3^2\omega_4^2\omega_2^3 + 4v_1^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 + 60v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 32\omega_3\omega_4^2\omega_1cs^2\omega_2^2 + 49\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 -$
$42v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 216v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 4v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 36\omega_4^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 27v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 18\omega_4^2\omega_1^3cs^2\omega_2^3 -$
$60\omega_4^2\omega_3^2\omega_4^2\omega_2^3 - 48v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 16v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 - 9v_1^2\omega_3\omega_4\omega_1^3cs^2\omega_2^3 + 28\omega_3\omega_4^2\omega_1cs^2\omega_2^3 + 28\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 + 27v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 +$
$36v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 + 66v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 74\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 - 72\omega_4^2\omega_1^3cs^4\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 32v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^3 + 20\omega_3^2\omega_4^2cs^2\omega_2^3 -$
$30v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 12\omega_4^2\omega_1^3cs^2\omega_2^2 + 4\omega_3^2\omega_4^2\omega_2^3 - 36\omega_4^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 4\omega_3\omega_4^2\omega_1^3cs^2\omega_2 + 4v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 108\omega_3^2\omega_1cs^4\omega_2^3 - 48v_2^2\omega_3^2\omega_4^2\omega_1^3 -$
$4v_1^2\omega_3^2\omega_4^2\omega_1^3 - 18\omega_3^2\omega_1^3cs^2\omega_2^3 - 24v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 58\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 + 32v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2 - 4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 24v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^3 - 3\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^3 +$

$16v_1^2\omega_3^2\omega_4^2cs^2\omega_2^3 + 96\omega_3\omega_4^2\omega_1^2cs^4\omega_2^3 + 12v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 12v_1^2\omega_4^2\omega_1^3cs^2\omega_2^2 - 138v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 18v_1^2\omega_3^2\omega_3^3cs^2\omega_2^3 - 119\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^3 + 108\omega_3\omega_4^2\omega_1^2cs^4\omega_2^3 + 18v_1^2\omega_4^2\omega_1^3cs^2\omega_2^3 - 27v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 36\omega_3^2\omega_4\omega_1^2cs^2\omega_2^3 - 25\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 27v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 216v_2^2\omega_3^2\omega_4^2cs^2\omega_2^3 + 9\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 + 4v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 72\omega_3^2\omega_4^2\omega_1^3cs^4 - 27\omega_3^2\omega_4\omega_1^2cs^4\omega_2^3 - 4v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 + 24\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^2)\frac{v_1}{36\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1}$ at $\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = (-24 - 108v_1^2\omega - cs^2\omega^3 - 12\omega^2 + 8cs^2\omega^2 - 18cs^2\omega + 36v_1^2\omega^2 + 72v_1^2 + 12cs^2 + 36\omega)\frac{\rho cs^2}{12\omega^3}$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} =$

$(12\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2 + 18v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 132\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} + 24\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} + 72\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 24\omega_{15}v_1^2\omega_9^3cs^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 - 12\omega_9^3\omega_{12}^2cs^2\omega_5^2 - 24\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3v_2^2cs^2\omega_5^3\omega_{21} + 6\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5\omega_{21} + 72\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3 + 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 18v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3 - 36\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 6\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2 - 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2cs^4\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3v_2^2cs^2\omega_5^2\omega_{21} + 180\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 24\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3\omega_{21} - 18v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3 - 6\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_9^3cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 48\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_{21} - 36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} - 6\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 78\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_9^2cs^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5\omega_{21} - 72\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5^2 - 108\omega_{15}v_1^2\omega_9\omega_{12}^2cs^2\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^2\omega_{21} + 84\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2 - 12\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_{21} + 36v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2 + 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3 - 36\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} - 144\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} + 12\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} + 18v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 108\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} - \omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5\omega_{21} - 18v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3 + 12\omega_{15}\omega_9^2\omega_{12}cs^4\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2 - 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 6\omega_9^3\omega_{12}^2cs^4\omega_5^3 - 42\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}cs^4\omega_5^3 - 84\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} - 54\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3 + 18\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^2 - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3 + 6\omega_{15}\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3 + 72\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_9^3\omega_{12}^2cs^4\omega_5^2 - 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^2 + 36v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 + 36\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_5^3 + 6\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3v_2^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}cs^4\omega_5^3\omega_{21} - 72\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 12\omega_9^3\omega_{12}^2v_2^2\omega_5^2 - 36v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}cs^2\omega_5^2\omega_{21} - 6\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2 - 4\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} + 60\omega_{15}v_1^2\omega_9^2\omega_{12}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^2 + 18\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 12\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} + 60\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 + 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}cs^4\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3 + 36\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2 + 6\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 36\omega_{15}v_1^2\omega_9\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 6\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3)\frac{\rho}{12\omega_{15}\omega_9^3\omega_{12}^2\omega_5^3\omega_{21}}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = (-12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} + 18v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 18v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} - \omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} - 144\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 72\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3 - 36\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3 - 42\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} + 12\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2 + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^2 + 12\omega_{15}\omega_9\omega_{12}cs^4\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5\omega_{21} - 24\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} - 84\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5\omega_{21} + 72\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3 + 6\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3 + 6\omega_9^2\omega_{12}^2v_2^2\omega_5^3 - 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3 - 6\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3 + 36\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 36\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2 - 36\omega_{15}v_1^2\omega_9\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 72\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9\omega_{12}cs^4\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 12\omega_{15}\omega_9^3v_2^2cs^2\omega_5^3\omega_{21} + 60\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 36v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}cs^4\omega_5^3 + 12\omega_{15}\omega_9^3v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^2 - 4\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^2\omega_{21} - 6\omega_9^2\omega_{12}^2cs^4\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} + 24\omega_{15}\omega_9\omega_{12}v_2^2\omega_5\omega_{21} - 12\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5\omega_{21} - 72\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5\omega_{21} + 60\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^3\omega_{12}^2v_2^2cs^2\omega_5^3 + 12\omega_9^3\omega_{12}^2cs^4\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 36\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3 + 36\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_5^3 + 24\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} - 24v_1^2\omega_9^3cs^2\omega_5^3\omega_{21} + 12\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 12\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 108\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^2\omega_{21} - 132\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^2\omega_{21} - 18v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} - 18v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3 + 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3 + 12\omega_{15}\omega_9^3v_2^2cs^2\omega_5^3\omega_{21} + 6\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3 + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21} - 48\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_{21} - 24\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} - 54\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 - 6\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3 - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^2 - 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^2 + 36v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 - 12\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_{21} + 36v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 + 18\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5\omega_{21} - 18\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 24\omega_{15}\omega_9^3\omega_{12}cs^4\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^2 - 12\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2cs^4\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^3v_2^2cs^2\omega_5^2\omega_{21} + 180\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} - 72\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 12\omega_9^3\omega_{12}^2v_2^2\omega_5^2 - 12\omega_9^3\omega_{12}^2cs^2\omega_5^2 - 6\omega_9^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 6\omega_9^2\omega_{12}^2cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 + 78\omega_{15}v_1^2\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^3\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2cs^4\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^2\omega_{21} + 24\omega_{15}v_1^2\omega_9^3cs^2\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 18\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^3 - 12\omega_{15}\omega_9^3\omega_{12}v_2^2cs^2\omega_5^3 + 24\omega_{15}v_1^2\omega_9^2cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^3v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5^2 + 84\omega_{15}v_1^2\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9^3\omega_{12}^2v_2^2\omega_5^2 - 12\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3 - 12\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_5^3 + 6\omega_{15}\omega_9^3\omega_{12}^2cs^4\omega_5^3 + 6\omega_9^3\omega_{12}^2v_2^2\omega_5^3 + 6\omega_9^3\omega_{12}^2cs^2\omega_5^3 + 36\omega_{15}v_1^2\omega_9\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 108\omega_{15}v_1^2\omega_9\omega_{12}^2cs^2\omega_5^2\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^2\omega_{21})\frac{\rho}{12\omega_{15}\omega_9^3\omega_{12}^2\omega_5^3\omega_{21}}$

$$C^{(1),\text{CLBM1}}_{\mathrm{D}^2_x\mathrm{D}^2_y v_1} =$$

$$(-12\omega_{15}\omega_9^2 cs^2\omega_5^3 + 36\omega_{15}v_1^2\omega_9^2\omega_5\omega_{21} - 24\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}cs^2\omega_5\omega_{21} - 6\omega_9^2\omega_{12}cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_5^3 + 18\omega_{15}\omega_9^2\omega_{12}cs^2\omega_5\omega_{21} +$$
$$24\omega_{15}\omega_9^2\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_9\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2 cs^2\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3 + 12\omega_{15}\omega_9 cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}\omega_5^2\omega_{21} + 12\omega_9^2\omega_{12}cs^2\omega_5^2 + 36\omega_{15}v_1^2\omega_9\omega_5^3 +$$
$$6\omega_9^2\omega_{12}\omega_5^3 + 12\omega_{15}\omega_9^2 cs^2\omega_5\omega_{21} + 6\omega_{15}\omega_9\omega_{12}\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5^3 - 6\omega_{15}\omega_{12}\omega_5^3\omega_{21} - 12\omega_9^2\omega_{12}\omega_5^2 - 36\omega_{15}v_1^2\omega_9\omega_{12}\omega_5\omega_{21} -$$
$$12\omega_{15}\omega_9 cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5^2 - 36\omega_{15}v_1^2\omega_9\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_9^2\omega_5^3 + 72\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^3 -$$
$$12\omega_{15}\omega_9^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}cs^2\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3 + 18v_1^2\omega_9\omega_{12}\omega_5^3\omega_{21} - \omega_{15}\omega_9^2\omega_{12}cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2 cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^2\omega_5^3 -$$
$$24\omega_{15}\omega_9^2 cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_9\omega_{12}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}\omega_5^2 + 12\omega_{15}\omega_9\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}cs^2\omega_5^3 - 12\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} +$$
$$36\omega_{15}v_1^2\omega_9\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_5\omega_{21} - 36v_1^2\omega_9\omega_{12}\omega_5^2\omega_{21} - 4\omega_{15}\omega_9^2\omega_{12}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_5^3 + 6\omega_{15}\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9 cs^2\omega_5^3 -$$
$$18\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^3\omega_{21} + 36v_1^2\omega_9^2\omega_{12}\omega_5^2 - 72v_1^2\omega_9^2\omega_5^2\omega_{21} + 6\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_5^2 - 12\omega_{15}\omega_9\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_5\omega_{21} +$$
$$12\omega_{15}\omega_9^2 cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{21} - 6\omega_9\omega_{12}\omega_5^2\omega_{21} + 24\omega_{15}\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_{12}\omega_5^2\omega_{21} - 18v_1^2\omega_9^2\omega_{12}\omega_5^3)\frac{\rho cs^2}{12\omega_{15}\omega_9^2\omega_{12}\omega_5^3\omega_{21}}$$

$$C^{(1),\text{CLBM2}}_{\mathrm{D}^2_x\mathrm{D}^2_y v_1} = (-12\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_5^2 + 36\omega_{15}v_1^2\omega_9^2\omega_5\omega_{21} - 24\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9 cs^2\omega_5^2\omega_{21} + 18\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_5\omega_{21} - 12\omega_{15}\omega_9\omega_5^3 -$$
$$12\omega_{15}\omega_9 cs^2\omega_{12}\omega_5\omega_{21} + 24\omega_{15}\omega_9^2\omega_5\omega_{21} + 36\omega_{15}v_1^2\omega_9\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_5^3 + 12\omega_{15}\omega_{12}\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_9\omega_5^3 + 6\omega_9^2\omega_{12}\omega_5^3 +$$
$$6\omega_{15}\omega_9\omega_{12}\omega_5^2 + 12\omega_{15}\omega_9 cs^2\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9 cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5^3 - 6\omega_{15}\omega_{12}\omega_5^3\omega_{21} - 12\omega_9^2\omega_{12}\omega_5^2 -$$
$$36\omega_{15}v_1^2\omega_9\omega_{12}\omega_5\omega_{21} - 12\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_{21} + 12\omega_{15}\omega_9^2 cs^2\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_5^2 - 36\omega_{15}v_1^2\omega_9\omega_5^3\omega_{21} - 12\omega_{15}\omega_9\omega_5^3\omega_{21} - 6\omega_9^2 cs^2\omega_{12}\omega_5^3 -$$
$$12\omega_9 cs^2\omega_{12}\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_9^2\omega_5^2 + 72\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^3 - 24\omega_{15}\omega_9^2 cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9 cs^2\omega_{12}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}\omega_5^3 +$$
$$18v_1^2\omega_9\omega_{12}\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2 cs^2\omega_5^3 + 18\omega_{15}v_1^2\omega_{12}\omega_5^3\omega_{21} + 12\omega_9^2 cs^2\omega_{12}\omega_5 - 12\omega_{15}cs^2\omega_{12}\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9^2\omega_5^3 - \omega_{15}\omega_9^2 cs^2\omega_{12}\omega_5^3\omega_{21} +$$
$$12\omega_9\omega_{12}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}\omega_5^2 + 12\omega_{15}\omega_9\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^2 cs^2\omega_5^2 - 6\omega_{15}\omega_9 cs^2\omega_{12}\omega_5^3 + 36\omega_{15}v_1^2\omega_9\omega_5^3\omega_{21} - 12\omega_{15}\omega_9\omega_5\omega_{21} +$$
$$24\omega_{15}\omega_9 cs^2\omega_{12}\omega_5^2\omega_{21} - 36v_1^2\omega_9\omega_{12}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_5^3 + 12\omega_{15}\omega_9^2 cs^2\omega_5^2\omega_{21} + 6\omega_9 cs^2\omega_{12}\omega_5^3\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^3\omega_{21} + 36v_1^2\omega_9^2\omega_{12}\omega_5^2 -$$
$$72\omega_{15}v_1^2\omega_9\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_5^2 - 12\omega_{15}\omega_9\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_5\omega_{21} - 4\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_5^2\omega_{21} - 6\omega_9\omega_{12}\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_{12}\omega_5^2\omega_{21} -$$
$$18v_1^2\omega_9^2\omega_{12}\omega_5^3 + 6\omega_{15}cs^2\omega_{12}\omega_5^3\omega_{21})\frac{\rho cs^2}{12\omega_{15}\omega_9^2\omega_{12}\omega_5^3\omega_{21}}$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}^2_x\mathrm{D}^2_y v_1} = (72v_1^2\omega_4\omega_1^2 - 4\omega_9 cs^2\omega_4^2\omega_1^2 + 12cs^2\omega_4^2\omega_1 - 72v_1^2\omega_4\omega_1^3 - 36v_1^2\omega_9\omega_1^2 - 36v_1^2\omega_9\omega_4\omega_1 - \omega_9 cs^2\omega_4^2\omega_1^3 + 36v_1^2\omega_9\omega_4\omega_1^2 - 24cs^2\omega_4^2\omega_1^2 -$$
$$24\omega_4\omega_1^2 + 18\omega_9 cs^2\omega_4^2\omega_1 + 12cs^2\omega_1^3 + 12\omega_9\omega_1^2 + 24\omega_4\omega_1^3 + 12cs^2\omega_4^2\omega_1^3 - 12\omega_9 cs^2\omega_4^2 - 12\omega_9 cs^2\omega_4\omega_1 + 12\omega_9\omega_4\omega_1 + 36v_1^2\omega_4^2\omega_1 - 12\omega_4^2\omega_1^3 -$$
$$24cs^2\omega_4\omega_1^3 + 24cs^2\omega_4\omega_1^2 + 24\omega_4^2\omega_1^2 + 36v_1^2\omega_1^3 - 12\omega_4^2\omega_1 + 36v_1^2\omega_4^2\omega_1^3 - 12\omega_1^3 - 72v_1^2\omega_4^2\omega_1^2 - 12\omega_9 cs^2\omega_1^2 + 12\omega_9 cs^2\omega_4\omega_1^2 - 12\omega_9\omega_4\omega_1^2)\frac{\rho cs^2}{12\omega_9\omega_4^2\omega_1^3}$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}^2_x\mathrm{D}^2_y v_1} = (18\omega_3^2\omega_4\omega_1^3 cs^2\omega_2 + v_1^4\omega_3^2\omega_4\omega_1^3\omega_2^2 - 96v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 + 32\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 - 4\omega_3^2\omega_4\omega_1^3\omega_2 + 18v_2^2\omega_4\omega_1^2\omega_2^3 - 126v_1^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 +$$
$$72\omega_3^2\omega_1^2 cs^2\omega_2^3 - v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 28\omega_3^2\omega_4\omega_1^2 cs^4\omega_2 + 66v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 + 12v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 - 8\omega_3\omega_4\omega_1 cs^2\omega_2^3 - 12v_2^2\omega_3^2\omega_4\omega_1 cs^2\omega_2 + 18\omega_3^2\omega_1^3 cs^4\omega_2^3 -$$
$$18v_2^2\omega_3\omega_1^2\omega_2^3 + 72v_1^2 v_2^2\omega_3^2\omega_4\omega_1^3 + 8\omega_3^2\omega_4\omega_1^2\omega_2^2 - 6v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 18\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 + 132v_1^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 - 9v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + 18v_2^4\omega_3^2\omega_1^3\omega_2^2 -$$
$$18v_2^2\omega_3^2\omega_1\omega_2^2 - 8\omega_3\omega_4\omega_1^3 cs^2\omega_2 + 16\omega_3^2\omega_4\omega_1^3 cs^4 + 6v_2^2\omega_3\omega_4\omega_1\omega_2^2 - 6v_1^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 + 12v_1^2\omega_3^2\omega_4\omega_1^3\omega_2 + 9v_2^4\omega_3^2\omega_4\omega_1^3\omega_2^2 - 108v_2^2\omega_3\omega_4 cs^2\omega_2^3 +$$
$$36\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 - 144v_1^2 v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 - 30v_2^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 - 24v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 - 48v_2^2\omega_3^2\omega_4\omega_1^3 - 9v_2^4\omega_3^2\omega_4\omega_1^3 - 14\omega_3^2\omega_4\omega_1 cs^4\omega_2^3 -$$
$$36\omega_3^4\omega_3^2\omega_4\omega_1^3\omega_2 + 4\omega_3^2\omega_4\omega_2^3 - 4\omega_3^2\omega_4\omega_1^2\omega_2 - 12v_1^2\omega_3^2\omega_4\omega_1^3 + 56\omega_3\omega_4\omega_1^3 cs^4\omega_2^2 + 54v_2^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 + 66v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + 9v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^3 -$$
$$54v_2^2\omega_3^2\omega_1^2 cs^2\omega_2^3 - 18v_2^4\omega_3^2\omega_1^2\omega_2^3 - 54v_2^2\omega_3\omega_1^3 cs^2\omega_2^2 + 12v_1^2\omega_3^2\omega_4\omega_1^3\omega_2 + 72\omega_3^2\omega_1 cs^4\omega_2^3 + v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 24v_2^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 - 216v_1^2\omega_3^2\omega_1^2 cs^2\omega_2^3 +$$
$$28\omega_3^2\omega_4\omega_1^2 cs^4\omega_2^2 - 48v_1^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2 - 18v_2^4\omega_3^2\omega_4\omega_1^2\omega_2 - 90v_1^2 v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 - 18\omega_3\omega_4\omega_1^3 cs^2\omega_2^3 + 18v_2^2\omega_3\omega_1^3\omega_2 - 48v_2^4\omega_3^2\omega_4\omega_2^3 - 54v_2^2\omega_4\omega_1^3 cs^2\omega_2^2 +$$
$$28\omega_3^2\omega_4 cs^2\omega_2^3 - 18v_2^2\omega_3^2\omega_1^2\omega_2 - 54v_2^2\omega_3^2\omega_1^2 cs^2\omega_2^2 - 42v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 - v_1^4\omega_3^2\omega_4\omega_1^2\omega_2^3 - 2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^2 - 36\omega_3\omega_4\omega_1^2 cs^4\omega_2^3 - 90v_2^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 -$$
$$18v_2^4\omega_4\omega_1^3\omega_2^2 + 12v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 - 18v_2^2\omega_4\omega_1^2\omega_2^3 + 12v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 + 150v_2^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 + 76\omega_3^2\omega_4\omega_1 cs^4\omega_2^3 - 90v_1^2 v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + 12v_1^2\omega_3^2\omega_4\omega_1^3 cs^2 +$$
$$108v_1^2 v_2^2\omega_3^2\omega_4\omega_2^3 + 8\omega_3\omega_4\omega_1^3 cs^4\omega_2 - 90v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 18v_2^2\omega_3\omega_1^2\omega_2^3 + 54v_2^2\omega_3^2\omega_1 cs^2\omega_2^3 - 36v_2^2\omega_3\omega_4\omega_1^3 cs^2\omega_2 + 36v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 - 18v_2^2\omega_3^2\omega_1^3\omega_2^2 +$$
$$180v_1^2 v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 174v_2^2\omega_3\omega_4\omega_1 cs^2\omega_2 + 6v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 - 14\omega_3^2\omega_4\omega_1 cs^4\omega_2 + 36v_2^4\omega_3\omega_4\omega_1^3\omega_2^2 + 216v_1^2\omega_3^2\omega_1 cs^2\omega_2^3 - 12v_2^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 -$$
$$28\omega_3^2\omega_4\omega_1 cs^4\omega_2^3 + 54v_2^4\omega_3^2\omega_4\omega_1\omega_2^3 + 12v_1^2\omega_3^2\omega_4\omega_1\omega_2^2 - 72\omega_3^2\omega_1^2 cs^4\omega_2^3 - 36v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 8\omega_3\omega_4\omega_1 cs^4\omega_2^3 + 132v_2^2\omega_3^2\omega_4\omega_1 cs^2 -$$
$$18v_2^2\omega_3\omega_4\omega_1 cs^2\omega_2^3 + 32\omega_3^2\omega_4\omega_1^2 cs^2\omega_2 - 24v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 18v_2^4\omega_3^2\omega_1\omega_2^3 - 18\omega_3^2\omega_1^3 cs^2\omega_2^3 + 54v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^3 + 12v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 72\omega_3^2\omega_1 cs^2\omega_2^3 +$$
$$24v_2^4\omega_3^2\omega_4\omega_1^3 + 54v_2^2\omega_3\omega_1^2 cs^2\omega_2^3 + 36v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 36\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 + 54v_2^2\omega_3^2\omega_1^3 cs^2\omega_2^2 + 60v_1^2\omega_3\omega_4\omega_1 cs^2\omega_2^3 - 4\omega_3^2\omega_4\omega_1\omega_2^2 - 68\omega_3^2\omega_4 cs^4\omega_2^3 +$$
$$18\omega_3\omega_4\omega_1^3 cs^4\omega_2^3 - 6v_1^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2 + 2\omega_3^2\omega_4\omega_1^3 cs^4\omega_2^2 - 36v_2^4\omega_3\omega_4\omega_1^2\omega_2^3 - 36v_1^2 v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 + 54v_2^2\omega_3^2\omega_1^3 cs^2\omega_2^3 + 30v_2^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^2 +$$
$$18v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 12v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 84v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 + 36\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 90v_2^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 4\omega_3^2\omega_4\omega_1^3 - 36\omega_3\omega_4\omega_1^3 cs^4\omega_2^2 +$$
$$24v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2 - 20\omega_3^2\omega_4\omega_1^3 cs^2 - 18v_2^4\omega_3^2\omega_1^3\omega_2^2 + 12v_2^2\omega_3^2\omega_4\omega_2^3 + 2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 - 6v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 4\omega_3^2\omega_4\omega_1\omega_2^3 + 18v_2^2\omega_4\omega_1^2\omega_2^2 +$$
$$48v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 + 54v_2^2\omega_4\omega_1^2 cs^2\omega_2^3 - 56\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 + 18v_2^2\omega_3^2\omega_1^2\omega_2^2 - 12v_1^2\omega_3^2\omega_4\omega_2^3 - 3\omega_3^2\omega_4\omega_1^3 cs^4\omega_2^3 + 6v_2^4\omega_3\omega_4\omega_1^2\omega_2^2)\frac{\rho}{36\omega_3^2\omega_4\omega_1^3\omega_2^3}$$

coefficient $C^{(1)}_{\mathrm{D}^2_x\mathrm{D}^2_y v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}^2_x\mathrm{D}^2_y v_2} = 0$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}^2_x\mathrm{D}^2_y v_2} = (-4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^2 - \omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2 -$$
$$4\omega_{15}^2\omega_9\omega_{12}^2 cs^2\omega_5\omega_{21} + 26\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 9\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 3\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$$
$$4\omega_{15}^2 v_1^2\omega_9^3\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2 v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 2\omega_{15}^2 v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 - \omega_{15}^2 v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} -$$
$$6\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 2\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}\omega_5^3 + 2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^3 + 13\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 5\omega_{15}^2\omega_9\omega\omega_{12}\omega_{10}\omega_5^3\omega_{21} -$$
$$4\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3 - 24\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 7\omega_{15}^2 v_1^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 3\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2 v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 -$$
$$4\omega_{15}^2 v_1^2\omega_9^3\omega_{10}\omega_5^2\omega_{21} - \omega_{15}^2\omega_9^2 v_1^2\omega_{10}cs^2\omega_5^2\omega_{21} - 2\omega_{15}\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^3 - 8\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 8\omega_{15}^2\omega_9^3\omega_{10}cs^2\omega_5^3\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^3 +$$
$$3\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5\omega_{21} - 2\omega_{15}^2 v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 8\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 4\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^2 -$$

$$2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 4\omega_{15}^2v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2 - 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^3 - 16\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_{21} - 4\omega_{15}^2v_1^2\omega_9^2\omega_{10}\omega_5^3\omega_{21} -$$
$$4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2 + 2\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 15\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + \omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 8\omega_{15}^2\omega_9^3\omega_{10}cs^2\omega_5^3\omega_{21} - 4\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 -$$
$$4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2 + 8\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 4\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} - 5\omega_{15}^2v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}^2\omega_9^3\omega_{10}\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 -$$
$$5\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 7\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^2 - 6\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} + \omega_{15}^2v_1^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} +$$
$$4\omega_{15}^2\omega_9^2\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2 + 2\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3 + 4\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 4\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + \omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} -$$
$$4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^3 + 4\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2 + 9\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} - \omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} +$$
$$11\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 2\omega_{15}^2v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 2\omega_{15}^2v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 2\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_9^3\omega_{10}\omega_5^3\omega_{21} +$$
$$4\omega_{15}^2v_1^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 8\omega_{15}^2\omega_9^3\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} - 3\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$$
$$2\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 4\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 - 2\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 8\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 2\omega_{15}^3\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} -$$
$$2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3 - 2\omega_9^3\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 - 3\omega_{15}^2v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5\omega_5\omega_{21}) \frac{\rho v_1 v_2}{2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21}}$$

$C^{(1),\text{MRT2}}_{\text{D}_x^2\text{D}_y^2 v_2} = (-\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 8\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2 +$
$8\omega_{15}^2\omega_9^3cs^2\omega_{10}\omega_5^3\omega_{21} - 5\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} - 9\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 4\omega_{15}^2v_1^2\omega_9^3\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2v_1^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} -$
$2\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3 - \omega_{15}^2v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 4\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^2\omega_{21} - 2\omega_{15}^2v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3 - 6\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}\omega_5^3 -$
$5\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 + 7\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 3\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 2\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_5^3\omega_{21} + 2\omega_{15}^2v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3 -$
$4\omega_{15}^2v_1^2\omega_9^3\omega_{10}\omega_5^2\omega_{21} + 11\omega_{15}^2\omega_9^3\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5\omega_{21} - 8\omega_{15}^2\omega_9^3cs^2\omega_{10}\omega_5^2\omega_{21} - 4\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5^2\omega_{21} +$
$4\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 + 3\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 4\omega_{15}^2v_1^2\omega_9^3\omega_{12}cs^2\omega_{10}\omega_5^2 - 2\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5\omega_{21} - 2\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} -$
$4\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2 - 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^3 - 4\omega_{15}^2v_1^2\omega_9\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^3 - 2\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} +$
$2\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_5^2\omega_{21} - 8\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^2\omega_{21} + \omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 4\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 - 4\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2 - 2\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^3 -$
$5\omega_{15}^2v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 3\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}^2\omega_9^3\omega_{10}\omega_5^3\omega_{21} - 2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3 + 26\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5\omega_{21} -$
$7\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_5\omega_{21} + 13\omega_{15}^2\omega_9^3\omega_{12}cs^2\omega_{10}\omega_5^3\omega_{21} + \omega_{15}^2v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^2 + 4\omega_{15}^2\omega_9^3\omega_{10}\omega_5^3\omega_{21} +$
$4\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2 + 2\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3 - 16\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}\omega_5^3 - 6\omega_{15}^2\omega_9^3\omega_{12}cs^2\omega_{10}\omega_5\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$
$2\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}\omega_5^2\omega_{21} + \omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5\omega_{21} + 4\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2 + 9\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^2\omega_{21} -$
$2\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} - \omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 8\omega_{15}^2\omega_9\omega_9\omega_{12}cs^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^3 -$
$\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_9^3\omega_{10}\omega_5^3\omega_{21} + 4\omega_{15}^2v_1^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 8\omega_{15}^2\omega_9^3cs^2\omega_{10}\omega_5^3\omega_{21} - 3\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$
$2\omega_{15}\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 4\omega_{15}^2v_1^2\omega_9^3\omega_{12}\omega_{10}\omega_5^3 - 2\omega_{15}v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 2\omega_{15}^2\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^3 + 8\omega_{15}\omega_9^3\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} -$
$15\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}\omega_5\omega_{21} + 2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3 - 3\omega_{15}^2v_1^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_9^3\omega_{12}\omega_{10}\omega_5\omega_{21}) \frac{\rho v_1 v_2}{2\omega_{15}^2\omega_9^3\omega_{12}^2\omega_{10}\omega_5^3\omega_{21}}$

$$C^{(1),\text{CLBM1}}_{\text{D}_x^2\text{D}_y^2 v_2} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x^2\text{D}_y^2 v_2} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_x^2\text{D}_y^2 v_2} = 0$$

$C^{(1),\text{CuLBM2}}_{\text{D}_x^2\text{D}_y^2 v_2} =$
$(-9v_1^2\omega_3\omega_1^3\omega_2 + 36\omega_1^2 cs^2\omega_2^3 + 6\omega_1\omega_2^3 + 42\omega_3\omega_1^3 cs^2\omega_2^2 - 50v_2^2\omega_3\omega_1^2\omega_2^3 - 75v_2^2\omega_3\omega_1^3\omega_2 + 18v_1^2\omega_3\omega_1^2\omega_2^2 - 66v_2^2\omega_3\omega_1^2\omega_2^2 - 36\omega_3\omega_1^3 - 114v_2^2\omega_3\omega_2\omega_2^3 +$
$6v_2^2\omega_3\omega_1^2\omega_2 - 6v_1^2\omega_1\omega_2^3 - 60\omega_3\omega_1\omega_2^3 + 108\omega_3\omega_1 cs^2\omega_2^3 - 12v_1^2\omega_3\omega_1^2\omega_2 + 84\omega_3\omega_1^3 cs^2 + 12v_1^2\omega_3\omega_1^3 + 50v_2^2\omega_3\omega_1^3\omega_2^2 - 12\omega_3\omega_1\omega_2^2 - 108\omega_3\omega_1^3 cs^2\omega_2 +$
$42\omega_3\omega_2^3 - 42\omega_3\omega_1^2 cs^2\omega_2^3 + 12v_1^2\omega_1^2\omega_2^2 + 12\omega_3\omega_1^2\omega_2^2 - 6v_1^2\omega_1^3\omega_2 + 23\omega_3\omega_1^2\omega_2^3 + 48\omega_3\omega_1^3\omega_2 - 12\omega_1^2\omega_2^2 - 18\omega_1^3 cs^2\omega_2 - 23\omega_3\omega_1^3\omega_2 - 18\omega_3\omega_1^2 cs^2\omega_2 +$
$12v_1^2\omega_3\omega_2^3 - 12v_1^2\omega_3\omega_1\omega_2^2 - 66\omega_3 cs^2\omega_2^3 + 60v_2^2\omega_3\omega_1\omega_2^2 - 9v_1^2\omega_3\omega_1\omega_2^3 - 18\omega_1 cs^2\omega_2^3 + 6\omega_1^3\omega_2 + 48v_2^2\omega_3\omega_1^3 + 6\omega_3\omega_1^2\omega_2 + 141v_2^2\omega_3\omega_1\omega_2^3) \frac{\rho v_1 v_2}{18\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\text{D}_x\text{D}_y^3\rho}$ at $\frac{\partial^4\rho}{\partial x_1 \partial x_2^3}$:

$$C^{(1),\text{SRT}}_{\text{D}_x\text{D}_y^3\rho} = (24 + 3cs^2\omega^3 + 14\omega^2 - 42cs^2\omega^2 - \omega^3 + 108cs^2\omega + v_2^2\omega^3 - 72cs^2 - 14v_2^2\omega^2 + 36v_2^2\omega - 36\omega - 24v_2^2) \frac{v_2 cs^2}{12\omega^3}$$

$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}_y^3\rho} = (12\omega_{15}^2\omega_9\omega_{10}cs^2\omega_5^3 - 45\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}^2 cs^4\omega_5^3 - 6\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} -$
$42\omega_{15}\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_5^3\omega_{21} - 12\omega_{15}^2v_1^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 9\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + \omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 15\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} +$
$27\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 15\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}^2\omega_5 - 18\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 24\omega_{15}^2v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} -$
$6\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 6\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 3\omega_{15}\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^2 + 12\omega_{15}^2v_1^2 v_2^2\omega_{10}\omega_5^3 -$
$12\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}^2\omega_{10}cs^4\omega_5^3\omega_{21} - 36\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_5^2 - 36\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2 + 36\omega_{15}^2v_1^2\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} -$
$12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5\omega_{21} + 156\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{10}cs^2\omega_5^3 + 18v_1^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} -$
$6\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 36\omega_{15}^2\omega_9\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} + 18\omega_{15}^2v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3 + 18\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_5^3 -$
$6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^2 + 36\omega_{15}^2\omega_{10}cs^4\omega_5^3 - 12\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3 + 24\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} -$
$18\omega_{15}\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2v_1^2\omega_9\omega_{10}\omega_5^2 + 6\omega_{15}^2v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 5\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} -$
$12\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 54\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} - 48\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 108\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} -$
$18\omega_{15}\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_5^3 - 12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^2 + 12\omega_{15}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 24\omega_{15}^2v_1^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 144\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} +$
$6\omega_{15}^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 15\omega_{15}\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_5^3\omega_{21} - 24\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{10}cs^2\omega_5^3\omega_{21} +$
$18\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5\omega_{21} - 96\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_{21} - 18\omega_{15}^2v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3 -$
$36\omega_{15}^2\omega_9\omega_{10}cs^4\omega_5^2\omega_{21} - 36v_1^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 36\omega_{15}\omega_9\omega_{12}\omega_{10}^2 cs^4\omega_5^3 - 18\omega_{15}^2v_1^2\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 9\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} +$

$$48\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^2 \omega_{21} - 72\omega_{15}^2 v_1^2 \omega_{12} \omega_{10}^2 cs^2 \omega_5^2 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^2 \omega_{21} - 36\omega_{15}^2 v_1^2 \omega_{10} cs^2 \omega_5^2 \omega_{21}^3 - 18\omega_{15}^2 v_1^2 \omega_{12} \omega_{10} cs^2 \omega_5^2 \omega_{21}^3 +$$
$$36\omega_{15}^2 \omega_9 \omega_{10}^2 cs^4 \omega_5^2 - 6\omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^3 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^3 -$$
$$36\omega_{15}^2 v_1^2 \omega_9 \omega_{10} cs^2 \omega_5^3 \omega_{21} - 5\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} cs^2 \omega_5^3 \omega_{21} + 3\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} cs^4 \omega_5^3 \omega_{21} - 12\omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^3 - 6v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 \omega_{21} +$$
$$18\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5^3 \omega_{21} + 12\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} - 6\omega_{15}^2 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 - 6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 - 3\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 \omega_{21} -$$
$$6\omega_{15}^2 v_1^2 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 + 6\omega_{15}^2 \omega_{12} \omega_{10}^2 cs^2 \omega_5^3 - 36\omega_{15}^2 \omega_9 \omega_{10} cs^4 \omega_5^3 + 12\omega_{15} \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5 \omega_{21} - 12v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^2 \omega_{21} +$$
$$12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_5^2 \omega_{21} + 6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_5^3 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5 \omega_{21} - 12\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5^3 \omega_{21} + 12\omega_{15}^2 v_1^2 \omega_9 \omega_{10} \omega_5^2 \omega_{21} -$$
$$36\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} cs^4 \omega_5 \omega_{21} + 24\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5 \omega_{21} + 72\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5 \omega_{21} - 24\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5 \omega_{21} + 6\omega_9 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 \omega_{21} +$$
$$12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5 + 24\omega_{15} v_1^2 \omega_{12} \omega_{10}^2 \omega_5^2 \omega_{21} + 6\omega_{15}^2 v_1^2 \omega_{12} \omega_{10}^2 \omega_5^3 - 72\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5 \omega_{21} + 12\omega_{15} \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^2 +$$
$$18\omega_{15} \omega_9 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5^2 \omega_{21} - 6\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5^3 \omega_{21} + 12v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^2 \omega_{21} - 36\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5^2 \omega_{21} + 36\omega_{15}^2 v_1^2 \omega_9 \omega_{10} cs^2 \omega_5^3 \omega_{21} +$$
$$12\omega_{15}^2 v_1^2 \omega_{10} \omega_5^3 \omega_{21} - 6\omega_9 \omega_{12} \omega_{10}^2 cs^4 \omega_5^3 \omega_{21} - 60\omega_{15}^2 \omega_9 \omega_{12} \omega_{10}^2 cs^4 \omega_5^3 \omega_{21} + 18\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} cs^2 \omega_5^3 \omega_{21} - 36\omega_{15}^2 v_1^2 \omega_9 \omega_{10} cs^2 \omega_5^3 -$$
$$12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 - \omega_{15}^2 \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^3 \omega_{21} - 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5^2 + 12\omega_{15}^2 \omega_9 v_2^2 \omega_{10}^2 cs^2 \omega_5^3 \omega_{21} + 12\omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^2 \omega_{21} +$$
$$36\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^2 + 72\omega_{15}^2 v_1^2 \omega_{12} \omega_{10} cs^2 \omega_5^2 \omega_{21} - 12\omega_{15} \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^2 - 15\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 36\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 \omega_{21} -$$
$$12\omega_{15}^2 \omega_9 v_2^2 \omega_{10}^2 cs^2 \omega_5^3 + 36\omega_{15} v_1^2 \omega_{12} \omega_{10}^2 cs^2 \omega_5^3 \omega_{21} + 6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 + 12\omega_{15} \omega_9 \omega_{12} \omega_{10}^2 cs^4 \omega_5 \omega_{21} - 12\omega_{15} v_1^2 \omega_{12} \omega_{10}^2 \omega_5^3 \omega_{21} -$$
$$12\omega_{15}^2 v_1^2 \omega_9 \omega_{10} \omega_5^3 \omega_{21} - 12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_5^2 \omega_{21} + 12\omega_{15}^2 v_2^2 \omega_{10}^2 cs^2 \omega_5^3 - 12\omega_9 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5^2 \omega_{21} + 36\omega_{15}^2 v_1^2 \omega_{10}^2 cs^2 \omega_5^3 - 12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 +$$
$$12\omega_{15} \omega_9 v_2^2 \omega_{10}^2 cs^2 \omega_5^2 - 6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_5^3 \omega_{21} + 6\omega_{15} \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^3 + 6v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5 \omega_{21} -$$
$$18\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 cs^2 \omega_5^3 - 12\omega_{15}^2 v_1^2 \omega_{10}^2 \omega_5^3 + 36\omega_{15} v_1^2 \omega_9 \omega_{10}^2 cs^2 \omega_5^2 + 6\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 + 6\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3) \dfrac{v_2}{12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 \omega_{21}}$$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = (-12\omega_{15}^2 \omega_9 v_2^2 cs^2 \omega_{10} \omega_5^2 \omega_{21} + 12\omega_{15}^2 v_2^2 cs^2 \omega_{10}^2 \omega_5^3 - 6\omega_{15}^2 v_1^2 \omega_{12} v_2^2 \omega_{10} \omega_5^3 \omega_{21} - 18\omega_{15}^2 v_1^2 \omega_{12} cs^2 \omega_{10} \omega_5^3 \omega_{21} +$

$36\omega_{15}^2 v_1^2 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} + 12\omega_{15} v_1^2 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 36\omega_{15}^2 v_1^2 cs^2 \omega_{10} \omega_5^3 \omega_{21} - 12\omega_{15}^2 v_1^2 v_2^2 \omega_{10} \omega_5^3 \omega_{21} - 9\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5^3 \omega_{21} -$

$\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 18\omega_{15}^2 \omega_{12} cs^4 \omega_{10}^2 \omega_5^3 + 15\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 \omega_{21} + 12\omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^2 \omega_{21} + 12\omega_{15}^2 v_1^2 \omega_9 v_2^2 \omega_{10}^2 \omega_5^2 +$

$36\omega_{15}^2 v_1^2 \omega_9 cs^2 \omega_{10}^2 \omega_5^2 - 42\omega_{15} \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^2 \omega_{21} + 6\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^3 - 24\omega_{15} v_1^2 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} - 36\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^2 +$

$54\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10} \omega_5^2 \omega_{21} - 18\omega_{15} v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 - 6\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 + 6\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^3 \omega_{21} + 18\omega_{15} v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5^3 \omega_{21} +$

$6\omega_{15} \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 - 5\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10} \omega_5^3 \omega_{21} + 18\omega_{15} \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^2 \omega_{21} - 36\omega_{15}^2 v_1^2 \omega_9 cs^2 \omega_{10} \omega_5^2 \omega_{21} + 12\omega_{15}^2 v_1^2 v_2^2 \omega_{10}^2 \omega_5^3 -$

$12\omega_{15}^2 v_1^2 \omega_9 v_2^2 \omega_{10}^2 \omega_5^2 \omega_{21} + 36\omega_{15}^2 v_1^2 cs^2 \omega_{10}^2 \omega_5^3 + 12\omega_{15} \omega_9 v_2^2 cs^2 \omega_{10}^2 \omega_5^3 + 18\omega_{15}^2 \omega_{12} cs^4 \omega_{10} \omega_5^3 \omega_{21} + 36\omega_{15}^2 cs^4 \omega_{10}^2 \omega_5^3 - 12\omega_{15} \omega_9 v_2^2 cs^2 \omega_{10}^2 \omega_5^3 -$

$12\omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^2 - 36\omega_{15}^2 \omega_9 cs^4 \omega_{10} \omega_5^2 \omega_{21} - 12\omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^2 + 12\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^2 + 36\omega_{15} v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^2 +$

$18\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^3 + 72\omega_{15} v_1^2 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 36\omega_{15}^2 v_1^2 \omega_9 cs^2 \omega_{10}^2 \omega_5^3 - 12\omega_{15}^2 v_1^2 \omega_9 v_2^2 \omega_{10}^2 \omega_5^3 + 24\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 \omega_{21} -$

$12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^2 - 12\omega_{15}^2 v_2^2 cs^2 \omega_{10} \omega_5^3 \omega_{21} + 156\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5 \omega_{21} - 3\omega_{15} \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} + 18\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10} \omega_5^2 \omega_{21} +$

$12\omega_{15}^2 v_1^2 \omega_9 v_2^2 \omega_{10} \omega_5^3 \omega_{21} - 12\omega_{15}^2 v_1^2 \omega_9 \omega_{10} \omega_5^2 + 36\omega_{15}^2 v_1^2 \omega_9 cs^2 \omega_{10} \omega_5^3 \omega_{21} + 6\omega_{15}^2 v_1^2 \omega_{12} \omega_{10} \omega_5^3 \omega_{21} + 15\omega_{15} \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^3 \omega_{21} -$

$36\omega_{15}^2 v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5 \omega_{21} - 12\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 \omega_{21} - 15\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10} \omega_5^3 \omega_{21} + 6\omega_{15}^2 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 + 12\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^2 +$

$12\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5 \omega_{21} + 36\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} - 6\omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 48\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^2 \omega_{21} + 72\omega_{15}^2 v_1^2 \omega_{12} cs^2 \omega_{10} \omega_5^2 \omega_{21} +$

$24\omega_{15}^2 v_1^2 \omega_{12} v_2^2 \omega_{10} \omega_5^2 \omega_{21} + 12\omega_{15}^2 \omega_9 v_2^2 cs^2 \omega_{10} \omega_5^3 \omega_{21} - 36\omega_{15}^2 cs^4 \omega_{10} \omega_5^3 \omega_{21} - 18\omega_{15} \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^3 - 24\omega_{15} v_1^2 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^2 \omega_{21} -$

$72\omega_{15} v_1^2 \omega_{12} cs^2 \omega_{10}^2 \omega_5^2 \omega_{21} - 72\omega_{15} v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5 \omega_{21} - 24\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5 \omega_{21} + 12\omega_{15}^2 v_1^2 \omega_9 \omega_{10}^2 \omega_5^3 +$

$6\omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} + 36\omega_{15}^2 \omega_9 cs^4 \omega_{10}^2 \omega_5^3 \omega_{21} + 36\omega_{15} \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^2 - 12\omega_{15}^2 cs^2 \omega_{10}^2 \omega_5^3 - 6\omega_{15}^2 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^3 + 12\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5 \omega_{21} -$

$96\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5 \omega_{21} - 6\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 + 12\omega_{15} \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^2 \omega_{21} + 144\omega_{15} v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5 \omega_{21} + 9\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^2 \omega_{21} +$

$48\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^2 \omega_{21} + 27\omega_{15}^2 v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5^3 \omega_{21} + 3\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^3 \omega_{21} + 36\omega_{15}^2 \omega_9 cs^4 \omega_{10}^2 \omega_5^2 + 12\omega_{15} \omega_9 cs^4 \omega_{10}^2 \omega_5^2 \omega_{21} -$

$12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^2 \omega_{21} - 6v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 \omega_{21} - 18\omega_{15} \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^2 \omega_{21} + 12\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} - 6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 -$

$18\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5^3 \omega_{21} - 18\omega_{15}^2 v_1^2 \omega_{12} cs^2 \omega_{10} \omega_5^3 - 6\omega_{15}^2 v_1^2 \omega_{12} v_2^2 \omega_{10} \omega_5^3 - 6\omega_{15}^2 \omega_{12} cs^2 \omega_{10} \omega_5^3 \omega_{21} - 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10} \omega_5 \omega_{21} -$

$36\omega_{15}^2 \omega_9 cs^4 \omega_{10}^2 \omega_5 - 36v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^2 \omega_{21} - 12v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^2 \omega_{21} + 12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_5^2 \omega_{21} + 36\omega_{15}^2 v_1^2 \omega_9 \omega_{12} cs^2 \omega_5^2 \omega_{21} +$

$6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_5^3 \omega_{21} + 12\omega_{15}^2 v_1^2 \omega_9 \omega_{10} \omega_5^2 \omega_{21} + 24\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5 \omega_{21} - 24\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5 \omega_{21} - 12\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5 \omega_{21} +$

$12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5^2 + 24\omega_{15} v_1^2 \omega_{12} \omega_{10}^2 \omega_5^2 \omega_{21} + 6\omega_{15}^2 v_1^2 \omega_{12} \omega_{10}^2 \omega_5^3 + 12\omega_{15}^2 \omega_9 cs^2 \omega_{10} \omega_5^2 \omega_{21} - 12\omega_{15}^2 \omega_9 cs^2 \omega_{10}^2 \omega_5^2 - 6\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10} \omega_5^3 \omega_{21} +$

$3\omega_{15} \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} + 12v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^2 \omega_{21} + 5\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5^3 \omega_{21} + 12\omega_{15}^2 v_1^2 \omega_9 \omega_{10} \omega_5^3 \omega_{21} - 12\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^2 +$

$6\omega_{15}^2 \omega_{12} v_2^2 cs^2 \omega_{10} \omega_5^3 \omega_{21} + 6\omega_{15}^2 \omega_9 \omega_{12} v_2^2 cs^2 \omega_5^3 \omega_{21} + 12\omega_{15}^2 cs^2 \omega_{10} \omega_5^3 \omega_{21} - 6\omega_{15} \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^3 - 60\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5 \omega_{21} -$

$15\omega_{15} v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 108\omega_{15}^2 v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5^2 \omega_{21} - 45\omega_{15} v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 36\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 \omega_{21} +$

$18\omega_{15}^2 v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5^3 + 6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^3 - 6\omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5^3 \omega_{21} - 12\omega_{15} v_1^2 \omega_{12} \omega_{10}^2 \omega_5^3 \omega_{21} - 12\omega_{15}^2 \omega_9 cs^2 \omega_{10} \omega_5^3 \omega_{21} -$

$12\omega_{15}^2 v_1^2 \omega_9 \omega_{10} \omega_5^3 \omega_{21} - 12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} \omega_5^2 \omega_{21} + 12\omega_{15}^2 \omega_9 cs^2 \omega_{10}^2 \omega_5^3 - 12\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 - 36\omega_{15}^2 \omega_9 \omega_{12} cs^4 \omega_{10} \omega_5 \omega_{21} -$

$36\omega_{15}^2 v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10} \omega_5^2 - 6\omega_{15}^2 v_1^2 \omega_9 \omega_{12} v_2^2 \omega_5^3 \omega_{21} - 18\omega_{15}^2 v_1^2 \omega_9 \omega_{12} cs^2 \omega_5^3 \omega_{21} + 12\omega_{15} \omega_9 \omega_{12} cs^4 \omega_{10}^2 \omega_5 \omega_{21} + 12\omega_{15} \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5^2 +$

$6v_1^2 \omega_9 \omega_{12} v_2^2 \omega_{10}^2 \omega_5^3 \omega_{21} + 18v_1^2 \omega_9 \omega_{12} cs^2 \omega_{10}^2 \omega_5^3 \omega_{21} - 12\omega_{15}^2 v_1^2 \omega_{10}^2 \omega_5^3 - 12\omega_{15} \omega_9 \omega_{12} v_2^2 cs^2 \omega_{10}^2 \omega_5 \omega_{21} + 6\omega_{15} v_1^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3) \dfrac{v_2}{12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10}^2 \omega_5^3 \omega_{21}}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x \mathrm{D}_y^3 \rho} = (36\omega_{15}^2 \omega_9 cs^2 \omega_5^2 \omega_{21} - 12\omega_{15}^2 \omega_{10} \omega_5^2 - 12\omega_{15}^2 v_2^2 \omega_5^2 \omega_{21} + 3\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5^2 \omega_{21} - 5\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_5^2 \omega_{21} - 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{21} +$

$12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_5 \omega_{21} + 36\omega_{15}^2 \omega_9 \omega_{10} cs^2 \omega_5 + 6\omega_{15}^2 \omega_{12} \omega_{10} \omega_5^2 - 12\omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 \omega_{21} - 12\omega_{15}^2 \omega_9 v_2^2 \omega_{10} \omega_5^2 + 54\omega_{15} \omega_9 \omega_{12} \omega_{10} \omega_5 \omega_5^2 \omega_{21} +$

$12\omega_9 \omega_{12} \omega_{10} \omega_5 \omega_{21} + 5\omega_{15}^2 \omega_9 \omega_{12} \omega_5^2 \omega_{21} + 6\omega_{15}^2 \omega_{12} v_2^2 \omega_5^2 \omega_{21} - 3\omega_{15} \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 \omega_{21} + 12\omega_{15}^2 \omega_9 v_2^2 \omega_{10} \omega_5 + 18\omega_9 \omega_{12} \omega_{10} cs^2 \omega_5^2 \omega_{21} -$

$36\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_{21} - 36\omega_{15}^2 \omega_9 \omega_{10} cs^2 \omega_5^2 - 12\omega_{15}^2 \omega_9 \omega_5^2 \omega_{21} - 18\omega_{15} \omega_9 \omega_{12} \omega_{10} \omega_5 \omega_{21} + 54\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_5 \omega_{21} - 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 \omega_{21} -$

$12\omega_{15}^2 \omega_9 v_2^2 \omega_5 \omega_{21} - 6\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_5 - 6\omega_{15}^2 \omega_{12} v_2^2 \omega_{10} \omega_5 - 36\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5 + 12\omega_{15}^2 \omega_9 \omega_{12} \omega_{21} - 15\omega_{15}^2 \omega_9 \omega_{12} cs^2 \omega_5^2 \omega_{21} +$

$36\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_5 \omega_{21} + 3\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} - 36\omega_{15}^2 cs^2 \omega_5^2 \omega_{21} + 12\omega_{15}^2 \omega_9 v_2^2 \omega_5^2 \omega_{21} - 18\omega_{15} \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5^2 -$

$\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5^2 \omega_{21} + 18\omega_{15}^2 \omega_{12} cs^2 \omega_5^2 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 - 6\omega_{15}^2 \omega_{12} v_2^2 \omega_5^2 \omega_{21} + 18\omega_{15} \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 \omega_{21} + 6\omega_{15} \omega_9 \omega_{12} \omega_{10} \omega_5 +$

$6\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 - 12\omega_{15}^2 \omega_9 \omega_{10} \omega_5 - 12\omega_{15} \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_{21} - 36\omega_9 \omega_{12} \omega_{10} cs^2 \omega_5 \omega_{21} + 12\omega_{15}^2 \omega_5^2 \omega_{21} + 12\omega_{15}^2 v_2^2 \omega_{10} \omega_5^2 -$

$12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_5 + 6\omega_{15} \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 \omega_{21} - 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 - 18\omega_{15}^2 v_1^2 \omega_{10} cs^2 \omega_5^2 - 9\omega_{15} \omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} -$

$6\omega_{15} \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 + 12\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_{10} \omega_5 \omega_{21} - 18\omega_{15}^2 \omega_9 \omega_{12} \omega_5 \omega_{21} + 12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_{21} - 6\omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} - 36\omega_{15} \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5^2 \omega_{21} -$

$36\omega_{15}^2 \omega_9 cs^2 \omega_5 \omega_{21} + 18\omega_{15}^2 \omega_9 \omega_{12} v_2^2 \omega_5 \omega_{21} + 36\omega_{15} \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5 - 12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_{21} - \omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21} - 36\omega_{15} \omega_9 \omega_{12} \omega_{10} cs^2 \omega_{21} +$

$36\omega_{15}^2 \omega_{10} cs^2 \omega_5^2 + 12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_5 + 18\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} cs^2 \omega_5^2) \dfrac{v_2 cs^2}{12\omega_{15}^2 \omega_9 \omega_{12} \omega_{10} \omega_5^2 \omega_{21}}$

$$C_{\mathrm{D}_x\mathrm{D}_y^3\rho}^{(1),\mathrm{CLBM2}} = (-9\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_{10}\omega_5^2 - 12\omega_{15}^2 v_2^2\omega_5^2\omega_{21} + 36\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5 - 5\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} -$$

$$12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{21} - 36\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}\omega_5^2 + 18\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2 + 36\omega_{15}^2 cs^2\omega_{10}\omega_5^2 -$$

$$12\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}^2\omega_9 v_2^2\omega_{10}\omega_5^2 - 36\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 18\omega_{15}^2 cs^2\omega_{12}\omega_{10}\omega_5^2 + 12\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} + 5\omega_{15}^2\omega_9\omega_{12}\omega_5^2\omega_{21} +$$

$$36\omega_{15}^2\omega_9 cs^2\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_{12}v_2^2\omega_5^2\omega_{21} + 54\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_5^2\omega_{21} - 3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9 v_2^2\omega_{10}\omega_5 - 36\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{10}\omega_5 -$$

$$12\omega_{15}^2\omega_9\omega_5^2\omega_{21} - 36\omega_9 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 36\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2 - 18\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} -$$

$$18\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2 - 12\omega_{15}^2\omega_9 v_2^2\omega_5\omega_{21} - 6\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^2 - 6\omega_{15}^2\omega_{12}v_2^2\omega_{10}\omega_5^2 - 36\omega_{15}^2\omega_9 cs^2\omega_{10}\omega_5^2 + 12\omega_{15}^2\omega_9\omega_{12}\omega_{21} +$$

$$18\omega_{15}^2 cs^2\omega_{12}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9\omega_5\omega_{21} + 3\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 18\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9 v_2^2\omega_5^2\omega_{21} + \omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} +$$

$$12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5 - 6\omega_{15}^2\omega_{12}\omega_5^2\omega_{21} - 36\omega_{15}^2 cs^2\omega_5^2\omega_{21} - 15\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} + 6\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2 +$$

$$6\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2 - 12\omega_{15}^2\omega_9\omega_{10}\omega_5 - 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_{21} + 12\omega_{15}^2\omega_5^2\omega_{21} + 12\omega_{15}^2 v_2^2\omega_{10}\omega_5^2 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5 + 6\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} -$$

$$36\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5 + 3\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9\omega_{10}\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2 + 12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_{21} -$$

$$36\omega_{15}^2\omega_9 cs^2\omega_5\omega_{21} - 18\omega_{15}^2\omega_9\omega_{12}\omega_5\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_{21} - 6\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 54\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 18\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_5\omega_{21} -$$

$$12\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_{21} - \omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5 + 36\omega_{15}^2\omega_9 cs^2\omega_{10}\omega_5)\frac{cs^2 v_2}{12\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21}}$$

$$C_{\mathrm{D}_x\mathrm{D}_y^3\rho}^{(1),\mathrm{CuLBM1}} = (12\omega_7^2\omega_1\omega_5 - \omega_7^2\omega_1^2 - 18cs^2\omega_7\omega_1^2 + 36cs^2\omega_7^2\omega_5 + 54cs^2\omega_7\omega_1\omega_5 + 12\omega_7\omega_5 + 3\omega_7\omega_1^2 + 12v_2^2\omega_7^2\omega_5 - 6v_2^2\omega_7\omega_1^2 +$$

$$3cs^2\omega_7^2\omega_1^2\omega_5 + 6v_2^2\omega_1^2\omega_5 + 12\omega_7\omega_1 + 12\omega_7^2 + v_2^2\omega_7^2\omega_1^2\omega_5 + 18v_2^2\omega_7\omega_1\omega_5 + 12\omega_1\omega_5 - 6\omega_7^2\omega_1 + 18cs^2\omega_1^2\omega_5 + 36cs^2\omega_7\omega_1 - 3v_2^2\omega_7\omega_1^2\omega_5 -$$

$$12\omega_7\omega_1 - 6\omega_1^2\omega_5 + 18cs^2\omega_7\omega_1 - 36cs^2\omega_1\omega_5 + 6v_2^2\omega_7^2\omega_1 - 12v_2^2\omega_1\omega_5 - 12v_2^2\omega_7^2\omega_1\omega_5 - 12v_2^2\omega_7\omega_5 - 18\omega_7\omega_1\omega_5 + v_2^2\omega_7^2\omega_1^2 - 36cs^2\omega_7^2\omega_1\omega_5 +$$

$$6\omega_7\omega_1^2 - 12v_2^2\omega_7^2 - \omega_7^2\omega_1^2\omega_5 + 3cs^2\omega_7^2\omega_1^2 - 9cs^2\omega_7\omega_1^2\omega_5 - 36cs^2\omega_7\omega_5 - 12\omega_7^2\omega_5 - 36cs^2\omega_7^2)\frac{v_2 cs^2}{12\omega_7^2\omega_1^2\omega_5}$$

$$C_{\mathrm{D}_x\mathrm{D}_y^3\rho}^{(1),\mathrm{CuLBM2}} = (-288\omega_3^2\omega_4^2 cs^4\omega_2^3 + 160v_2^2\omega_3^2\omega_4^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3 + 48\omega_3\omega_4^2\omega_1^3 cs^4\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 + 16v_2^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_2 + 36\omega_3^2\omega_1^3 cs^2\omega_2^3 +$$

$$54\omega_4^3\omega_1^3 cs^4\omega_2 + 1232v_2^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^3 + 588\omega_3^2\omega_4^2\omega_1 cs^4\omega_2^3 + 48v_2^2\omega_3^2\omega_4^2\omega_1^3 + 28\omega_3^2\omega_4^2\omega_1\omega_2^3 + 54\omega_4^4\omega_1^3 cs^4\omega_2^3 - 104\omega_3^2\omega_4^2\omega_1^3 cs^2 -$$

$$168\omega_3\omega_4^2\omega_1 cs^4\omega_2^3 - 88\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 - 56v_2^2\omega_3\omega_4^2\omega_1 cs^2\omega_2^3 - 56v_2^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 - 144\omega_3^2\omega_4^2\omega_1 cs^4\omega_2^2 - 712v_2^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 - 276\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2 +$$

$$18v_1^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 + 36\omega_4^2\omega_1^3 cs^2\omega_2^3 - 72\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^3 + 36v_2^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 + 108\omega_3^2\omega_4\omega_1^2 cs^4\omega_2^3 + 394v_2^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^2 -$$

$$24v_2^4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 9v_2^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^3 - 27\omega_3\omega_4^2\omega_1^3 cs^4\omega_2^3 + 32v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 52\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 - 36v_2^2\omega_3^2\omega_1^2 cs^2\omega_2^3 + 9\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^3 +$$

$$228v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 18\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^3 + 6v_2^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^3 - 36v_2^2\omega_4^2\omega_1^2 cs^2\omega_2^3 - 40\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^2 + 184\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^3 - 256v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 -$$

$$36v_2^2\omega_3\omega_4\omega_4^2\omega_1^3 cs^2\omega_2 + 320v_2^2\omega_3^2\omega_4^2\omega_1^3 cs^2 - 108\omega_3\omega_4^2\omega_1^3 cs^4\omega_2 - 132v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 78v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 18\omega_4^2\omega_1^3 cs^2\omega_2^3 - 144v_2^4\omega_3^2\omega_4^2\omega_1^3 +$$

$$72\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2 + 448v_2^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 + 56\omega_3\omega_4^2\omega_1 cs^2\omega_2^3 + 56\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^3 + 92v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 152v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 208\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 -$$

$$108\omega_3^2\omega_1^2 cs^4\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2 - 18v_1^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^3 + 208\omega_3^2\omega_4^2 cs^2\omega_2^3 + 6v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 16\omega_3^2\omega_4^2\omega_2^3 - 96v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 16\omega_3\omega_4^2\omega_1^3 cs^2\omega_2 -$$

$$108\omega_3^2\omega_1^2 cs^4\omega_2^3 - 56v_2^2\omega_3^2\omega_4\omega_1^3 + 14\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 18\omega_3\omega_1^3 cs^2\omega_2^3 + 104v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 368\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^3 - 6v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 14\omega_3^2\omega_4^2\omega_1^2\omega_2^3 -$$

$$20\omega_3^2\omega_4^2\omega_1^3\omega_2 - 6\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^3 + 6v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 120\omega_3\omega_4^2\omega_1^2 cs^4\omega_2^3 - 136v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 40v_2^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 - 460v_2^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^3 -$$

$$342\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^3 + 120v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 36\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^3 + 18v_2^2\omega_4^2\omega_1^3 cs^2\omega_2^3 - 6v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 216\omega_3\omega_4^2\omega_1^2 cs^4\omega_2^3 + 72v_2^2\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^3 -$$

$$92v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 36\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 - 118\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^3 + 18v_2^2\omega_3^2\omega_1^3 cs^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 78v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 784v_2^2\omega_3^2\omega_4^2 cs^2\omega_2^3 +$$

$$9\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3 cs^4 - 412v_2^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 - 27\omega_3^2\omega_4\omega_1^3 cs^4\omega_2^3 - 9v_2^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 + 12\omega_3^2\omega_4^2\omega_1^2 cs^4\omega_2^2)\frac{v_2}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C_{\mathrm{D}_x\mathrm{D}_y^3 v_1}^{(1)}$ **at** $\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3}$:

$$C_{\mathrm{D}_x\mathrm{D}_y^3 v_1}^{(1),\mathrm{SRT}} = (2 + 3cs^2\omega - 6cs^2 + v_2^2\omega - \omega - 2v_2^2)\frac{\rho v_1 v_2}{12\omega}$$

$$C_{\mathrm{D}_x\mathrm{D}_y^3 v_1}^{(1),\mathrm{MRT1}} = (-4\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 12\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} -$$

$$12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 72\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 90\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} +$$

$$36\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2 + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} cs^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 - 36\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} +$$

$$12\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 12\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} + 36\omega_{15}^2\omega_9^2\omega_{12}^2 cs^2\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2 + 6\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} -$$

$$12\omega_{15}^2\omega_9 v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 156\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10} cs^2\omega_5\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3 + 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 42\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} -$$

$$24\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3 - 24\omega_{15}^2\omega_9\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3 - 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} -$$

$$24\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 18\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 72\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3 + \omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} +$$

$$12\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^2 - 6\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} -$$

$$12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_5^2\omega_{21} - 24\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2 - 18\omega_{15}^2\omega_9^2\omega_{12}^2 cs^2\omega_5^3\omega_{21} -$$

$$96\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3 - 48\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 3\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 +$$

$$48\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} cs^2\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2 + 24\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3 + 4\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} -$$

$$18\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 +$$

$$12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} cs^2\omega_5\omega_{21} - 24\omega_{15}^2\omega_9\omega_{12}^2\omega_{10} cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_5^2\omega_{21} + 18\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} -$$

$$24\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3 + 60\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 24\omega_{15}^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 24\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} +$$

$$84\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 24\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 18\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} -$$

$$\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 66\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3 - 84\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2\omega_{10} cs^2\omega_5^3\omega_{21} +$$

$$12\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3 + 24\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 66\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} +$$

$$12\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3 - 132\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 66\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} -$$

$$36\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5\omega_5\omega_{21} + 24\omega_{15}^2\omega_9\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}^2\omega_5^2 - 6\omega_{15}^2\omega_9^2\omega_{12}^2 v_2^2\omega_5^2\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2)\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21}}$$

$$C_{\mathrm{D}_x\mathrm{D}_y^3 v_1}^{(1),\mathrm{MRT2}} = (-4\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5 - 12\omega_{15}\omega_9^2\omega_{12}^2 cs^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} +$$

$$24\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^2\omega_{21} - 66\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} -$$
$$84\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 36\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}^2\omega_9^2cs^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^3\omega_5 -$$
$$36\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5\omega_{21} - 36\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10}^2\omega_5\omega_{21} + 24\omega_{15}^2\omega_9cs^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 12\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5\omega_{21} +$$
$$12\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5\omega_{21} + 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5 + 6\omega_{15}^2\omega_9^2\omega_{12}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 132\omega_{15}^2\omega_9^2\omega_{12}cs^2\omega_{10}^2\omega_5^2\omega_{21} +$$
$$12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9cs^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3 - 24\omega_{15}^2\omega_9^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 - 24\omega_{15}^2\omega_9^2\omega_{12}cs^2\omega_{10}^2\omega_5^3 +$$
$$48\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 48\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} -$$
$$24\omega_9^2\omega_{12}^2v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 18\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 3\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^3\omega_{21} + \omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 84\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}^2\omega_5^2\omega_{21} +$$
$$12\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5 + 24\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5 - 6\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} +$$
$$60\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^3\omega_{21} + 24\omega_{15}^2\omega_{12}cs^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_5\omega_{21} +$$
$$24\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5 + 24\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5 - 72\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}^2\omega_5\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3 + 12\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5^3\omega_{21} +$$
$$4\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 18\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^3\omega_{21} - 96\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} -$$
$$12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 + 24\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5^2 - 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}\omega_9^2\omega_{12}^2cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} +$$
$$18\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}cs^2\omega_{10}^2\omega_5^3 - 12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 +$$
$$24\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 24\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 42\omega_{15}^2\omega_9^2\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} -$$
$$\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 90\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^2\omega_{21} + 66\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 72\omega_{15}^2\omega_9^2\omega_{12}cs^2\omega_{10}^2\omega_5\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3 +$$
$$12\omega_{15}^2\omega_9^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 12\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}^2\omega_5^3 - 12\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5\omega_{21} + 156\omega_{15}^2\omega_9^2\omega_{12}^2cs^2\omega_{10}\omega_5\omega_{21} -$$
$$12\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_{10}^2\omega_5 - 12\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^2\omega_5 + 12\omega_{15}\omega_9\omega_{12}^2cs^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 66\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} -$$
$$24\omega_{15}^2\omega_9^2\omega_{12}cs^2\omega_{10}^2\omega_5^2 - 24\omega_{15}^2\omega_9^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2 - 18\omega_{15}^2\omega_9^2\omega_{12}cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21})\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21}}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}_y^3 v_1} = (-9\omega_{10}cs^2 - \omega_{15} + \omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10} + 3\omega_{10} - \omega_{15}\omega_{10} - 3v_2^2\omega_{10} + 3\omega_{15}cs^2 + 3\omega_{15}\omega_{10}cs^2)\frac{\rho v_1 v_2}{12\omega_{15}\omega_{10}}$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}_y^3 v_1} = (-\omega_{15} + 3\omega_{15}cs^2 + \omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10} - 9cs^2\omega_{10} + 3\omega_{10} + 3\omega_{15}cs^2\omega_{10} - \omega_{15}\omega_{10} - 3v_2^2\omega_{10})\frac{\rho v_1 v_2}{12\omega_{15}\omega_{10}}$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}_y^3 v_1} = (-\omega_7\omega_5 - \omega_7 + 3cs^2\omega_7 + v_2^2\omega_7 - 3v_2^2\omega_5 - 9cs^2\omega_5 + v_2^2\omega_7\omega_5 + 3\omega_5 + 3cs^2\omega_7\omega_5)\frac{\rho v_1 v_2}{12\omega_7\omega_5}$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}_y^3 v_1} = (-27\omega_3\omega_1 cs^2\omega_2 + 9\omega_3\omega_1\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 + 18\omega_3\omega_4\omega_1 cs^2\omega_2 - 18v_1^2\omega_3\omega_4\omega_2 - 8\omega_3\omega_4\omega_1 +$$
$$4v_2^2\omega_3\omega_4\omega_2 + 6v_2^2\omega_3\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 - 9v_2^2\omega_3\omega_1\omega_2 + 6\omega_3\omega_4cs^2\omega_2 + 12\omega_3\omega_4\omega_1cs^2 + 18v_1^2\omega_3\omega_4\omega_1 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_1 v_2}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(1)}_{\text{D}_x\text{D}_y^3 v_2}$ at $\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3}$:

$$C^{(1),\text{SRT}}_{\text{D}_x\text{D}_y^3 v_2} = (-12 - cs^2\omega^3 - 6\omega^2 + 2cs^2\omega^2 + 18v_2^2\omega^2 - 54v_2^2\omega + 18\omega + 36v_2^2)\frac{\rho cs^2}{12\omega^3}$$

$$C^{(1),\text{MRT1}}_{\text{D}_x\text{D}_y^3 v_2} = (12\omega_{15}^2\omega_9\omega_{10}^2cs^2\omega_5^3 - 15\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}^2cs^4\omega_5^3 - 18\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} -$$
$$18\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5^3\omega_{21} - 36\omega_{15}^2v_1^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 9\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 15\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 9\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3cs^2\omega_5^3\omega_{21} -$$
$$5\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 36\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}^2\omega_5^2 - 18\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 24\omega_{15}^2v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3 +$$
$$18\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^2 + 36\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3 - 36\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}\omega_5^2\omega_{21} -$$
$$12\omega_{15}^2\omega_{10}cs^4\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5^2 - 12\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2 + 12\omega_{15}^2v_1^2\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} + 60\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5\omega_{21} -$$
$$36\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5\omega_{21} + 18\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{10}cs^2\omega_5^2 + 6v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$$
$$12\omega_{15}^2\omega_9\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5^3 - 18\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^3 +$$
$$36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^2 + 12\omega_{15}^2\omega_{10}cs^4\omega_5^3 - 36\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}^2\omega_5^3 + 72\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} + 18\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} +$$
$$36\omega_{15}^2v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2v_1^2\omega_9\omega_{10}^2\omega_5^2 + 6\omega_{15}^2v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 5\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$36\omega_{15}^2v_1^2\omega_9\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} - 48\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2 - 36\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5^3 -$$
$$15\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{10}cs^2\omega_5^3\omega_{21} + 72\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 48\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} + 18\omega_{15}^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} +$$
$$6\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5^3\omega_{21} - 72\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 72\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{10}cs^2\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} +$$
$$12\omega_{15}^2v_1^2\omega_9\omega_{10}^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5^2\omega_{21} - 6\omega_{15}^2v_1^2\omega_{12}\omega_{10}^2cs^2\omega_5^3 - 12\omega_{15}^2\omega_9\omega_{10}cs^4\omega_5^2\omega_{21} - 12v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} +$$
$$12\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5^2 - 6\omega_{15}^2v_1^2\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 27\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 144\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}v_1^2\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} +$$
$$\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2v_1^2\omega_{10}cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{10}cs^4\omega_5^3 - 36\omega_{15}^2\omega_9 v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} -$$
$$6\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 - 12\omega_{15}^2v_1^2\omega_9\omega_{10}cs^2\omega_5^2\omega_{21} - 15\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - \omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_{10}cs^2\omega_5^3 -$$
$$6v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3 - 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3 +$$
$$30\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^3\omega_{21} - 18\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 6\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{10}cs^4\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^4\omega_5\omega_{21} +$$
$$36v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 6\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_5^3\omega_{21} + 60\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5\omega_{21} - 36\omega_{15}^2v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} +$$
$$12\omega_{15}^2v_1^2\omega_9\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} + 24\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 24\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} -$$
$$12\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3 + 24\omega_{15}^2v_1^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 6\omega_{15}^2v_1^2\omega_{12}\omega_{10}\omega_5^3 - 24\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5\omega_{21} -$$
$$48\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2 - 102\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^2\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} -$$
$$12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2v_1^2\omega_9\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_{15}^2v_1^2\omega_{10}\omega_5^3\omega_{21} - 5\omega_{15}\omega_9\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} + 54\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} -$$
$$12\omega_{15}^2v_1^2\omega_9\omega_{10}cs^2\omega_5^3 - 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3 - 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^2 + 36\omega_{15}^2\omega_9 v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2 +$$
$$24\omega_{15}^2v_1^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}\omega_{10}^2cs^2\omega_5^2 - 45\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 108\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}^2\omega_9 v_2^2\omega_{10}^2cs^2\omega_5^3 +$$
$$12\omega_{15}^2v_1^2\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} + 18\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2v_1^2\omega_9\omega_{10}\omega_5^3\omega_{21} -$$
$$12\omega_{15}^2v_1^2\omega_9\omega_{12}\omega_5^3\omega_{21} + 36\omega_{15}^2v_2^2\omega_{10}cs^2\omega_5^3 + 24\omega_9\omega_{12}v_2^2\omega_{10}^2cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2v_1^2\omega_{10}^2cs^2\omega_5^3 - 36\omega_{15}^2v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 36\omega_{15}^2\omega_9 v_2^2\omega_{10}^2cs^2\omega_5^2 -$$

$$18\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3 + 18v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3 -$$
$$12\omega_{15}^2 v_1^2\omega_{10}^2\omega_5^3 + 12\omega_{15}^2 v_1^2\omega_9\omega_{10}^2 cs^2\omega_5^3 + 18\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3 + 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3)\frac{\rho}{12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21}}$$

$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}_y^3 v_2} = (-36\omega_{15}^2\omega_9 v_2^2 cs^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}^2 v_2^2 cs^2\omega_{10}^2\omega_5^3 - 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_{12}cs^2\omega_{10}^2\omega_5^3\omega_{21} +$

$36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2 cs^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}^2 v_1^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 9\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_{12}cs^4\omega_{10}^2\omega_5^3 +$

$15\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 36\omega_{15}^2 v_1^2\omega_9 v_2^2\omega_{10}^2\omega_5^2 + 12\omega_{15}^2 v_1^2\omega_9 cs^2\omega_{10}\omega_5^2 - 18\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}^2\omega_5^2\omega_{21} + 18\omega_{15}^2\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^3 -$

$24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}^2\omega_5^2 + 18\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^3 - 18\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3 +$

$18\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^3 - 15\omega_{15}^2\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^3\omega_{21} - 102\omega_{15}\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^2\omega_{21} -$

$12\omega_{15}^2 v_1^2\omega_9 cs^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_{15}^2 v_1^2 v_2^2\omega_{10}\omega_5^3 - 36\omega_{15}^2 v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2 cs^2\omega_{10}\omega_5^3 + 36\omega_{15}\omega_9 v_2^2 cs^2\omega_{10}\omega_5^3 + 6\omega_{15}\omega_{12}cs^4\omega_{10}\omega_5^3\omega_{21} +$

$12\omega_{15}^2 cs^4\omega_{10}\omega_5^3 - 36\omega_{15}^2\omega_9 v_2^2 cs^2\omega_{10}^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^2 - 12\omega_{15}^2\omega_9 cs^4\omega_{10}\omega_5^2\omega_{21} + 24\omega_{15}\omega_9 v_2^2 cs^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2 +$

$12\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2 + 6\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}^2\omega_5^3 + 24\omega_{15}^2 v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9 cs^2\omega_{10}^2\omega_5^3 - 36\omega_{15}^2 v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3 +$

$72\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 36\omega_{15}^2\omega_9\omega_{12}v_2^2 cs^2\omega_{10}^2\omega_5^2 - 36\omega_{15}^2 v_2^2 cs^2\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}^2\omega_9\omega_{12}cs^4\omega_{10}^2\omega_5\omega_{21} + 30\omega_{15}\omega_9\omega_{12}v_2^2 cs^2\omega_{10}^2\omega_5^3\omega_{21} +$

$54\omega_{15}^2\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}^2 v_1^2\omega_9 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9\omega_{10}\omega_5^2 + 12\omega_{15}^2 v_1^2\omega_9 cs^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$

$6\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 5\omega_{15}^2\omega_9\omega_{12}cs^4\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_{12}cs^2\omega_{10}\omega_5^3 -$

$48\omega_{15}^2\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5\omega_{21} + 12\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2 + \omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 48\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} +$

$24\omega_{15}^2 v_1^2\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} + 72\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}^2\omega_9 v_2^2 cs^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2 cs^4\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}\omega_5^3 -$

$72\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}v_1^2\omega_{12}cs^2\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} - 72\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 60\omega_{15}\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5\omega_{21} +$

$12\omega_{15}^2 v_1^2\omega_9\omega_{10}\omega_5^3 - 12\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}\omega_9 cs^4\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}\omega_5^2 - 12\omega_{15}^2 cs^2\omega_{10}\omega_5^3 - 18\omega_{15}\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^3 +$

$12\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}cs^4\omega_{10}\omega_5\omega_{21} - 6\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}\omega_5\omega_{21} + 48\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} +$

$27\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 144\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 9\omega_{15}^2 v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^3\omega_{21} - \omega_{15}^2\omega_9\omega_{12}cs^4\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9 cs^4\omega_{10}^2\omega_5^3 -$

$15\omega_{15}^2\omega_9\omega_{12}v_2^2 cs^2\omega_{10}^2\omega_5^2\omega_{21} - 6v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3 -$

$18\omega_{15}^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}cs^2\omega_{10}\omega_5^3 - 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3 - 6\omega_{15}\omega_{12}cs^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}^2\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5\omega_{21} -$

$12\omega_{15}^2\omega_9 cs^4\omega_{10}^2\omega_5^3 - 12v_1^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^2\omega_{21} - 36v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 36\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} +$

$6\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{10}\omega_5^2\omega_{21} + 24\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5\omega_{21} - 24\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2 +$

$24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9 cs^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9 cs^2\omega_{10}\omega_5^3 - 6\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^2\omega_{21} -$

$12v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 5\omega_{15}\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{10}\omega_5^3 - 12\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}^2\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2 cs^2\omega_{10}\omega_5^3\omega_{21} -$

$18\omega_{15}\omega_9\omega_{12}v_2^2 cs^2\omega_{10}^2\omega_5^3 - 5\omega_{15}^2\omega_9\omega_{12}cs^4\omega_{10}^2\omega_5^2\omega_{21} - 45\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 36\omega_{15}^2 v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2\omega_{21} - 15\omega_{15}v_1^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^3\omega_{21} -$

$108\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_5^2 v_1^2\omega_9\omega_{12}cs^2\omega_{10}^2\omega_5^3 + 18\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9 cs^2\omega_{10}\omega_5^3\omega_{21} -$

$12\omega_{15}^2 v_1^2\omega_9\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9 cs^2\omega_{10}\omega_5^3 - 36\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}^2\omega_9\omega_{12}cs^4\omega_{10}\omega_5\omega_{21} -$

$12\omega_{15}^2 v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^2 - 18\omega_{15}^2 v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_9\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}cs^4\omega_{10}\omega_5\omega_{21} + 36\omega_{15}\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5^2 +$

$18v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 6v_1^2\omega_9\omega_{12}cs^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{10}\omega_5^3 + 60\omega_{15}\omega_9\omega_{12}v_2^2 cs^2\omega_{10}\omega_5\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3)\frac{\rho}{12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21}}$

$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}_y^3 v_2} = (6\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} + 36\omega_{15}v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}cs^2\omega_5\omega_{21} + 36\omega_{15}\omega_9 v_2^2\omega_{10}\omega_5^3 - 12\omega_9\omega_{12}\omega_{10}\omega_5^2 +$

$36\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} + 12\omega_{15}\omega_5^3\omega_{21} + 18\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_9 cs^2\omega_5^2\omega_{21} - 15\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9 v_2^2\omega_{10}\omega_5^3 -$

$12\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} + 6\omega_9\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}\omega_{10}cs^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{10}\omega_5^2 + 5\omega_{15}\omega_9\omega_{12}\omega_5^3\omega_{21} - 3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_{12}v_2^2\omega_5^3\omega_{21} +$

$12\omega_{15}\omega_9\omega_{10}cs^2\omega_5^2 - 12\omega_{15}cs^2\omega_5^3\omega_{21} - 18\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}\omega_5^3\omega_{21} + 54\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9 cs^2\omega_5^3\omega_{21} -$

$12\omega_{15}\omega_9\omega_{10}cs^2\omega_5^3 + 12\omega_{15}\omega_9\omega_{10}\omega_5^3 - 6\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_5\omega_{21} + \omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - \omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$

$18\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2 - 18\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3 - 5\omega_{15}\omega_9 cs^2\omega_5^3\omega_{21} +$

$6\omega_{15}\omega_{12}\omega_{10}\omega_5^3 - 36\omega_{15}\omega_9 v_2^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5 + 6\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 - 18\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3 +$

$12\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 54\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}v_2^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_{12}cs^2\omega_5^3\omega_{21} - 5\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2 +$

$12\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2 - 6\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^3 + 18\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_{21} +$

$36\omega_{15}\omega_9 v_2^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_9\omega_{12}cs^2\omega_5^2\omega_{21} - 6\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 + 18\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3)\frac{\rho cs^2}{12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21}}$

$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}_y^3 v_2} = (-5\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}\omega_9\omega_{12}\omega_5^2\omega_{21} + 36\omega_{15}v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9 cs^2\omega_5^2\omega_{21} + 36\omega_{15}\omega_9 v_2^2\omega_{10}\omega_5^2 -$

$12\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_{21} - 12\omega_9\omega_{12}\omega_{10}\omega_5^2 - 6\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^3 + 36\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}\omega_9 cs^2\omega_{12}\omega_5\omega_{21} + 12\omega_{15}\omega_5^3\omega_{21} -$

$6\omega_{15}cs^2\omega_{12}\omega_{10}\omega_5^3 + 12\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2 - 15\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9 v_2^2\omega_{10}\omega_5^3 - 12\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} + 6\omega_9\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{10}\omega_5^2 +$

$5\omega_{15}\omega_9\omega_{12}\omega_5^3\omega_{21} - 3\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9 cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_{12}v_2^2\omega_5^3\omega_{21} - \omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} -$

$6\omega_{15}\omega_{12}\omega_5^3\omega_{21} - 12\omega_{15}cs^2\omega_5^3\omega_{21} + 54\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_9 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 12\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9\omega_{10}\omega_5^3 -$

$6\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_5\omega_{21} + \omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 18\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 5\omega_{15}\omega_9 cs^2\omega_{12}\omega_5^3\omega_{21} + 18\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} +$

$36\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2 - 12\omega_{15}\omega_9 cs^2\omega_5^3\omega_{10} - 18\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^3 - 6\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}cs^2\omega_{10}\omega_5^3 + 6\omega_{15}\omega_{12}\omega_{10}\omega_5^3 - 36\omega_{15}\omega_9 v_2^2\omega_5^2\omega_{21} -$

$12\omega_{15}\omega_9\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9 cs^2\omega_{10}\omega_5^2 - 18\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3 - 54\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9 cs^2\omega_{12}\omega_5^2\omega_{21} -$

$36\omega_{15}v_2^2\omega_5^3\omega_{21} + 6\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2 + 18\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}\omega_{10}\omega_5^3 + 18\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} +$

$12\omega_{15}\omega_9\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_5\omega_{21} + 36\omega_{15}\omega_9 v_2^2\omega_5^3\omega_{21} + 6\omega_{15}cs^2\omega_{12}\omega_5^3\omega_{21} + 18\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3)\frac{\rho cs^2}{12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21}}$

$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}_y^3 v_2} = (6cs^2\omega_7\omega_1^2 + 18cs^2\omega_7\omega_1\omega_5 + 3v_2^2\omega_7\omega_1^3 + 18v_2^2\omega_1^3\omega_5 + cs^2\omega_7\omega_1^3 + 6cs^2\omega_1^3\omega_5 + \omega_7\omega_1^2\omega_5 + 18v_2^2\omega_7\omega_1^2 - 54v_2^2\omega_1^2\omega_5 -$

$36v_2^2\omega_7\omega_1 + 12cs^2\omega_1^2 + 36v_2^2\omega_1^2 - 6cs^2\omega_1^3 - 12\omega_1\omega_5 - 18cs^2\omega_1^2\omega_5 - 18v_2^2\omega_1^3 - 12cs^2\omega_7\omega_1 - 3v_2^2\omega_7\omega_1\omega_5 + 12\omega_7\omega_1 + 18\omega_1^2\omega_5 + 12cs^2\omega_1\omega_5 +$

$36v_2^2\omega_1\omega_5 - cs^2\omega_7\omega_1^3\omega_5 - \omega_7\omega_1^3 - 6\omega_1^3\omega_5 + 6\omega_1^3 - 6\omega_7\omega_1^2 - 5cs^2\omega_7\omega_1^2\omega_5 - 12cs^2\omega_7\omega_5 - 12\omega_1^2)\frac{\rho cs^2}{12\omega_7\omega_1^3\omega_5}$

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$$C_{\mathrm{D}_x\mathrm{D}_y^3 v_2}^{(1),\mathrm{CuLBM2}} = (-18\omega_4\omega_1^2 cs^4\omega_2^3 + 108v_2^2\omega_3\omega_1 cs^2\omega_2^3 - 3v_1^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 96v_2^4\omega_3\omega_4\omega_1^3 + 12v_2^2\omega_3\omega_4\omega_1\omega_2^2 - 9\omega_4\omega_1^3 cs^2\omega_2^3 - 54\omega_3\omega_4\omega_1 cs^2\omega_2^3 -$$
$$24v_2^4\omega_3\omega_4\omega_1\omega_2^2 + 24v_2^2\omega_4\omega_1^3 cs^2\omega_2 - 9\omega_3\omega_1^3 cs^2\omega_2^3 - 222v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 120v_2^2\omega_3\omega_4\omega_1^2 cs^2\omega_2 + 8\omega_3\omega_4\omega_1^2 cs^4\omega_2 + 20\omega_4\omega_1^2 cs^4\omega_2^2 +$$
$$144v_2^2\omega_3\omega_4\omega_2^3 + 144v_2^2\omega_3\omega_4\omega_1^3 cs^2 + 4\omega_3\omega_4\omega_1^3 + 42\omega_3\omega_4\omega_1^3 cs^2\omega_2 + 408v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 36\omega_3\omega_1^2 cs^4\omega_2^3 + 24v_2^2\omega_4\omega_1 cs^2\omega_2^3 + 32\omega_3\omega_4\omega_1 cs^2\omega_2^2 +$$
$$18\omega_4\omega_1^3 cs^2\omega_2^2 - 24\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 27v_2^4\omega_4\omega_1^3 cs^2\omega_2^2 - 8\omega_4\omega_1^3 cs^2\omega_2 - 68\omega_3\omega_4 cs^4\omega_2^3 + 10\omega_3\omega_4\omega_1^2 cs^4\omega_2^3 - 90v_2^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 - 36\omega_3\omega_1 cs^2\omega_2^3 -$$
$$4\omega_3\omega_4\omega_1\omega_2^2 - 8\omega_4\omega_1 cs^2\omega_2^3 - 54v_2^2\omega_4\omega_1^3 cs^2\omega_2^2 + 27v_2^2\omega_3\omega_1^3 cs^2\omega_2^3 + 14\omega_3\omega_4\omega_1\omega_2^3 - 29\omega_3\omega_4\omega_1^2 cs^4\omega_2^3 - 153v_2^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 - 20\omega_3\omega_4\omega_1^3 cs^2 +$$
$$9\omega_3\omega_1^3 cs^4\omega_2^3 - 8\omega_3\omega_4\omega_2^3 - 16\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 - 60v_2^2\omega_3\omega_4\omega_1^3 - 20\omega_4\omega_1^2 cs^2\omega_2 - v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 + 192v_2^4\omega_3\omega_4\omega_1^2\omega_2 - 32\omega_3\omega_4\omega_1^3 cs^4\omega_2 +$$
$$3v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 - 10\omega_3\omega_4\omega_1^3\omega_2 - 288v_2^2\omega_3\omega_4\omega_1^3 cs^2\omega_2 + 36\omega_3\omega_1^2 cs^2\omega_2^3 - 7\omega_3\omega_4\omega_1^2\omega_2^3 - 28\omega_3\omega_4\omega_1 cs^4\omega_2^2 - 60v_2^2\omega_3\omega_4\omega_1 cs^2\omega_2^2 -$$
$$96v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 18\omega_4\omega_1^3 cs^4\omega_2 + v_1^4\omega_3\omega_4\omega_1^3\omega_2 - 264v_2^4\omega_3\omega_4\omega_2^3 + 138v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 18\omega_4\omega_1^2 cs^2\omega_2^3 - 312v_2^2\omega_3\omega_4 cs^2\omega_2^3 + 16\omega_3\omega_4\omega_1^3 cs^4 +$$
$$9\omega_4\omega_1^3 cs^4\omega_2^3 - 81v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 94\omega_3\omega_4\omega_1 cs^4\omega_2^3 + 432v_2^2\omega_3\omega_4\omega_1 cs^2\omega_2^3 - 4\omega_3\omega_4\omega_1^2\omega_2^2 + 138v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 108v_2^2\omega_3\omega_1^2 cs^2\omega_2^3 +$$
$$81v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 + 8\omega_3\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1 cs^4\omega_2^3 - 3\omega_3\omega_4\omega_1 cs^4\omega_2^3 - 138v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 240v_2^4\omega_3\omega_4\omega_1^3\omega_2 + 60v_2^2\omega_4\omega_1^2 cs^2\omega_2^2 + 24\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 +$$
$$153v_2^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 17\omega_3\omega_4\omega_1^3 cs^4\omega_2 + 7\omega_3\omega_4\omega_1^3\omega_2^2 + 84v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 + 8\omega_4\omega_1^3 cs^4\omega_2 - 54v_2^2\omega_4\omega_1^2 cs^2\omega_2^3 + 40\omega_3\omega_4 cs^2\omega_2^3 -$$
$$6\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 + 36\omega_3\omega_1 cs^4\omega_2^3 + v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 - 168v_2^2\omega_3\omega_4\omega_1^2\omega_2^2)\frac{\rho}{36\omega_3\omega_4\omega_1^3\omega_2^3}$$

coefficient $C_{\mathrm{D}_y^4\rho}^{(1)}$ at $\frac{\partial^4\rho}{\partial x_2^4}$:

$$C_{\mathrm{D}_y^4\rho}^{(1),\mathrm{SRT}} = (24v_2^2 cs^2 + 6v_2^4 + cs^2\omega - 3v_2^4\omega + 2cs^4 - 12v_2^2 cs^2\omega - 2cs^2 + 3v_2^2\omega - 6v_2^2 - cs^4\omega)\frac{v_1}{24\omega}$$

$$C_{\mathrm{D}_y^4\rho}^{(1),\mathrm{MRT1}} = (48\omega_{15}^2\omega_{10} cs^2\omega_5 + 150\omega_{15}^2 v_2^2\omega_{10} cs^2\omega_5^2 - 48\omega_{15} v_2^4\omega_{10}\omega_5 - 12v_2^2\omega_{10}^2\omega_5^2 - \omega_{15}^2\omega_{10} cs^4\omega_2^2 - 3\omega_{15}^2 v_2^4\omega_{10}\omega_5^2 - 24v_2^4\omega_{10}^2\omega_5 -$$
$$144v_2^2\omega_{10}^2 cs^2\omega_5 - 24\omega_{15} v_2^2\omega_{10}\omega_5^2 + 72\omega_{15}^2 v_2^4\omega_5 + 12\omega_{15}\omega_{10}^2 cs^2\omega_5^2 + 48\omega_{15} v_2^2\omega_{10}^2 - 24\omega_{10}^2 cs^4\omega_5 + 48\omega_{15}^2 v_2^4\omega_{10} + 12\omega_{15}^2 cs^2\omega_5^2 +$$
$$72\omega_{15} v_2^2\omega_{10} cs^2\omega_5 - 144\omega_{15}\omega_{10}^2 cs^2\omega_5 - 24\omega_{15}^2 cs^2\omega_5 + 48\omega_{15} v_2^2\omega_{10}\omega_5 + 12v_2^2\omega_{10}^2\omega_5^2 + 72v_2^2\omega_{10}^2 cs^2\omega_5^2 + 3\omega_{15}^2 v_2^2\omega_{10}\omega_5 - 36\omega_{15}^2 v_2^4\omega_5^2 +$$
$$24\omega_{10}^2 cs^2 + 12\omega_{10}^2 cs^4\omega_5^2 - 48\omega_{15}\omega_{10}^2 cs^2\omega_5 + 24v_2^2\omega_{10}^2\omega_5 + 24\omega_{15} v_2^4\omega_{10}\omega_5^2 - 24\omega_{15}^2\omega_{10} cs^2 - 14\omega_{15}^2\omega_{10} cs^4\omega_5^2 - 432\omega_{15}^2 v_2^2\omega_{10}\omega_5 +$$
$$432\omega_{15} v_2^2\omega_{10}^2 cs^2\omega_5 - 144\omega_{15}^2 v_2^2 cs^2\omega_5^2 - 30\omega_{15} v_2^4\omega_{10}^2\omega_5^2 - 24\omega_{15}\omega_{10}^2 cs^4 - 96\omega_{15}^2 v_2^4\omega_{10}\omega_5 - 72\omega_{15}^2 v_2^2\omega_5 - 48\omega_{15} v_2^4\omega_{10}^2 + 24\omega_{10}^2 cs^2\omega_5 -$$
$$12\omega_{15}\omega_{10}^2 cs^4\omega_5^2 - 48\omega_{15}^2 v_2^2\omega_{10} - 12\omega_{15}^2 cs^4\omega_5^2 + 24\omega_{15}^2\omega_{10} cs^4 - 48\omega_{15}^2\omega_{10} cs^4\omega_5 - 96\omega_{15} v_2^2\omega_{10}^2\omega_5 + \omega_{15}^2\omega_{10}^2 cs^2\omega_5^2 - 216\omega_{15} v_2^2\omega_{10}^2 cs^2 -$$
$$36\omega_{15}^2 v_2^2\omega_{10}\omega_5 - 12\omega_{15}^2 v_2^2\omega_{10}^2 cs^2\omega_5^2 + 30\omega_{15} v_2^2\omega_{10}^2\omega_5^2 + 216\omega_{15}^2 v_2^2\omega_{10} cs^2 + 96\omega_{15}^2 v_2^2\omega_{10}\omega_5 + 14\omega_{15}^2\omega_{10} cs^4\omega_5^2 + 24\omega_{15}^2 cs^4\omega_5 -$$
$$126\omega_{15} v_2^2\omega_{10}^2 cs^2\omega_5^2 + 288\omega_{15}^2 v_2^2 cs^2\omega_5 + 96\omega_{15} v_2^4\omega_{10}^2\omega_5 + 36\omega_{15}^2 v_2^2\omega_5^2 + 36\omega_{15}^2 v_2^4\omega_{10}\omega_5^2 + 48\omega_{15}\omega_{10}^2 cs^4\omega_5 - 12\omega_{10}^2 cs^2\omega_5^2)\frac{v_1}{24\omega_{15}^2\omega_{10}\omega_5^2}$$

$$C_{\mathrm{D}_y^4\rho}^{(1),\mathrm{MRT2}} = (-48\omega_{15} v_2^4\omega_{10}\omega_5 - 12cs^2\omega_{10}^2\omega_5^2 - 12v_2^2\omega_{10}^2\omega_5^2 - \omega_{15}^2 cs^4\omega_{10}^2\omega_5^2 - 3\omega_{15}^2 v_2^4\omega_{10}^2\omega_5^2 - 126\omega_{15} v_2^2 cs^2\omega_{10}^2\omega_5^2 - 24v_2^4\omega_{10}^2\omega_5 -$$
$$24cs^4\omega_{10}^2\omega_5 - 24\omega_{15} v_2^2\omega_{10}\omega_5^2 + 216\omega_{15}^2 v_2^2 cs^2\omega_{10} + 72\omega_{15}^2 v_2^4\omega_5 + 24\omega_{15}^2 cs^4\omega_5 - 12\omega_{15}^2 v_2^2 cs^2\omega_{10}^2\omega_5^2 + 48\omega_{15} v_2^2\omega_{10}^2 + 24\omega_{15} cs^2\omega_{10}^2 +$$
$$24\omega_{15} cs^4\omega_{10} + 48\omega_{15}^2 v_2^4\omega_{10} + 288\omega_{15}^2 v_2^2 cs^2\omega_5 - 144\omega_{15}^2 v_2^2 cs^2\omega_5^2 + 48\omega_{15} v_2^2\omega_{10}\omega_5 + 12v_2^4\omega_{10}^2\omega_5 + 12cs^4\omega_{10}^2\omega_5 + 3\omega_{15}^2 v_2^2\omega_{10}\omega_5^2 - 36\omega_{15}^2 v_2^4\omega_5^2 -$$
$$12\omega_{15}^2 cs^4\omega_5^2 + \omega_{15}^2 cs^2\omega_{10}^2\omega_5^2 + 24cs^2\omega_{10}^2\omega_5 + 24v_2^2\omega_{10}^2\omega_5 + 24\omega_{15} v_2^4\omega_{10}\omega_5^2 + 432\omega_{15} v_2^2 cs^2\omega_{10}^2\omega_5 - 12\omega_{15} cs^4\omega_{10}^2\omega_5^2 - 30\omega_{15} v_2^4\omega_{10}^2\omega_5^2 -$$
$$48\omega_{15}^2 cs^4\omega_{10}\omega_5 - 96\omega_{15}^2 v_2^4\omega_{10}\omega_5 - 24\omega_{15}^2 cs^2\omega_5 - 72\omega_{15}^2 v_2^2\omega_5 - 144\omega_{15} v_2^2 cs^2\omega_{10}\omega_5 - 24\omega_{15} cs^4\omega_{10} - 48\omega_{15} v_2^4\omega_{10}^2 - 48\omega_{15}^2 v_2^2\omega_{10} -$$
$$24\omega_{15}^2 cs^2\omega_{10} - 96\omega_{15} v_2^2\omega_{10}^2\omega_5 - 48\omega_{15} cs^2\omega_{10}^2\omega_5 - 432\omega_{15}^2 v_2^2 cs^2\omega_{10}\omega_5 + 72v_2^2 cs^2\omega_{10}^2\omega_5 - 36\omega_{15}^2 v_2^2\omega_{10}\omega_5^2 - 14\omega_{15}^2 cs^2\omega_{10}\omega_5^2 -$$
$$216\omega_{15} v_2^2 cs^2\omega_{10}^2 + 30\omega_{15} v_2^2\omega_{10}^2\omega_5^2 + 12\omega_{15} cs^2\omega_{10}^2\omega_5^2 - 144v_2^2 cs^2\omega_{10}^2\omega_5 + 150\omega_{15}^2 v_2^2 cs^2\omega_{10}\omega_5^2 + 96\omega_{15}^2 v_2^2\omega_{10}\omega_5 + 48\omega_{15}^2 cs^2\omega_{10}\omega_5 +$$
$$48\omega_{15} cs^4\omega_{10}^2\omega_5 + 96\omega_{15} v_2^4\omega_{10}^2\omega_5 + 72\omega_{15} v_2^2 cs^2\omega_{10}^2\omega_5^2 + 12\omega_{15}^2 cs^2\omega_5^2 + 36\omega_{15}^2 v_2^2\omega_5^2 + 14\omega_{15}^2 cs^4\omega_{10}\omega_5^2 + 36\omega_{15}^2 v_2^4\omega_{10}\omega_5^2)\frac{v_1}{24\omega_{15}^2\omega_{10}\omega_5^2}$$

$$C_{\mathrm{D}_y^4\rho}^{(1),\mathrm{CLBM1}} = (\omega_{10} cs^2 - 3v_2^4\omega_{10} + 6v_2^4 - 2cs^2 + 2cs^4 + 3v_2^2\omega_{10} - \omega_{10} cs^4 - 12v_2^2\omega_{10} cs^2 - 6v_2^2 + 24v_2^2 cs^2)\frac{v_1}{24\omega_{10}}$$

$$C_{\mathrm{D}_y^4\rho}^{(1),\mathrm{CLBM2}} = (-3v_2^4\omega_{10} + 6v_2^4 + 2cs^4 + cs^2\omega_{10} - 2cs^2 + 24cs^2 v_2^2 + 3v_2^2\omega_{10} - 12cs^2 v_2^2\omega_{10} - cs^4\omega_{10} - 6v_2^2)\frac{v_1}{24\omega_{10}}$$

$$C_{\mathrm{D}_y^4\rho}^{(1),\mathrm{CuLBM1}} = (-3v_2^4\omega_5 - cs^4\omega_5 + 6v_2^4 - 12v_2^2 cs^2\omega_5 - 2cs^2 + 3v_2^2\omega_5 + cs^2\omega_5 + 2cs^4 + 24v_2^2 cs^2 - 6v_2^2)\frac{v_1}{24\omega_5}$$

$$C_{\mathrm{D}_y^4\rho}^{(1),\mathrm{CuLBM2}} = (48v_2^2 cs^2\omega_2 - 36v_2^2\omega_1 cs^2\omega_2 - 3\omega_1 cs^4\omega_2 - 6v_2^2\omega_1 + 12v_2^4\omega_2 + 2\omega_1 cs^4 + 24v_2^2\omega_1 cs^2 + 4cs^4\omega_2 + 9v_2^2\omega_1\omega_2 + 6v_2^4\omega_1 - 12v_2^2\omega_2 +$$
$$3\omega_1 cs^2\omega_2 - 2\omega_1 cs^2 - 9v_2^4\omega_1\omega_2 - 4cs^2\omega_2)\frac{v_1}{72\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_y^4 v_1}^{(1)}$ at $\frac{\partial^4 v_1}{\partial x_2^4}$:

$$C_{\mathrm{D}_y^4 v_1}^{(1),\mathrm{SRT}} = (-144v_2^2 cs^2 + cs^2\omega^3 - 42v_2^4\omega^2 - 14cs^2\omega^2 - 72v_2^4 + 3v_2^4\omega^3 + 36cs^2\omega + 108v_2^4\omega + 48cs^4 + 30cs^4\omega^2 + 216v_2^2 cs^2\omega - 3v_2^2\omega^3 -$$
$$24cs^2 - 3cs^4\omega^3 + 42v_2^2\omega^2 - 108v_2^2\omega + 6v_2^2 cs^2\omega^3 + 72v_2^2 - 72cs^4\omega - 84v_2^2 cs^2\omega^2)\frac{\rho}{24\omega^3}$$

$$C_{\mathrm{D}_y^4 v_1}^{(1),\mathrm{MRT1}} = (\omega_{15}^2 cs^2\omega_5^3 + 18\omega_{15} v_2^2\omega_5^3 + 48\omega_{15} v_2^2 cs^2\omega_5^2 + 24\omega_{15} cs^4\omega_5 + 24\omega_{15}^2 v_2^4\omega_5 - 12\omega_{15} v_2^2 cs^2\omega_5^3 - 72\omega_{15} v_2^2\omega_5^2 - 8\omega_{15}^2 cs^2\omega_5^2 + 48\omega_{15} v_2^2\omega_5 +$$
$$12\omega_{15}^2 cs^2\omega_5 + 12v_2^2\omega_5^3 - 24\omega_{15} cs^4\omega_5^2 - 24\omega_{15}^2 v_2^4\omega_5^2 - 24\omega_{15} v_2^2 cs^2\omega_5 + 3\omega_{15}^2 v_2^4\omega_5^3 + 6\omega_{15} cs^4\omega_5^3 - 24v_2^4\omega_5^2 + 24\omega_{15}^2 cs^4 - 24\omega_{15} cs^2\omega_5 -$$
$$72\omega_{15}^2 v_2^2 cs^2\omega_5^2 - 24\omega_{15}^2 v_2^2\omega_5 - 96\omega_{15}^2 v_2^2 cs^2 + 72\omega_{15} v_2^4\omega_5^2 + 24\omega_{15} cs^4\omega_5^2 + 6\omega_{15}^2 v_2^2 cs^2\omega_5^3 - 3\omega_{15}^2 cs^4\omega_5^3 - 18\omega_{15} v_2^4\omega_5^3 - 24v_2^2 cs^2\omega_5^2 -$$
$$3\omega_{15}^2 v_2^2\omega_5^3 + 24v_2^2\omega_5^2 - 6\omega_{15} cs^2\omega_5^3 + 12v_2^2 cs^2\omega_5^3 - 48\omega_{15} v_2^4\omega_5 - 48\omega_{15}^2 cs^4\omega_5 + 24\omega_{15} cs^2\omega_5^2 - 12v_2^2\omega_5^3 + 156\omega_{15}^2 v_2^2 cs^2\omega_5 + 24\omega_{15}^2 v_2^4\omega_5^2)\frac{\rho}{24\omega_{15}^2\omega_5^3}$$

$$C_{\mathrm{D}_y^4 v_1}^{(1),\mathrm{MRT2}} = (-24v_2^2 cs^2\omega_5^2 - 6\omega_{15} cs^2\omega_5^3 + 18\omega_{15} v_2^2\omega_5^3 + 12v_2^2 cs^2\omega_5^3 + 24\omega_{15}^2 v_2^4\omega_5 - 48\omega_{15}^2 cs^4\omega_5 + 156\omega_{15}^2 v_2^2 cs^2\omega_5 + 24\omega_{15} cs^2\omega_5^2 -$$

$$72\omega_{15}v_2^2\omega_5^2 - 72\omega_{15}^2v_2^2cs^2\omega_5^2 - 24\omega_{15}cs^2\omega_5 + 48\omega_{15}v_2^2\omega_5 + 12v_2^4\omega_5^3 - 24\omega_{15}^2v_2^4\omega_5^2 + 24\omega_{15}^2cs^4\omega_5^2 + 24\omega_{15}^2cs^4 + 6\omega_{15}^2v_2^2cs^2\omega_5^3 - 96\omega_{15}^2v_2^2cs^2 +$$
$$3\omega_{15}^2v_2^4\omega_5^3 - 3\omega_{15}^2cs^4\omega_5 - 24v_2^4\omega_5^2 + 12\omega_{15}^2cs^2\omega_5 - 24\omega_{15}^2v_2^2\omega_5 + 72\omega_{15}v_2^4\omega_5^2 - 24\omega_{15}cs^4\omega_5^2 - 24\omega_{15}v_2^2cs^2\omega_5 - 18v_{15}v_2^4\omega_5^3 + 6\omega_{15}cs^4\omega_5^3 +$$
$$\omega_{15}^2cs^2\omega_5^3 - 3\omega_{15}^2v_2^2\omega_5^3 + 48\omega_{15}v_2^2cs^2\omega_5^2 + 24v_2^2\omega_5^2 - 48\omega_{15}v_2^2\omega_5 + 24\omega_{15}cs^4\omega_5 - 12v_2^2\omega_5^3 - 12\omega_{15}v_2^2cs^2\omega_5^3 - 8\omega_{15}^2cs^2\omega_5^3 + 24\omega_{15}^2v_2^2\omega_5^2)\frac{\rho}{24\omega_{15}^2\omega_5^3}$$

$C^{(1),\text{CLBM1}}_{\text{D}_y^4 v_1} = (-24\omega_{15}cs^2\omega_5 - 12\omega_{15}^2v_2^2cs^2\omega_5^2 + 24\omega_{15}^2cs^4\omega_5^2 + 30\omega_{15}v_2^2\omega_5^3 + 6\omega_{15}^2v_2^2cs^2\omega_5^3 - 72\omega_{15}v_2^2\omega_5^2 - 3\omega_{15}^2cs^4\omega_5^3 - 216v_2^2cs^2\omega_5^2 +$
$36v_2^4\omega_5^3 - 6\omega_{15}cs^2\omega_5^3 - 12\omega_{15}^2v_2^4\omega_5^2 - 48\omega_{15}^2cs^4\omega_5 + 108v_2^2cs^2\omega_5^3 + 3\omega_{15}^2v_2^4\omega_5^3 + 24\omega_{15}cs^2\omega_5^2 - 36\omega_{15}^2v_2^2cs^2\omega_5 - 72v_2^4\omega_5^2 + 72\omega_{15}v_2^4\omega_5^2 +$
$144\omega_{15}v_2^2cs^2\omega_5^2 + \omega_{15}^2cs^2\omega_5^3 + 24\omega_{15}cs^4\omega_5 - 8\omega_{15}^2cs^2\omega_5^2 - 30\omega_{15}v_2^2\omega_5^3 - 72\omega_{15}v_2^2cs^2\omega_5^2 + 24\omega_{15}^2cs^4 + 12\omega_{15}^2cs^2\omega_5 - 3\omega_{15}^2v_2^2\omega_5^3 -$
$24\omega_{15}cs^4\omega_5^2 + 72v_2^2\omega_5^2 + 72\omega_{15}v_2^2cs^2\omega_5 - 36v_2^2\omega_5^3 + 6\omega_{15}cs^4\omega_5^3 + 12\omega_{15}^2v_2^2\omega_5^2)\frac{\rho}{24\omega_{15}^2\omega_5^3}$

$C^{(1),\text{CLBM2}}_{\text{D}_y^4 v_1} = (\omega_{15}^2cs^2\omega_5^3 + 72\omega_{15}cs^2v_2^2\omega_5 + 24\omega_{15}^2cs^4 + 30\omega_{15}v_2^2\omega_5^3 - 8\omega_{15}^2cs^2\omega_5^2 - 72\omega_{15}v_2^2\omega_5^2 + 24\omega_{15}cs^4\omega_5 - 24\omega_{15}cs^4\omega_5^2 + 36v_2^4\omega_5^3 -$
$72\omega_{15}cs^2v_2^2\omega_5^3 - 12\omega_{15}^2v_2^4\omega_5^2 + 12\omega_{15}^2cs^2\omega_5 + 6\omega_{15}cs^4\omega_5^3 + 3\omega_{15}^2v_2^4\omega_5^3 + 144\omega_{15}cs^2v_2^2\omega_5^2 - 72v_2^4\omega_5^2 + 108cs^2v_2^2\omega_5^3 + 24\omega_{15}^2cs^4\omega_5^2 -$
$36\omega_{15}^2cs^2v_2^2\omega_5 + 72\omega_{15}v_2^4\omega_5^2 - 24\omega_{15}cs^2\omega_5 - 3\omega_{15}^2cs^4\omega_5^3 - 216cs^2v_2^2\omega_5^2 - 30\omega_{15}v_2^2\omega_5^3 - 6\omega_{15}cs^2\omega_5^3 + 6\omega_{15}^2cs^2v_2^2\omega_5^3 - 3\omega_{15}^2v_2^2\omega_5^3 + 72v_2^2\omega_5^2 -$
$12\omega_{15}^2cs^2v_2^2\omega_5^2 + 24\omega_{15}cs^2\omega_5^2 - 36v_2^2\omega_5^3 + 12\omega_{15}^2v_2^2\omega_5^2 - 48\omega_{15}^2cs^4\omega_5)\frac{\rho}{24\omega_{15}^2\omega_5^3}$

$C^{(1),\text{CuLBM1}}_{\text{D}_y^4 v_1} =$
$(24cs^2\omega_7\omega_1^2 + 30v_2^2\omega_7\omega_1^3 - 6cs^2\omega_7\omega_1^3 - 36v_2^2cs^2\omega_7^2\omega_1 - 72v_2^2\omega_7\omega_1^2 + 24cs^4\omega_7\omega_1 - 12v_2^2cs^2\omega_7^2\omega_1^2 - 24cs^4\omega_7\omega_1^2 + 72v_2^2\omega_1^2 + 24cs^4\omega_7^2 - 30v_2^4\omega_7\omega_1^3 +$
$6cs^4\omega_7\omega_1^3 + 6v_2^2cs^2\omega_7^2\omega_1^3 + 72v_2^4\omega_7\omega_1^2 - 36v_2^2\omega_1^3 - 24cs^2\omega_7\omega_1 - 3cs^4\omega_7^2\omega_1^3 - 72v_2^2cs^2\omega_7\omega_1^3 - 12v_2^2\omega_7^2\omega_1^2 + 12cs^2\omega_7^2\omega_1 - 216v_2^2cs^2\omega_1^2 + 144v_2^2cs^2\omega_7\omega_1^2 +$
$24cs^4\omega_7^2\omega_1^2 + 108v_2^2cs^2\omega_1^3 + 3v_2^4\omega_7^2\omega_1^3 + cs^2\omega_7^2\omega_1^3 + 12v_2^2\omega_7^2\omega_1^2 + 72v_2^2cs^2\omega_7\omega_1 + 36v_2^4\omega_1^3 - 48cs^4\omega_7^2\omega_1 - 8cs^2\omega_7^2\omega_1^2 - 72v_2^4\omega_1^2 - 3v_2^2\omega_7^2\omega_1^3)\frac{\rho}{24\omega_7^2\omega_1^3}$

$C^{(1),\text{CuLBM2}}_{\text{D}_y^4 v_1} = (9v_2^4\omega_4^2\omega_1^3 + 36v_2^2\omega_3^2\omega_4\omega_1cs^2 - 12v_2^4\omega_3^2\omega_4^2\omega_1^2 - 9v_2^2\omega_3^2\omega_1^3 - 12\omega_3\omega_4^2\omega_1cs^2 + 18v_2^4\omega_3\omega_4\omega_1^3 + 18v_2^2\omega_3^2\omega_1^2 - 12v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2 -$
$36v_2^2\omega_3\omega_4\omega_1^2 + 3v_2^4\omega_3^2\omega_4^2\omega_1^3 - 18v_2^4\omega_4^2\omega_1^2 + \omega_3^2\omega_4^3\omega_1^3cs^2 + 54v_2^2\omega_3\omega_4\omega_1^3cs^2 + 3\omega_3\omega_4^3\omega_1cs^4 - 12\omega_3\omega_4^2\omega_1cs^4 + 27v_2^2\omega_3^2\omega_1^3cs^2 - 9v_2^2\omega_4^2\omega_1^3 -$
$48\omega_3^2\omega_4^2\omega_1cs^4 + 9v_2^2\omega_4^2\omega_1^3 + 15v_2^2\omega_3^2\omega_4\omega_1^3 - 36v_2^2\omega_3\omega_4^2\omega_1^2 - 12\omega_3\omega_4\omega_1cs^2 + 36v_2^2\omega_3\omega_4^2\omega_1cs^2 + 3\omega_3\omega_4^3\omega_1cs^4 + 15v_2^2\omega_3\omega_4^2\omega_1^3 - 36v_2^2\omega_3^2\omega_4\omega_1^2 -$
$54v_2^2\omega_3^2\omega_1^2cs^2 - 18v_2^4\omega_3^2\omega_1^2 + 18v_2^2\omega_4^2\omega_1^2 - 12\omega_3\omega_4\omega_1cs^4 - 8\omega_3^2\omega_4^2cs^2 - 108v_2^2\omega_3\omega_4\omega_1^2cs^2 + 6v_2^2\omega_3^2\omega_4^3cs^2 + 12v_2^2\omega_3^2\omega_4^2\omega_1^2 - 18v_2^2\omega_3\omega_4\omega_1^3 +$
$12\omega_3^2\omega_4\omega_1cs^4 + 12\omega_3^2\omega_4^2\omega_1cs^2 + 24\omega_3^2\omega_4^2cs^4 + 27v_2^2\omega_4^2\omega_1^3cs^2 + 36v_2^2\omega_3\omega_4\omega_1^2 - 3v_2^2\omega_3^2\omega_4^3\omega_1 - 3\omega_3\omega_4^3\omega_1cs^2 - 36v_2^2\omega_3^2\omega_4\omega_1^3cs^2 +$
$72v_2^2\omega_3\omega_4^2\omega_1^2cs^2 + 12\omega_3\omega_4\omega_1^2cs^2 - 15v_2^4\omega_3^2\omega_4\omega_1^3 - 36v_2^2\omega_3^2\omega_4\omega_1^2cs^2 + 36v_2^4\omega_3\omega_4\omega_1^2 + 24\omega_3^2\omega_4^2cs^4 + 12\omega_3\omega_4\omega_1cs^4 - 36v_2^2\omega_3\omega_4\omega_1^3cs^2 -$
$3\omega_3^2\omega_4\omega_1^3cs^2 - 15v_2^2\omega_3\omega_4^2\omega_1^3 + 12\omega_3\omega_4^2\omega_1^2cs^2 + 72v_2^2\omega_3^2\omega_4\omega_1^2cs^2 + 36v_2^4\omega_3\omega_4\omega_1^2 - 3\omega_3^2\omega_4\omega_1^3cs^4 - 54v_2^2\omega_4^2\omega_1^2cs^2)\frac{\rho}{24\omega_3^2\omega_4^2\omega_1^3}$

coefficient $C^{(1)}_{\text{D}_y^4 v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_2^4}$:

$C^{(1),\text{SRT}}_{\text{D}_y^4 v_2} = (-4 - 3cs^2\omega + 6cs^2 - 5v_2^2\omega + 2\omega + 10v_2^2)\frac{\rho v_1 v_2}{12\omega}$

$C^{(1),\text{MRT1}}_{\text{D}_y^4 v_2} = (-25\omega_{15}^2\omega_{10}\omega_5^2 - 120\omega_{15}^2\omega_{10}cs^2\omega_5 + 24v_2^2\omega_{10}^2\omega_5^2 + 36\omega_{15}v_2^2\omega_{10}\omega_5^2 + 24\omega_{15}^2\omega_5^2 - 33\omega_{15}\omega_{10}^2cs^2\omega_5^2 + 21\omega_{15}\omega_{10}^2\omega_5^2 - 84\omega_{15}v_2^2\omega_{10}^2 -$
$36\omega_{15}^2cs^2\omega_5^2 - 36\omega_{15}^2\omega_{10} + 72\omega_{15}^2cs^2\omega_5 - 72\omega_{15}v_2^2\omega_{10}\omega_5 - 48\omega_{15}^2\omega_5 - 5\omega_{15}^2v_2^2\omega_{10}^2\omega_5^2 - 60\omega_{15}\omega_{10}^2cs^2 - 72\omega_{15}\omega_{10}^2\omega_5 + 120\omega_{15}\omega_{10}cs^2\omega_5 -$
$48v_2^2\omega_{10}^2\omega_5 + 60\omega_{15}^2\omega_{10}cs^2 + 72\omega_{15}^2\omega_{10}\omega_5 + 39\omega_{15}^2\omega_{10}cs^2\omega_5^2 + 120\omega_{15}^2v_2^2\omega_5 - 48\omega_{10}^2cs^2\omega_5 + 84\omega_{15}^2v_2^2\omega_{10} - 24\omega_{15}\omega_{10}cs^2\omega_5 +$
$168\omega_{15}v_2^2\omega_{10}^2\omega_5 + 24\omega_{10}^2\omega_5 - 3\omega_{15}^2\omega_{10}^2cs^2\omega_5^2 + 24\omega_{15}\omega_{10}\omega_5 + 61\omega_{15}^2v_2^2\omega_{10}\omega_5^2 - 51\omega_{15}v_2^2\omega_{10}^2\omega_5^2 - 12\omega_{10}^2\omega_5^2 - 12\omega_{15}\omega_{10}\omega_5^2 - 168\omega_{15}^2v_2^2\omega_{10}\omega_5 +$
$36\omega_{15}\omega_{10}^2 + 12\omega_{15}\omega_{10}cs^2\omega_5^2 + 2\omega_{15}^2\omega_{10}^2\omega_5^2 - 60\omega_{15}^2v_2^2\omega_5^2 + 24\omega_{10}^2cs^2\omega_5^2)\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_{10}^2\omega_5^2}$

$C^{(1),\text{MRT2}}_{\text{D}_y^4 v_2} = (-25\omega_{15}^2\omega_{10}\omega_5^2 + 24cs^2\omega_{10}^2\omega_5^2 + 24v_2^2\omega_{10}^2\omega_5^2 + 36\omega_{15}v_2^2\omega_{10}\omega_5^2 + 12\omega_{15}cs^2\omega_{10}\omega_5^2 + 24\omega_{15}^2\omega_5^2 + 21\omega_{15}\omega_{10}^2\omega_5^2 - 84\omega_{15}v_2^2\omega_{10}^2 -$
$60\omega_{15}cs^2\omega_{10}^2 - 36\omega_{15}^2\omega_{10} - 72\omega_{15}v_2^2\omega_{10}\omega_5 - 24\omega_{15}cs^2\omega_{10}\omega_5 - 48\omega_{15}^2\omega_5 - 5\omega_{15}^2v_2^2\omega_{10}^2\omega_5^2 - 3\omega_{15}^2cs^2\omega_{10}^2\omega_5^2 - 72\omega_{15}\omega_{10}^2\omega_5 - 48cs^2\omega_{10}^2\omega_5 -$
$48v_2^2\omega_{10}^2\omega_5 + 72\omega_{15}^2\omega_{10}\omega_5 + 72\omega_{15}^2cs^2\omega_5 + 120\omega_{15}^2v_2^2\omega_5 + 84\omega_{15}^2v_2^2\omega_{10} + 60\omega_{15}^2cs^2\omega_{10} + 168\omega_{15}v_2^2\omega_{10}^2\omega_5 + 120\omega_{15}cs^2\omega_{10}^2\omega_5 + 24\omega_{10}^2\omega_5 +$
$24\omega_{15}\omega_{10}\omega_5 + 61\omega_{15}^2v_2^2\omega_{10}\omega_5^2 + 39\omega_{15}^2cs^2\omega_{10}\omega_5^2 - 51\omega_{15}v_2^2\omega_{10}^2\omega_5^2 - 33\omega_{15}cs^2\omega_{10}^2\omega_5^2 - 12\omega_{10}^2\omega_5^2 - 12\omega_{15}\omega_{10}\omega_5^2 - 168\omega_{15}^2v_2^2\omega_{10}\omega_5 -$
$120\omega_{15}^2cs^2\omega_{10}\omega_5 + 36\omega_{15}\omega_{10}^2 + 2\omega_{15}^2\omega_{10}^2\omega_5^2 - 36\omega_{15}^2cs^2\omega_5^2 - 60\omega_{15}^2v_2^2\omega_5^2)\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_{10}^2\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}_y^4 v_2} = (-4 - 3\omega_{10}cs^2 + 6cs^2 + 2\omega_{10} - 5v_2^2\omega_{10} + 10v_2^2)\frac{\rho v_1 v_2}{12\omega_{10}}$

$C^{(1),\text{CLBM2}}_{\text{D}_y^4 v_2} = (-4 - 3cs^2\omega_{10} + 2\omega_{10} + 6cs^2 - 5v_2^2\omega_{10} + 10v_2^2)\frac{\rho v_1 v_2}{12\omega_{10}}$

$C^{(1),\text{CuLBM1}}_{\text{D}_y^4 v_2} = (-4 + 6cs^2 - 5v_2^2\omega_5 - 3cs^2\omega_5 + 10v_2^2 + 2\omega_5)\frac{\rho v_1 v_2}{12\omega_5}$

$C^{(1),\text{CuLBM2}}_{\text{D}_y^4 v_2} = (10v_2^2\omega_1 + 6\omega_1\omega_2 - 15v_2^2\omega_1\omega_2 + 20v_2^2\omega_2 - 4\omega_1 - 9\omega_1cs^2\omega_2 + 6\omega_1cs^2 + 12cs^2\omega_2 - 8\omega_2)\frac{\rho v_1 v_2}{36\omega_1\omega_2}$

coefficient $C^{(1)}_{\text{D}_x^3 \text{D}_z \rho}$ **at** $\frac{\partial^4 \rho}{\partial x_1^3 \partial x_3}$:

$C^{(1),\text{SRT}}_{\text{D}_x^3 \text{D}_z \rho} = 0$

$$C^{(1),\text{MRT1}}_{\text{D}_x^3\text{D}_z\rho} = (-4\omega_9^2\omega_6^2cs^4 + 36v_1^2\omega_9^2\omega_{13}^2cs^2 - 20v_1^4\omega_9\omega_6^2\omega_{13} - 144v_1^2\omega_9\omega_6^2\omega_{13}^2cs^2 - 20v_1^2\omega_9\omega_6\omega_{13}^2 - 8v_1^4\omega_9^3\omega_{13} - 8\omega_9^2\omega_6^2\omega_{13}cs^2 -$$
$$20v_1^2\omega_9^3\omega_6\omega_{13} - 51v_1^2\omega_9^3\omega_6^2\omega_{13}cs^2 - 8\omega_6^2\omega_{13}^2cs^2 - 16v_1^4\omega_9^2\omega_6\omega_{13} + 4\omega_9^2\omega_6^2\omega_{13}^2cs^4 + 8\omega_9^2\omega_6\omega_{13}^2cs^2 + 8v_1^4\omega_9^3\omega_{13}^2 - 24v_1^2\omega_9^3\omega_6cs^2 - 4\omega_9^3\omega_{13}cs^4 -$$
$$13v_1^2\omega_9^3\omega_6^2\omega_{13}^2 - 32v_1^2\omega_9^3\omega_6\omega_{13} - 4\omega_9^3\omega_6cs^4 - 4\omega_9\omega_6^2\omega_{13}cs^4 - 20v_1^4\omega_9^2\omega_6\omega_{13}^2 - 36v_1^2\omega_9^3\omega_{13}^2cs^2 - 84v_1^2\omega_9^2\omega_6\omega_{13}^2cs^2 + 8v_1^2\omega_9^3\omega_{13} -$$
$$24v_1^2\omega_9^2\omega_6^2cs^2 + 12\omega_9\omega_6^2\omega_{13}^2cs^2 + 4\omega_9^2\omega_{13}^2cs^4 - 4\omega_9^3\omega_6^2cs^2 + 8\omega_9^3\omega_6\omega_{13}cs^4 - 13v_1^4\omega_9^2\omega_6^2\omega_{13} + 120v_1^2\omega_9^2\omega_6^2\omega_{13}cs^2 - 8v_1^2\omega_9^2\omega_{13}^2 + 4\omega_9^3\omega_6^2\omega_{13}cs^2 +$$
$$4\omega_9\omega_6^2\omega_{13}^2cs^4 - 36v_1^4\omega_9\omega_6^2\omega_{13}^2 + 4\omega_9^3\omega_6cs^2 + 20v_1^2\omega_9\omega_6^2\omega_{13} + 4\omega_9\omega_6^2\omega_{13}cs^2 - 4v_1^4\omega_9^2\omega_6^2 + 96v_1^2\omega_6^2\omega_{13}^2cs^2 + 51v_1^2\omega_9^2\omega_6^2\omega_{13}^2cs^2 + 20v_1^4\omega_9^3\omega_6\omega_{13} -$$
$$4v_1^2\omega_9^3\omega_6^2 + 20v_1^4\omega_9\omega_6\omega_{13}^2 - 4\omega_9^3\omega_{13}cs^4 - 4\omega_9\omega_6\omega_{13}^2cs^2 - 4v_1^4\omega_9^3\omega_6 + 16v_1^2\omega_9^2\omega_6\omega_{13} - 12\omega_9\omega_6^2\omega_{13}^2cs^4 + 13v_1^4\omega_9^2\omega_6^2\omega_{13} - 4\omega_9^2\omega_{13}^2cs^2 +$$
$$4\omega_9^3\omega_6^2cs^4 - 8\omega_9^3\omega_6\omega_{13}cs^2 - 48v_1^2\omega_9^2\omega_6\omega_{13}^2cs^2 - 24v_1^2\omega_6^2\omega_{13}^2 + 72v_1^2\omega_9\omega_6\omega_{13}^2cs^2 + 32v_1^4\omega_9^2\omega_6^2\omega_{13} + 4v_1^2\omega_9^2\omega_6^2 + 8\omega_9^2\omega_6^2\omega_{13}cs^4 + 4\omega_9^2\omega_6^2cs^2 +$$
$$24v_1^2\omega_9^3\omega_6^2cs^2 + 84v_1^2\omega_9^2\omega_6\omega_{13}cs^2 + 4v_1^4\omega_9^3\omega_6^2 + 20v_1^2\omega_9^2\omega_6\omega_{13} - 8\omega_9^2\omega_6\omega_{13}cs^4 + 4\omega_9^3\omega_{13}cs^2 - 72v_1^2\omega_9\omega_6^2\omega_{13}cs^2 + 4v_1^4\omega_9^3\omega_6 + 8\omega_6^2\omega_{13}cs^4 +$$
$$36v_1^2\omega_9\omega_6^2\omega_{13}^2 + 24v_1^4\omega_6^2\omega_{13}^2 + 13v_1^2\omega_9^3\omega_6^2\omega_{13} - 4\omega_9^2\omega_6^2\omega_{13}^2cs^2)\frac{v_3}{4\omega_9^3\omega_6^2\omega_{13}^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}_x^3\text{D}_z\rho} = (4\omega_9cs^2\omega_6^2\omega_{13} - 20v_1^4\omega_9\omega_6^2\omega_{13} + 8\omega_9^2cs^2\omega_6\omega_{13}^2 - 48v_1^2\omega_9^2cs^2\omega_6\omega_{13} - 8\omega_9^3cs^2\omega_6\omega_{13}^2 - 20v_1^2\omega_9\omega_6\omega_{13}^2 - 8v_1^4\omega_9^3\omega_{13} -$$
$$20v_1^2\omega_9^3\omega_6\omega_{13} - 144v_1^2\omega_9cs^2\omega_6^2\omega_{13}^2 - 16v_1^4\omega_9^2\omega_6\omega_{13} + 36v_1^2\omega_9^2cs^2\omega_{13}^2 + 24v_1^2\omega_9^3cs^2\omega_6 + 4\omega_9^2cs^2\omega_6^2 - 8cs^2\omega_6^2\omega_{13}^2 - 12\omega_9cs^4\omega_6^2\omega_{13}^2 +$$
$$8v_1^4\omega_9^3\omega_{13}^2 + 4\omega_9^3cs^4\omega_6^2 - 13v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + 4\omega_9^2cs^4\omega_{13}^2 - 4\omega_9cs^4\omega_6^2\omega_{13} - 4\omega_9^3cs^4\omega_6 - 32v_1^2\omega_9^2\omega_6\omega_{13} - 8\omega_9^2cs^4\omega_6\omega_{13} + 8\omega_9^3cs^4\omega_6\omega_{13} -$$
$$20v_1^4\omega_9^2\omega_6\omega_{13}^2 + 4\omega_9^3cs^2\omega_{13} + 8v_1^2\omega_9^3\omega_{13} - 24v_1^2\omega_9^3cs^2\omega_6 - 84v_1^2\omega_9^2cs^2\omega_6\omega_{13}^2 - 72v_1^2\omega_9cs^2\omega_6^2\omega_{13} - 13v_1^4\omega_9^3\omega_6^2\omega_{13} - 8v_1^2\omega_9^2\omega_{13}^2 + 8cs^4\omega_6^2\omega_{13} +$$
$$12\omega_9cs^2\omega_6^2\omega_{13}^2 - 36v_1^4\omega_9\omega_6^2\omega_{13}^2 + 84v_1^2\omega_9^3cs^2\omega_6\omega_{13} + 20v_1^2\omega_9\omega_6\omega_{13} - 4v_1^4\omega_9^2\omega_6^2 + 96v_1^2cs^2\omega_6^2\omega_{13}^2 + 51v_1^2\omega_9^2cs^2\omega_6^2\omega_{13}^2 - 4\omega_9^2cs^4\omega_6^2 -$$
$$4\omega_9cs^2\omega_6\omega_{13}^2 + 20v_1^4\omega_9^3\omega_6\omega_{13} - 4\omega_9^3cs^2\omega_6^2 - 51v_1^2\omega_9^3cs^2\omega_6^2\omega_{13} - 24v_1^2\omega_9^2cs^2\omega_6^2 - 4\omega_9^2cs^2\omega_{13}^2 - 4v_1^2\omega_9^3\omega_6^2 + 20v_1^4\omega_9\omega_6\omega_{13}^2 - 8\omega_9^2cs^2\omega_6^2\omega_{13} +$$
$$4\omega_9^2cs^4\omega_6^2\omega_{13} - 4v_1^4\omega_9^3\omega_6 + 16v_1^2\omega_9^2\omega_6\omega_{13} + 13v_1^4\omega_9^2\omega_6^2\omega_{13} - 4\omega_9^3cs^4\omega_6\omega_{13} - 24v_1^2\omega_6^2\omega_{13}^2 + 32v_1^4\omega_9^2\omega_6^2\omega_{13} + 4v_1^2\omega_9^2\omega_6^2 + 4\omega_9cs^4\omega_6\omega_{13}^2 +$$
$$4v_1^4\omega_9^3\omega_6^2 + 20v_1^2\omega_9^2\omega_6\omega_{13} + 8\omega_9^3cs^4\omega_6^2\omega_{13} + 4\omega_9^3cs^2\omega_6 - 4\omega_9^2cs^2\omega_6^2\omega_{13} - 36v_1^2\omega_9^3cs^2\omega_{13} + 4v_1^4\omega_9^3\omega_6 + 36v_1\omega_9\omega_6^2\omega_{13} + 4\omega_9^3cs^2\omega_6^2\omega_{13} +$$
$$120v_1^2\omega_9^3cs^2\omega_6^2\omega_{13} + 24v_1^4\omega_6^2\omega_{13}^2 - 4\omega_9^3cs^4\omega_{13} + 13v_1^2\omega_9^3\omega_6^2\omega_{13} + 72v_1^2\omega_9cs^2\omega_6\omega_{13}^2)\frac{v_3}{4\omega_9^3\omega_6^2\omega_{13}^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_x^3\text{D}_z\rho} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x^3\text{D}_z\rho} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_x^3\text{D}_z\rho} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_x^3\text{D}_z\rho} = (48v_1^2\omega_3^2\omega_1\omega_2^2 + \omega_3^2\omega_1^3\omega_2^2 + 24v_1^2v_3\omega_3^2\omega_1^3 + 5\omega_3^2\omega_1^2cs^2\omega_2^3 + 2v_3^2\omega_3^2\omega_1^3cs^2\omega_2^2 - 18\omega_3\omega_1^3cs^2\omega_2^2 - 18v_3^2\omega_3\omega_1^2cs^2\omega_2^3 + 24v_1^2v_3^2\omega_3^2\omega_1\omega_2^2 +$$
$$8v_3^2\omega_3^2\omega_2^2 - 36\omega_1^3cs^4\omega_2^2 - 12v_3\omega_3^2cs^4\omega_2^3 + 20\omega_3^2cs^2\omega_2^3 - 4\omega_3^2\omega_1^2\omega_2 - 34\omega_3^2\omega_1^2cs^2\omega_2^2 - 4v_3^2\omega_3\omega_1^2cs^2\omega_2^2 + 216v_1^2\omega_3^2\omega_1^3cs^2 - 12\omega_1^2cs^2\omega_2^3 +$$
$$24v_1^2\omega_3^2\omega_2^3 - 60v_1^2\omega_3^2\omega_1\omega_2^2 + 6\omega_3^2\omega_1^3cs^4\omega_2^2 - 54\omega_3\omega_1^2cs^4\omega_2^3 + 96v_1^2v_3^2\omega_3^2\omega_1\omega_2^2 - 36v_1^4\omega_3^2\omega_1^3\omega_2 + 72\omega_3^3\omega_1^3cs^4 - 84\omega_3^3\omega_1^3cs^4\omega_2 + 216v_1^2\omega_3^2\omega_1^2cs^2\omega_2^2 -$$
$$4\omega_3^2\omega_1^2\omega_2 + 40\omega_3^2\omega_1^2cs^2\omega_2 - 8v_3^2\omega_3^2\omega_1\omega_2^3 - 8\omega_3\omega_1cs^2\omega_2^3 + 16v_3^2\omega_3^2\omega_1^3cs^2 + 22v_3^2\omega_3^2\omega_1cs^2\omega_2^3 + 42\omega_3^2\omega_1cs^4\omega_2^3 - 72v_1^2\omega_3^2cs^2\omega_2^3 + 48v_1^4\omega_3^2\omega_2^3 +$$
$$72v_1^4\omega_3^2\omega_1^2\omega_2 - 8\omega_3^2\omega_2^3 + 8v_3^2\omega_3^2\omega_1cs^2\omega_2^2 - 8v_3^2\omega_3^2\omega_1\omega_2^2 - 4\omega_3^2\omega_1^3\omega_2 + 4\omega_3\omega_1^3cs^2\omega_2 - 12v_3^2\omega_1^3cs^2\omega_2^2 - 20v_3^2\omega_3^2\omega_1cs^2\omega_2 - \omega_3^2\omega_1^3\omega_2^3 +$$
$$42\omega_3^2\omega_1^2cs^4\omega_2^2 - 48v_1^2\omega_3^3\omega_1 - 216v_1^2\omega_3^2\omega_1cs^2\omega_2^2 + 24v_1^2v_3^2\omega_3^2\omega_1^2\omega_2 + 36\omega_1^2cs^4\omega_2^3 - 72v_1^4\omega_3^2\omega_1\omega_2^2 - 324v_1^2\omega_3^2\omega_1^3cs^2\omega_2 - 24v_1^2\omega_3^2\omega_1^2\omega_2 +$$
$$18\omega_3\omega_1^2cs^2\omega_2^3 + 18v_3^2\omega_3\omega_1^3cs^2\omega_2^2 - 5\omega_3^2\omega_1^3cs^2\omega_2^2 - 2v_3^2\omega_3^2\omega_1^3cs^2\omega_2^2 - 52\omega_3^2\omega_1^3cs^2 + 8\omega_3^2\omega_1\omega_2^3 + 4v_3^2\omega_3^2\omega_1^3\omega_2^2 - 72v_1^2v_3^2\omega_3^2\omega_2^3 - 36v_1^4\omega_3^2\omega_1\omega_2^3 +$$
$$108v_1^2\omega_3^2\omega_1cs^2\omega_2^3 + 24v_1^2v_3^2\omega_3^3\omega_1^3\omega_2 + 54\omega_3\omega_1^3cs^4\omega_2^2 - 6\omega_3^2\omega_1^2cs^4\omega_2^3 + 12\omega_1^3cs^2\omega_2^2 + v_3^2\omega_3^2\omega_1^3\omega_2^3 + 8\omega_3^2\omega_1\omega_2^3 + 4v_3^2\omega_3^2\omega_1^3\omega_2 + 4\omega_3\omega_1^2cs^2\omega_2^2 -$$
$$2v_3^2\omega_3^2\omega_1cs^2\omega_2^2 - 24v_1^2\omega_3^2\omega_1^3\omega_2^2 - 4v_3^2\omega_3^2\omega_1^3 - 36\omega_3^2cs^4\omega_2^3 - 22\omega_3^2\omega_1cs^2\omega_2^3 + 8v_3^2\omega_3\omega_1cs^2\omega_2^3 - v_3^2\omega_3^2\omega_1^3\omega_2^2 + 24v_1^4\omega_3^2\omega_1^3 - 4v_3^2\omega_3^2\omega_1^2cs^2\omega_2 +$$
$$24v_1^2\omega_3^2\omega_1^2\omega_2^3 + 84v_1^2\omega_3^2\omega_1^3\omega_2 - 20v_3^2\omega_3^2cs^2\omega_2^3 + 4\omega_3^2\omega_1^3 - 24v_1^2v_3^2\omega_3^2\omega_1^2\omega_2^3 - 48v_1^2v_3^2\omega_3^2\omega_1^3\omega_2 - 12\omega_3\omega_1^3cs^4\omega_2 + 56\omega_3^2\omega_1^3cs^2\omega_2 + 12v_3^2\omega_3^2\omega_1cs^2\omega_2^2 -$$
$$24v_1^2\omega_3^3\omega_1^2\omega_2^2 - 4v_3^2\omega_3\omega_3\omega_1^3cs^2\omega_2 - 8\omega_3^2\omega_1cs^2\omega_2^2 + 4v_3^2\omega_3^2\omega_1^2\omega_2 - 36\omega_3^2\omega_1^2cs^4\omega_2 - 48v_1^2v_3^2\omega_3^2\omega_1^2\omega_2^2 + 24\omega_3\omega_1cs^4\omega_2^3 + 72v_1^2\omega_3^2\omega_1^3cs^2\omega_2^2)\frac{v_3}{36\omega_3^2\omega_1^3\omega_2^3}$$

coefficient $C^{(1)}_{\text{D}_x^3\text{D}_z v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^3 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}_x^3\text{D}_z v_1} = 0$$

$$C^{(1),\text{MRT1}}_{\text{D}_x^3\text{D}_z v_1} = (12\omega_9^3\omega_{13} + 64v_1^2\omega_9\omega_6\omega_{13}^2 + 56\omega_9^2\omega_6^2\omega_{13}cs^2 + 68v_1^2\omega_9^3\omega_6\omega_{13} + 16\omega_9^2\omega_6\omega_{13} + 48\omega_6^2\omega_{13}^2cs^2 - 12\omega_9^2\omega_{13}^2 - 44\omega_9\omega_6\omega_{13}^2cs^2 +$$
$$24\omega_9\omega_6^2\omega_{13} + 43v_1^2\omega_9^2\omega_6^2\omega_{13}^2 + 48\omega_9\omega_6^2\omega_{13}^2 + 104v_1^2\omega_9^2\omega_6^2\omega_{13} + 17\omega_9^3\omega_6^2\omega_{13} - 28v_1^2\omega_9^3\omega_{13} - 72\omega_9\omega_6^2\omega_{13}^2cs^2 + 16\omega_9^3\omega_6^2cs^2 + 28\omega_9^2\omega_6\omega_{13} +$$
$$28v_1^2\omega_9^2\omega_{13}^2 - 25\omega_9^3\omega_6^2\omega_{13}cs^2 - 16\omega_9^3\omega_6cs^2 - 64v_1^2\omega_9\omega_6^2\omega_{13} - 32\omega_9\omega_6^2\omega_{13}cs^2 - 17\omega_9^2\omega_6^2\omega_{13}^2 + 8\omega_9^2\omega_6^2 + 16v_1^2\omega_9^3\omega_6^2 - 24\omega_9\omega_6^2\omega_{13} - 28\omega_9^3\omega_6\omega_{13} +$$
$$32\omega_9\omega_6^2\omega_{13}cs^2 - 48v_1^2\omega_9^2\omega_6\omega_{13} + 8\omega_9^3\omega_6^2 + 20\omega_9^2\omega_{13}^2cs^2 + 44\omega_9^3\omega_6\omega_{13}cs^2 + 80v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 16v_1^2\omega_9^2\omega_6^2 - 8\omega_9^3\omega_6^2 - 16\omega_9^2\omega_6^2cs^2 - 16\omega_9^3\omega_6\omega_{13}cs^2 -$$
$$68v_1^2\omega_9^3\omega_6\omega_{13}^2 - 32\omega_6^2\omega_{13}^2 - 20\omega_9^3\omega_{13}cs^2 - 16v_1^2\omega_9^3\omega_6^2 - 120v_1^2\omega_9\omega_6^2\omega_{13}^2 - 40\omega_9^2\omega_6^2\omega_{13} - 43v_1^2\omega_9^3\omega_6^2\omega_{13} + 25\omega_9^2\omega_6^2\omega_{13}cs^2)\frac{\rho v_1 v_3}{4\omega_9^3\omega_6^2\omega_{13}^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}_x^3\text{D}_z v_1} = (-32\omega_9cs^2\omega_6^2\omega_{13} + 12\omega_9^3\omega_{13} - 44\omega_9^2cs^2\omega_6\omega_{13}^2 + 44\omega_9^3cs^2\omega_6\omega_{13} + 64v_1^2\omega_9\omega_6\omega_{13}^2 + 68v_1^2\omega_9^3\omega_6\omega_{13} + 16\omega_9\omega_6\omega_{13} - 12\omega_9^2\omega_{13}^2 -$$
$$16\omega_9^3cs^2\omega_6^2 + 48cs^2\omega_6^2\omega_{13}^2 + 24\omega_9\omega_6^2\omega_{13} + 43v_1^2\omega_9^2\omega_6^2\omega_{13}^2 + 48\omega_9\omega_6^2\omega_{13}^2 + 104v_1^2\omega_9^2\omega_6^2\omega_{13} + 17\omega_9^3\omega_6^2\omega_{13} - 20\omega_9^3cs^2\omega_{13} - 28v_1^2\omega_9^3\omega_{13} +$$
$$28\omega_9\omega_6\omega_{13}^2 + 28v_1^2\omega_9^2\omega_{13}^2 - 72\omega_9cs^2\omega_6^2\omega_{13} - 16\omega_9^2cs^2\omega_6\omega_{13} - 64v_1^2\omega_9\omega_6^2\omega_{13} - 17\omega_9^2\omega_6^2\omega_{13}^2 + 32\omega_9cs^2\omega_6\omega_{13} + 16\omega_9^3cs^2\omega_6^2 + 20\omega_9^2cs^2\omega_{13}^2 +$$
$$8\omega_9^2\omega_6^2 + 16v_1^2\omega_9^3\omega_6^2 + 56\omega_9^3cs^2\omega_6^2\omega_{13} - 24\omega_9\omega_6^2\omega_{13} - 28\omega_9^3\omega_6\omega_{13} - 48v_1^2\omega_9^2\omega_6\omega_{13} + 8\omega_9^3\omega_6^2 + 80v_1^2\omega_6^2\omega_{13}^2 - 16v_1^2\omega_9^2\omega_6^2 - 8\omega_9^3\omega_6^2 - 68v_1^2\omega_9^3\omega_6\omega_{13}^2 -$$
$$32\omega_6^2\omega_{13}^2 - 16\omega_9^3cs^2\omega_6 + 25\omega_9^3cs^2\omega_6^2\omega_{13} - 16v_1^2\omega_9^3\omega_6 - 120v_1^2\omega_9\omega_6^2\omega_{13}^2 - 25\omega_9^3cs^2\omega_6^2\omega_{13} - 40\omega_9^2\omega_6^2\omega_{13} - 43v_1^2\omega_9^3\omega_6^2\omega_{13})\frac{\rho v_1 v_3}{4\omega_9^3\omega_6^2\omega_{13}^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_x^3\text{D}_z v_1} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x^3\text{D}_z v_1} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}^3_x \text{D}_z v_1} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}^3_x \text{D}_z v_1} = (-66v_1^2\omega_3\omega_1^3\omega_2 - 18\omega_1^2cs^2\omega_2^2 + 5v_3^2\omega_3\omega_1^3\omega_2 - 12\omega_1\omega_2^3 + 15\omega_3\omega_1^3cs^2\omega_2^2 + 6v_3^2\omega_3\omega_1^2\omega_2 - 27\omega_1^2cs^2\omega_2^3 + 132v_1^2\omega_3\omega_1^2\omega_2^2 - 36\omega_3\omega_1^3 - 9v_3^2\omega_3\omega_1^2\omega_2^2 + 3\omega_3\omega_1\omega_2^3 + 12v_3^2\omega_3\omega_1^3 + 27\omega_3\omega_1cs^2\omega_2^3 - 12v_1^2\omega_3\omega_1^2\omega_2 + 84\omega_3\omega_1^3cs^2 + 48v_1^2\omega_3\omega_1^3 + 12v_3^2\omega_1\omega_2^3 - 54\omega_3\omega_1cs^2\omega_2^2 + 42\omega_3\omega_1\omega_2^2 - 18v_3^2\omega_3\omega_1^3\omega_2 - 108\omega_3\omega_1^3cs^2\omega_2 - 5v_3^2\omega_3\omega_1^2\omega_2^2 - 9v_3^2\omega_1^2\omega_2^2 - 6v_3^2\omega_1^3\omega_2 - 12\omega_3\omega_2^3 - 15\omega_3\omega_1^2cs^2\omega_2^2 + 27v_3^2\omega_3\omega_1\omega_2^2 - 9\omega_1^3\omega_2^2 - 51\omega_3\omega_1^2\omega_2^2 - 6v_3^2\omega_1^2\omega_2^2 + 27\omega_1^2cs^2\omega_2^2 + 5\omega_3\omega_1^2\omega_2^2 + 6v_3^2\omega_3\omega_1\omega_2^2 + 48\omega_3\omega_1^3\omega_2 + 81\omega_3\omega_1^2cs^2\omega_2^2 + 6\omega_1^3\omega_2^2 - 18\omega_1^3cs^2\omega_2 - 5\omega_3\omega_1^3\omega_2^2 - 18\omega_3\omega_1^2cs^2\omega_2 + 84v_1^2\omega_3\omega_2^2 - 120v_1^2\omega_3\omega_1\omega_2^2 - 12\omega_3cs^2\omega_2^3 - 66v_1^2\omega_3\omega_1\omega_2^3 + 36\omega_1cs^2\omega_2^3 + 6\omega_1^3\omega_2 + 6\omega_3\omega_1^2\omega_2 + 9\omega_1^2\omega_2^3 - 24v_3^2\omega_3\omega_2^3 + 9v_3^2\omega_1^2\omega_2)\dfrac{\rho v_1 v_3}{18\omega_3\omega_1^3\omega_2^3}$$

coefficient $C^{(1)}_{\text{D}^3_x \text{D}_z v_3}$ **at** $\dfrac{\partial^4 v_3}{\partial x_1^3 \partial x_3}$**:**

$$C^{(1),\text{SRT}}_{\text{D}^3_x \text{D}_z v_3} = (54v_1^2cs^2\omega - 54v_1^2\omega - 12cs^2\omega^2 - 4v_1^2\omega^3 - 36v_1^4 + 36cs^2\omega + 12v_1^2cs^2\omega^3 - 42v_1^2cs^2\omega^2 + 36cs^4 + 26v_1^2\omega^2 + 20cs^4\omega^2 + 36v_1^2 - 24cs^2 + 54v_1^4\omega - cs^4\omega^3 - 36v_1^2cs^2 - 26v_1^4\omega^2 + 4v_1^4\omega^3 - 54cs^4\omega)\dfrac{\rho}{12\omega^3}$$

$$C^{(1),\text{MRT1}}_{\text{D}^3_x \text{D}_z v_3} = (-12\omega_9\omega_6^3\omega_{13}^2cs^4 - 18v_1^4\omega_9^3\omega_6^2\omega_{13} - 108v_1^2\omega_9\omega_6^2\omega_{13}^2cs^2 + 6\omega_9^3\omega_6^3\omega_{13}cs^4 - 60v_1^2\omega_9^3\omega_6\omega_{13} - 12\omega_9^2\omega_6^2\omega_{13}cs^2 + 24v_1^3\omega_9\omega_6\omega_{13} + 30v_1^2\omega_9^3\omega_6^2\omega_{13}cs^2 + 60v_1^2\omega_9^2\omega_6^3\omega_{13}^2cs^2 + 252v_1^2\omega_6^3\omega_{13}^2cs^2 - 90v_1^4\omega_9\omega_6^3\omega_{13}^2 - 27v_1^4\omega_9^3\omega_6^2\omega_{13} + 6\omega_9^2\omega_6^2\omega_{13}^2cs^4 + 102v_1^2\omega_9^3\omega_6\omega_{13}^2cs^2 - 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 12v_1^2\omega_9^3\omega_6^3cs^2 + 13\omega_9^3\omega_6^2\omega_{13}^2cs^4 + 12\omega_9^3\omega_{13}^2cs^4 - \omega_9^2\omega_9^3\omega_{13}^2cs^2 + 24v_1^2\omega_9^2\omega_6^2\omega_{13} + 12v_1^3\omega_9^3\omega_6\omega_{13}^2cs^2 - 36v_1^4\omega_9\omega_6^3\omega_{13} + 4v_1^4\omega_9^3\omega_6^3\omega_{13}^2 - 48v_1^2\omega_9^2\omega_6\omega_{13}^2cs^2 - 36v_1^2\omega_9\omega_6^3\omega_{13}cs^2 + 6\omega_9^3\omega_6\omega_{13}^2cs^2 + 12\omega_9\omega_6^2\omega_{13}^2cs^2 - 19v_1^2\omega_9\omega_6^3\omega_{13}^2 + 12\omega_9\omega_6\omega_{13}cs^4 - 12v_1^2\omega_9^3\omega_6\omega_{13} + 48v_1^4\omega_9^3\omega_6^2\omega_{13} - 12v_1^2\omega_9^3\omega_6^2\omega_{13}cs^2 + 18\omega_9^3\omega_6^2\omega_{13}cs^2 - 6\omega_9^3\omega_6^3\omega_{13}cs^4 + 18v_1^2\omega_9^3\omega_6^2\omega_{13} + 12v_1^3\omega_9^3\omega_6^3cs^2 - 24\omega_9^3\omega_6\omega_{13}^2cs^4 - 5\omega_9^3\omega_6^2\omega_{13}^2cs^2 + 162v_1^2\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 24v_1^4\omega_9^3\omega_6\omega_{13} - 12\omega_9^3\omega_{13}^2cs^2 + \omega_9^2\omega_6^3\omega_{13}^2cs^4 + 12v_1^2\omega_9^3\omega_6^2 + 60v_1^4\omega_9\omega_6^3\omega_{13} + 27v_1^2\omega_9^3\omega_6^3\omega_{13} + 72v_1^4\omega_6^3\omega_{13}^2 - 18\omega_9^3\omega_6^2\omega_{13}cs^4 + 90v_1^2\omega_9\omega_6\omega_{13}^3\omega_2^2 - 21v_1^2\omega_9^3\omega_6^3\omega_{13}cs^2 + 6\omega_9^3\omega_6^3\omega_{13}cs^2 - 12v_1^4\omega_9^3\omega_6^3 - 12v_1^2\omega_9^3\omega_6^3 - 12\omega_9\omega_6^2\omega_{13}^2cs^4 - 48v_1^2\omega_9^3\omega_{13}^2cs^2 + 12v_1^4\omega_9^2\omega_6^3\omega_{13}^2 - 12\omega_9^3\omega_6\omega_{13}cs^2 - 306v_1^2\omega_9\omega_6^3\omega_{13}^2cs^2 - 6\omega_9^3\omega_6^3\omega_{13}cs^2 + 54v_1^2\omega_9^3\omega_6^3\omega_{13}cs^2 - 24v_1^4\omega_9^3\omega_6^2\omega_{13} + 12\omega_9^3\omega_6^2\omega_{13}cs^4 + 12\omega_9^3\omega_{13}^2cs^4 - 12v_1^2\omega_9^3\omega_6^2cs^2 - 4v_1^2\omega_9^3\omega_6^3\omega_{13}^2 + 12\omega_9\omega_6^3\omega_{13}^2cs^2 - 12v_1^2\omega_9^3\omega_6\omega_{13}cs^2 - 12v_1^4\omega_9^3\omega_6^3 + 36v_1^2\omega_9\omega_6^3\omega_{13} + 12v_1^4\omega_9^3\omega_6\omega_{13} - 72v_1^2\omega_6^3\omega_{13} + 12v_1^2\omega_9^3\omega_6^3 + 19v_1^4\omega_9^3\omega_6^2\omega_{13} + 12v_1^4\omega_9^3\omega_6^3 - \omega_9^3\omega_6^3\omega_{13}^2cs^4 - 81v_1^3\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 48v_1^4\omega_9^3\omega_6^2\omega_{13} - 6\omega_9^3\omega_6^2\omega_{13}^2cs^2)\dfrac{\rho}{12\omega_9^3\omega_6^3\omega_{13}^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}^3_x \text{D}_z v_3} = (12v_1^2\omega_9^3cs^2\omega_6^3 - 18v_1^4\omega_9^3\omega_6^2\omega_{13}^2 + 102v_1^2\omega_9^3cs^2\omega_6\omega_{13}^2 - 12\omega_9^3cs^2\omega_6\omega_{13} - 60v_1^2\omega_9^2\omega_6^3\omega_{13} + 24v_1^3\omega_9^3\omega_6\omega_{13} - 108v_1^2\omega_9cs^2\omega_6^2\omega_{13}^2 - 90v_1^4\omega_9\omega_6^3\omega_{13}^2 - 24\omega_9^3cs^4\omega_6\omega_{13}^2 - 27v_1^4\omega_9^3\omega_6^3\omega_{13} - 12v_1^2\omega_9^3cs^2\omega_6^2 + 12\omega_9cs^2\omega_6^3\omega_{13}^2 + 12cs^4\omega_6^3\omega_{13}^2 - 12\omega_9cs^4\omega_6^2\omega_{13}^2 - 36v_1^2\omega_9cs^2\omega_6^3\omega_{13} - 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 306v_1^2\omega_9cs^2\omega_6^3\omega_{13}^2 + 24v_1^2\omega_9^2\omega_6^2\omega_{13} - 36v_1^4\omega_9\omega_6^3\omega_{13} + 12\omega_9^3cs^4\omega_6\omega_{13} + 4v_1^4\omega_9^3\omega_6^3\omega_{13}^2 - 48v_1^2\omega_9^2cs^2\omega_6\omega_{13}^2 - 19v_1^2\omega_9^3\omega_6^3\omega_{13}^2 + 6\omega_9^3cs^2\omega_6\omega_{13}^2 - 12cs^4\omega_6^3\omega_{13}^2 - 12v_1^2\omega_9^3\omega_6^3 + 48v_1^4\omega_9^3\omega_6^2\omega_{13} + 12\omega_9\omega_6cs^2\omega_{13}^2 - 12v_1^2\omega_9^3cs^2\omega_6\omega_{13} - 5\omega_9^3cs^2\omega_6^3\omega_{13}^2 - 6\omega_9^2cs^4\omega_6^3\omega_{13} + 162v_1^2\omega_9^2cs^2\omega_6^2\omega_{13}^2 + 18v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + 12\omega_9^3cs^4\omega_{13}^2 - 24v_1^4\omega_9^3\omega_6\omega_{13} + 30v_1^2\omega_9^3cs^2\omega_6^2\omega_{13} + 12v_1^2\omega_9^3\omega_6^2 + 60v_1^4\omega_9^3\omega_6^3\omega_{13} - 48v_1^2\omega_9^3cs^2\omega_{13}^2 - \omega_9^3cs^4\omega_6^3\omega_{13}^2 - 12\omega_9^2cs^2\omega_6^3\omega_{13} + 27v_1^3\omega_9^3\omega_6^3\omega_{13} + 72v_1^4\omega_6^3\omega_{13}^2 + 6\omega_9^2cs^4\omega_6^2\omega_{13}^2 - 6\omega_9^3cs^2\omega_6^3\omega_{13} + 90v_1^2\omega_9\omega_6\omega_{13}^3\omega_2^2 + 54v_1^2\omega_9^2cs^2\omega_6^3\omega_{13} - 12v_1^4\omega_9^3\omega_6^3 - 12v_1^2\omega_9^3\omega_6^3 + 12v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 + 12v_1^4\omega_9^2\omega_6^2\omega_{13}^2 - 12v_1^2\omega_9^3cs^2\omega_6^3 - \omega_9^2cs^2\omega_6^3\omega_{13}^2 - 18\omega_9^3cs^4\omega_6^2\omega_{13} - 21v_1^2\omega_9^3cs^2\omega_6^3\omega_{13} + 13\omega_9^3cs^4\omega_6^2\omega_{13}^2 + 6\omega_9^2cs^2\omega_6^3\omega_{13} - 24v_1^4\omega_9^2\omega_6^3\omega_{13} - 4v_1^2\omega_9^3\omega_6^3\omega_{13}^2 - 12v_1^4\omega_9^3\omega_6^3 + 12\omega_9^3cs^4\omega_6^3\omega_{13} + 36v_1^2\omega_9\omega_6\omega_6^3\omega_{13} + 60v_1^2\omega_9^2cs^2\omega_6^3\omega_{13}^2 + 252v_1^2cs^2\omega_6^3\omega_{13}^2 + 12v_1^4\omega_9^3\omega_6\omega_{13}^2 - 72v_1^2\omega_6^3\omega_{13}^2 - 81v_1^3\omega_9^3cs^2\omega_6^2\omega_{13}^2 + 12v_1^2\omega_9^3\omega_6^3 - 6\omega_9^2cs^2\omega_6^2\omega_{13}^2 + 6\omega_9^3cs^4\omega_6^3\omega_{13} + 19v_1^4\omega_9^3\omega_6^3\omega_{13}^2 + \omega_9^2cs^4\omega_6^3\omega_{13}^2 + 18\omega_9^3cs^2\omega_6^2\omega_{13} + 12v_1^4\omega_9^3\omega_6^3 - 12v_1^2\omega_9^2cs^2\omega_6^2\omega_{13} - 48v_1^3\omega_9^3\omega_6^2\omega_{13})\dfrac{\rho}{12\omega_9^3\omega_6^3\omega_{13}^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}^3_x \text{D}_z v_3} =$$
$$(12\omega_6^3\omega_{13}^2cs^4 - 6v_1^4\omega_9^3\omega_6^2\omega_{13} + 13\omega_9^3\omega_6^2\omega_{13}^2cs^4 + 12v_1^2\omega_9^3\omega_6^3\omega_{13}^2cs^2 - \omega_9^2\omega_6^3\omega_{13}^2cs^2 - 72v_1^2\omega_9^2\omega_6^3\omega_{13} + 6\omega_9^3\omega_6\omega_{13}^2cs^2 - 108v_1^2\omega_9\omega_6^3\omega_{13}cs^2 + 12\omega_9\omega_6^2\omega_{13}^2cs^2 - 90v_1^4\omega_9\omega_6^3\omega_{13}^2 - 39v_1^4\omega_9^3\omega_6^3\omega_{13} + 12\omega_9^3\omega_6\omega_{13}cs^4 + 18\omega_9^3\omega_6^2\omega_{13}cs^2 + 36v_1^2\omega_9^2\omega_6^2\omega_{13}cs^2 - 6\omega_9^3\omega_6^3\omega_{13}cs^4 - 12\omega_9\omega_6^3\omega_{13}^2cs^4 - 36v_1^2\omega_9\omega_6^2\omega_{13}^2cs^2 - 36v_1^4\omega_9\omega_6^3\omega_{13} + 6\omega_9^3\omega_6\omega_{13}cs^4 + 4v_1^4\omega_9^3\omega_6^2\omega_{13} + 54v_1^2\omega_9^3\omega_6^2\omega_{13}cs^2 - 12\omega_9^2\omega_6^2\omega_{13}cs^2 - 19v_1^2\omega_9^3\omega_6^3\omega_{13} + 60v_1^2\omega_9\omega_6^3\omega_{13}^2cs^2 + 252v_1^2\omega_6^3\omega_{13}^2cs^2 + 6\omega_9^2\omega_6^2\omega_{13}^2cs^4 - 18v_1^2\omega_9^3\omega_6\omega_{13}^2cs^2 + 36v_1^4\omega_9^3\omega_6^2\omega_{13} - 108v_1^2\omega_2^2\omega_6^3cs^2 + 198v_1^2\omega_9^2\omega_6^3\omega_{13}cs^2 - 6\omega_9^3\omega_6^3\omega_{13}cs^2 + 6v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + 12\omega_9^2\omega_6^2\omega_{13}cs^4 + 12\omega_9^3\omega_{13}^2cs^4 + 36v_1^2\omega_9^3\omega_6\omega_{13}cs^2 + 12\omega_9\omega_6^2\omega_{13}^2cs^2 - 108v_1^2\omega_9^3\omega_6^2cs^2 + 36v_1^2\omega_9^3\omega_6^2 + 72v_1^4\omega_9^2\omega_6^3\omega_{13} + 39v_1^2\omega_9^3\omega_6^3\omega_{13} + 72v_1^4\omega_6^3\omega_{13}^2 + 90v_1^2\omega_9\omega_6^3\omega_{13}^2 - 36v_1^4\omega_9^3\omega_6^3 - 36v_1^2\omega_9^3\omega_6^3 - \omega_9^3\omega_6^3\omega_{13}^2cs^4 - 6\omega_9^2\omega_6^2\omega_{13}^2cs^2 - 3v_1^2\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 24\omega_9^3\omega_6\omega_{13}^2cs^4 + 108v_1^2\omega_9^3\omega_6^3cs^2 + 18v_1^2\omega_9^2\omega_6^2\omega_{13}^2cs^2 - 4v_1^2\omega_9^3\omega_6^3\omega_{13}^2 - 12\omega_6^3\omega_{13}^2cs^2 - 5\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 36v_1^4\omega_9^3\omega_6^2 + 36v_1^2\omega_9\omega_6^3\omega_{13} + \omega_9^2\omega_6^3\omega_{13}cs^4 - 18\omega_9^3\omega_6^2\omega_{13}cs^4 - 72v_1^2\omega_6^3\omega_{13}^2 + 6\omega_9^3\omega_6^3\omega_{13}cs^2 + 36v_1^2\omega_9^3\omega_6^3 - 99v_1^2\omega_9^3\omega_6^3\omega_{13}cs^2 + 19v_1^4\omega_9^3\omega_6^3\omega_{13}^2 - 12\omega_9\omega_6^2\omega_{13}^2cs^4 + 36v_1^4\omega_9^3\omega_6^3 - 36v_1^2\omega_9^3\omega_6^3\omega_{13} - 306v_1^2\omega_9\omega_6^3\omega_{13}^2cs^2 - 12\omega_9^3\omega_6\omega_{13}cs^2)\dfrac{\rho}{12\omega_9^3\omega_6^3\omega_{13}^2}$$

$$C^{(1),\text{CLBM2}}_{\text{D}^3_x \text{D}_z v_3} =$$
$$(-6v_1^4\omega_9^3\omega_6^2\omega_{13} - 6\omega_9^3cs^2\omega_6^3\omega_{13} + 6\omega_6^2cs^4\omega_6^2\omega_{13}^2 + 198v_1^2\omega_9^2cs^2\omega_6^3\omega_{13} + 12v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 - 18\omega_9^3cs^4\omega_6^2\omega_{13} - \omega_9^2cs^2\omega_6^3\omega_{13}^2 - 72v_1^2\omega_9^2\omega_6^3\omega_{13} - 6\omega_9^2cs^4\omega_6^3\omega_{13} - 5\omega_9^3cs^2\omega_6^2\omega_{13}^2 - 90v_1^4\omega_9\omega_6^3\omega_{13}^2 + 18v_1^2\omega_9^2cs^2\omega_6^2\omega_{13}^2 - 39v_1^4\omega_9^3\omega_6^3\omega_{13} + 54v_1^2\omega_9^3cs^2\omega_6^2\omega_{13} - 12\omega_9^2cs^2\omega_6^2\omega_{13} - \omega_9^3cs^4\omega_6^3\omega_{13} - 3v_1^2\omega_9^3cs^2\omega_6^2\omega_{13}^2 + 6\omega_9^3cs^4\omega_6^3\omega_{13} - 6\omega_9^2cs^2\omega_6^3\omega_{13}^2 - 36v_1^4\omega_9\omega_6^3\omega_{13} + 18\omega_9^3cs^2\omega_6^2\omega_{13} + \omega_9^2cs^4\omega_6^3\omega_{13} + 36v_1^2\omega_9^2cs^2\omega_6^2\omega_{13} + 4v_1^4\omega_9^3\omega_6^2\omega_{13} + 12\omega_9^3cs^4\omega_6^3\omega_{13}^2 - 99v_1^2\omega_9^3cs^2\omega_6^3\omega_{13} + 6\omega_9^2cs^2\omega_6^3\omega_{13} + 13\omega_9^3cs^4\omega_6^2\omega_{13}^2 - 19v_1^2\omega_9^3\omega_6^3\omega_{13} - 108v_1^2\omega_9^2cs^2\omega_6^3 + 36v_1^4\omega_9^3\omega_6^2\omega_{13} + 12\omega_9^2cs^4\omega_6^2\omega_{13} + 252v_1^2cs^2\omega_6^3\omega_{13} + 60v_1^2\omega_9^2cs^2\omega_6^3\omega_{13} - 24\omega_9^3cs^4\omega_6\omega_{13} + 6v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + 12cs^4\omega_6^3\omega_{13} + 12\omega_9cs^2\omega_6^3\omega_{13}^2 - 12\omega_9cs^4\omega_6^2\omega_{13} - 108v_1^2\omega_9cs^2\omega_6^3\omega_{13} + 36v_1^2\omega_9^3\omega_6^2 + 72v_1^4\omega_9^2\omega_6^3\omega_{13} + 39v_1^2\omega_9^3\omega_6^3\omega_{13} + 72v_1^4\omega_6^3\omega_{13}^2 + 90v_1^2\omega_9\omega_6^3\omega_{13}^2 - 18v_1^2\omega_9^3cs^2\omega_6\omega_{13}^2 - 36v_1^4\omega_9^3\omega_6^3 - 36v_1^2\omega_9^3\omega_6^3 - 12\omega_9^3cs^2\omega_6\omega_{13} - 36v_1^2\omega_9cs^2\omega_6^2\omega_{13}^2 + 6\omega_9^3cs^2\omega_6\omega_{13} - 12cs^2\omega_6^3\omega_{13}^2 - 12\omega_9cs^4\omega_6^3\omega_{13} + 108v_1^2\omega_9^3cs^2\omega_6^3 - 4v_1^2\omega_9^3\omega_6^3\omega_{13}^2 + 12\omega_9cs^2\omega_6^2\omega_{13}^2 - 36v_1^4\omega_9^3\omega_6^2 + 36v_1^2\omega_9\omega_6^3\omega_{13} + 36v_1^2\omega_9^3cs^2\omega_6\omega_{13} - 72v_1^2\omega_6^3\omega_{13}^2 - 306v_1^2\omega_9cs^2\omega_6^3\omega_{13}^2 + 36v_1^2\omega_9^3\omega_6^3 + 19v_1^4\omega_9^3\omega_6^3\omega_{13}^2 + 12\omega_9^3cs^4\omega_6\omega_{13} + 36v_1^4\omega_9^3\omega_6^3 - 36v_1^2\omega_9^3\omega_6^3\omega_{13} - 108v_1^2\omega_9^3cs^2\omega_6^2)\dfrac{\rho}{12\omega_9^3\omega_6^3\omega_{13}^2}$$

$$C^{(1),\text{CuLBM1}}_{\text{D}^3_x \text{D}_z v_3} =$$
$$(36v_1^4\omega_{12}\omega_4^3\omega_2^2 - 18\omega_{12}cs^4\omega_4^3\omega_2^2 - 99v_1^2\omega_{12}cs^2\omega_4^3\omega_2^2 - 36v_1^2\omega_{12}^2cs^2\omega_4\omega_2^2 - 12\omega_{12}^2cs^4\omega_4\omega_2^3 + 12\omega_{12}^2cs^4\omega_4^3 - 108v_1^2cs^2\omega_4^3\omega_2^2 + 36v_1^2\omega_4^3\omega_2^2 +$$

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$$36v_1^2\omega_{12}\omega_4\omega_2^3 - 12\omega_{12}cs^2\omega_4^2\omega_2^2 - 36v_1^4\omega_4^2\omega_2^3 - 12\omega_{12}^2cs^4\omega_4\omega_2^2 - 306v_1^2\omega_{12}^2cs^2\omega_4\omega_2^3 - 39v_4^4\omega_{12}\omega_4^3\omega_2^3 + 54v_1^2\omega_{12}cs^2\omega_4^2\omega_2 + 6\omega_{12}cs^4\omega_4^3\omega_2^3 +$$
$$6\omega_{12}cs^2\omega_4^2\omega_2^3 - 19v_1^2\omega_{12}^2\omega_4\omega_2^3 - 12\omega_{12}cs^2\omega_4^3\omega_2^2 + 108v_1^2cs^2\omega_4^3\omega_2^3 - 36v_1^2\omega_4^3\omega_2^2 + 6v_1^2\omega_{12}\omega_4^3\omega_2^2 + 18\omega_{12}cs^2\omega_4^2\omega_2^2 + 12\omega_{12}^2cs^2\omega_4\omega_2^3 - 36v_1^4\omega_4^3\omega_2^2 +$$
$$12\omega_{12}cs^4\omega_4^2\omega_2 + 198v_1^2\omega_{12}cs^2\omega_4^2\omega_2^3 + 36v_1^2\omega_{12}cs^2\omega_4^3\omega_2 - 90v_1^4\omega_{12}^2\omega_4\omega_2^3 + 36v_1^2\omega_4^3\omega_2^3 - 108v_1^2cs^2\omega_4^2\omega_2^3 + 12\omega_{12}^2cs^2\omega_4\omega_2 - 6\omega_{12}cs^2\omega_4^3\omega_2^3 -$$
$$4v_1^2\omega_{12}\omega_4^3\omega_2^3 + 12\omega_{12}cs^4\omega_4^3\omega_2 + 36v_1^2\omega_{12}cs^2\omega_4^2\omega_2^2 - 6\omega_{12}cs^4\omega_4^2\omega_2^3 + 72v_1^4\omega_{12}\omega_4^2\omega_2^3 - 12\omega_{12}^2cs^2\omega_2^3 + 36v_1^4\omega_4^3\omega_2^3 - 6\omega_{12}cs^2\omega_4^2\omega_2^2 - 36v_1^2\omega_{12}\omega_4^3\omega_2^2 -$$
$$36v_1^4\omega_{12}\omega_4\omega_2^3 + 13\omega_{12}^2cs^4\omega_4^3\omega_2^2 + 12v_1^2\omega_{12}^2cs^2\omega_4^3\omega_2^3 + 39v_1^2\omega_{12}\omega_4^3\omega_2^3 - \omega_{12}^2cs^2\omega_4^3\omega_2^3 + 6\omega_{12}^2cs^2\omega_4^3\omega_2 - 3v_1^2\omega_{12}^2cs^2\omega_4^3\omega_2 - \omega_{12}cs^4\omega_4^3\omega_2^3 - 72v_1^2\omega_{12}^2\omega_2^3 +$$
$$19v_1^4\omega_{12}^2\omega_4\omega_2^3 - 108v_1^2\omega_{12}cs^2\omega_4\omega_2^3 + 6\omega_{12}^2cs^4\omega_4^2\omega_2^2 + 60v_1^2\omega_{12}^2cs^2\omega_4^2\omega_2^3 + 252v_1^4\omega_{12}^2cs^2\omega_2^3 - 18v_1^2\omega_{12}^2cs^2\omega_4^3\omega_2 - 6v_1^4\omega_{12}\omega_4^3\omega_2^2 + 12\omega_{12}^2cs^4\omega_4^3\omega_2 +$$
$$90v_1^2\omega_{12}^2\omega_4\omega_2^3 - 5\omega_{12}^2cs^2\omega_4^3\omega_2^2 + 4v_1^4\omega_{12}^2\omega_4^3\omega_2^3 - 24\omega_{12}cs^4\omega_4^3\omega_2 + 18v_1^2\omega_{12}^2cs^2\omega_4^3\omega_2^2 + \omega_{12}^2cs^4\omega_4^3\omega_2^3 - 72v_1^2\omega_{12}\omega_4^2\omega_2^3 + 72v_1^4\omega_{12}^2\omega_2^3)\dfrac{\rho}{12\omega_{12}^2\omega_4^3\omega_2^3}$$

$C^{(1),\text{CuLBM2}}_{\text{D}_x^3\text{D}_z v_3} = (80\omega_3^3\omega_4^2cs^4\omega_2^3 + 36v_1^4\omega_3^3\omega_4\omega_1^3\omega_2^2 + 24v_3^3\omega_3^3\omega_4^2\omega_1^2\omega_2 + 8\omega_3^3\omega_4^2\omega_1^3 + 288v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 - 54v_1^2\omega_4^2\omega_1^3\omega_2^2 + 16\omega_3\omega_4^2\omega_1^3cs^4\omega_2 -$
$60v_1^4\omega_3\omega_4^2\omega_1^2\omega_2^2 + 16\omega_3^3\omega_4^2\omega_1\omega_2^2 - 540v_1^2\omega_3\omega_4\omega_1^2cs^2\omega_2^3 - 432v_1^2v_3^2\omega_3^2\omega_4^2\omega_2^3 - 36v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 108v_1^2\omega_3^2\omega_4\omega_1^2cs^2\omega_2^2 + 72v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 -$
$96v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 + 54v_1^4\omega_3^3\omega_1^3\omega_2^2 + 60v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 48v_1^2\omega_3^3\omega_4^2\omega_2^3 - 172\omega_3^2\omega_4^2\omega_1cs^4\omega_2^2 - 24v_1^4\omega_3\omega_4^2\omega_1^3\omega_2 - 297v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 + 36v_1^2\omega_4^2\omega_1^3\omega_2^2 -$
$72\omega_3^3\omega_4\omega_1cs^2\omega_2^3 + 16\omega_3^3\omega_4^2\omega_1\omega_2^3 + 216v_1^4\omega_3\omega_4^2\omega_1^3\omega_2^2 - 117v_4^4\omega_3^3\omega_4\omega_1^3\omega_2^2 - 40\omega_3^3\omega_4^2\omega_1^3cs^2 + 16\omega_3\omega_4\omega_1cs^4\omega_2^3 - 6v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2^2 + 64\omega_3^3\omega_4^2\omega_1^2cs^2\omega_2 -$
$216v_1^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 16\omega_3^3\omega_4^2\omega_1cs^4\omega_2^2 + 24v_1^2\omega_3\omega_4^2\omega_1^3\omega_2 + 24v_3^2\omega_3^3\omega_4^2cs^2\omega_2^3 + 48v_1^4\omega_3^3\omega_4^2\omega_1^3 + 648v_1^2\omega_3^3\omega_4\omega_1^2cs^2\omega_2^3 - 28\omega_3^3\omega_4^2\omega_1^3cs^4\omega_2 -$
$168v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 117v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 + 264v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 336v_1^2\omega_3^2\omega_4\omega_1cs^2\omega_2^2 - 108v_1^4\omega_3^2\omega_1^2\omega_2^3 + 36\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 +$
$12v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 - 108v_1^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 2\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2 - 492v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 36v_1^2\omega_3^3\omega_4\omega_1^3\omega_2^2 - 72\omega_3^3\omega_4\omega_1^2cs^4\omega_2^2 + 96v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 +$
$108v_1^4\omega_3\omega_4^2\omega_1^3\omega_2^2 + 72v_1^2\omega_4^2\omega_1^3\omega_2^2 - 216v_1^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 18\omega_3\omega_4^2\omega_1^3cs^4\omega_2 - 288v_1^4\omega_3^3\omega_4^2\omega_1\omega_2^3 + 48v_3^2\omega_3\omega_4\omega_1^2cs^2\omega_2^3 + 6v_3^2\omega_3^3\omega_4^2\omega_1^2\omega_2^3 -$
$12\omega_3^3\omega_4^2\omega_1^2cs^2\omega_2^2 + 24v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2^2 + 72v_1^2\omega_3\omega_4\omega_1^3cs^2\omega_2^3 - 36v_1^4\omega_3^3\omega_4\omega_1^2\omega_2^2 - 144v_1^2\omega_3^3\omega_4^2\omega_1\omega_2^2 + 48v_3^3\omega_3^3\omega_4^2\omega_2^3 -$
$288v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 6\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2^3 - 324v_1^2\omega_3^2\omega_1^2cs^2\omega_2^3 + 117v_1^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 24v_3^2\omega_3^2\omega_4^2cs^2\omega_2^2 - 852v_1^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 + 576v_1^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 -$
$40\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 - 36\omega_3^3\omega_4^2cs^2\omega_2^2 + 288v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 + 72v_3^2\omega_3\omega_4\omega_1^2cs^2\omega_2^3 + 96v_1^4\omega_3^3\omega_4^2\omega_1\omega_2^3 + 24v_3^2\omega_3^3\omega_4^2\omega_1\omega_2^2 - 72v_1^2\omega_3\omega_4\omega_1^3cs^2\omega_2 -$
$36\omega_3\omega_4^2\omega_1^3cs^4\omega_2 - 117v_1^4\omega_3\omega_4\omega_1^3\omega_2^2 + 54v_1^4\omega_4^2\omega_1^3\omega_2^3 + 72v_1^2\omega_3\omega_4\omega_1\omega_2^3 + 240v_1^2\omega_3^2\omega_4^2\omega_2^3 + 72\omega_3^3\omega_4\omega_1cs^4\omega_2^3 - 12v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2 -$
$144v_1^2v_3^2\omega_3^3\omega_4^2\omega_1^2\omega_2^3 + 36v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 - 492v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 - 56\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2 - 297v_1^2\omega_3^2\omega_4\omega_1^3cs^2\omega_2^2 - 288v_1^2v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2 -$
$16\omega_3\omega_4^2\omega_1cs^2\omega_2^3 - 32\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 108v_1^2\omega_3\omega_4\omega_1^3cs^2\omega_2^2 - 48v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 54v_1^2\omega_3^2\omega_4^2\omega_1^3 + 468v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 - 144v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 -$
$72v_1^4\omega_3^3\omega_4\omega_1\omega_2^3 + 192v_1^2\omega_3^2\omega_4^2\omega_2^3 + 36\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 48v_3^2\omega_3\omega_4\omega_1^3cs^2\omega_2^3 - 36v_1^4\omega_3\omega_4\omega_1^3\omega_2^2 - 8\omega_3^3\omega_4^2\omega_1^2\omega_2 + 174v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 +$
$108v_1^2\omega_3^2\omega_4\omega_1^2cs^2\omega_2^2 + 144v_1^2v_3^2\omega_3^3\omega_4^2\omega_1^3 + 8\omega_3^2\omega_4^2cs^2\omega_2^3 - 108v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 - 288v_1^2v_3^2\omega_3^3\omega_4^2\omega_1^2\omega_2^2 + 48v_3^2\omega_3^3\omega_4^2\omega_1cs^2\omega_2^2 + 8v_1^2\omega_3^3\omega_4^2\omega_1^2\omega_2 -$
$16\omega_3^2\omega_4^2\omega_2^3 - 16\omega_3\omega_4^2\omega_1^2cs^2\omega_2 + 204v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 12v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 - 36v_1^4\omega_4^2\omega_1^3\omega_2^2 + 108v_1^4\omega_3\omega_4\omega_1^3\omega_2^3 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 96v_1^2\omega_3^3\omega_4^2\omega_1^3 +$
$2\omega_3^3\omega_4^2\omega_1^3\omega_2 - 96v_3^2\omega_3\omega_4^2\omega_1cs^2\omega_2^2 - 108v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 48v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 48\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 + 324v_1^2\omega_3\omega_4\omega_1^2cs^2\omega_2^3 + 40v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 -$
$108v_1^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 - 2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 24v_1^4\omega_3\omega_4^2\omega_1\omega_2^3 - 8\omega_3^3\omega_4^2\omega_1^3\omega_2 + 38v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 24v_3^2\omega_3^3\omega_4^2\omega_1^3 + 108v_1^2\omega_3^2\omega_4^2\omega_2^3 + 432v_1^2\omega_3^2\omega_4^2cs^2\omega_2^3 +$
$40\omega_3\omega_4^2\omega_1^2cs^4\omega_2 - 108v_1^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 162v_1^2\omega_3^3\omega_1^2cs^2\omega_2^3 + 86\omega_3^3\omega_4^2\omega_1^2cs^4\omega_2^3 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 24v_1^2\omega_3\omega_4^2\omega_1\omega_2^3 + 36\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 -$
$72v_1^4\omega_4^2\omega_1^2\omega_2^3 - 12v_3^2\omega_3^3\omega_4^2\omega_1^3cs^2\omega_2^2 - 86v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 96v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 36\omega_3\omega_4^2\omega_1^2cs^4\omega_2^3 + 162v_1^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 24v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 +$
$72\omega_3^3\omega_4\omega_1^2cs^2\omega_2^2 - 180v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 - 8\omega_3^3\omega_4^2\omega_1^2\omega_2 - 72v_3^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 - 24v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 18\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 - 144v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 +$
$32\omega_3^2\omega_4^2\omega_1^3cs^4 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 18\omega_3^3\omega_4\omega_1^2cs^4\omega_2^2 + 180v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 + 264v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 + 20\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^2)\dfrac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\text{D}_x^2\text{D}_y\text{D}_z\rho}$ **at** $\dfrac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3}$:

$C^{(1),\text{SRT}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = 0$

$C^{(1),\text{MRT1}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = (-\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 + 6\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + 6\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$
$\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5 + \omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3\omega_9^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 -$
$v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_8\omega_5 + \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 -$
$3\omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8cs^2\omega_5^2 - v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5 - 3\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2 + v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_9^3\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 -$
$2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + 3\omega_9^2\omega_{12}^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - 3\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5 - 2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 -$
$\omega_9^2\omega_{12}^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2 + 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5 - \omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_8\omega_5 + 3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2 +$
$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_8\omega_5^2 +$
$3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6\omega_{14}\omega_8cs^2\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2 - 3\omega_9^3\omega_{12}\omega_6\omega_{14}\omega_8cs^2\omega_5^2 - 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2 +$
$v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8 + 6\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$
$v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8cs^2\omega_5 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 -$
$v_1^2\omega_9^3\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 -$
$\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8 - \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_8\omega_5^2 - 3\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 -$
$3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_8\omega_5^2 + v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_8\omega_5^2 +$
$3\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_8cs^2\omega_5^2 + 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8cs^2\omega_5^2 - 3\omega_9^3\omega_{12}\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + 3\omega_9^3\omega_{12}^2\omega_6\omega_{13}cs^2\omega_5^2 + 3\omega_9^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 +$
$2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5 - \omega_9^3\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_5^2 - 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5 +$
$v_1^2\omega_9^3\omega_{12}\omega_{13}\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}cs^2\omega_5 - 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$
$\omega_9^3\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_5^2 - 3\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}cs^2\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 +$
$v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5 + v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - v_1^2\omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_{13}\omega_8\omega_5^2 +$
$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8cs^2\omega_5 + 6\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5 - v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 6\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2 -$
$v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_8\omega_5^2 - 3\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}cs^2\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 +$
$3\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5 - 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}cs^2\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 -$
$2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8 + 3\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - 3\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 +$
$3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8cs^2\omega_5 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5^2 - \omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - 3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_8cs^2\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 +$
$3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8cs^2\omega_5 - 3\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}cs^2\omega_5^2 + 6\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5 - 3\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 -$
$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 + v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - \omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}cs^2\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_5 +$

$$\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 3\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_8 cs^2\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 3\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14} cs^2\omega_5^2 - v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2)\dfrac{v_1 v_2 v_3}{\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2}$$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho} = (-\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 3\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_5^2 +$

$\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_5^2 + \omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 6\omega_9\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 6\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$

$v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 +$

$3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - 3\omega_9^3\omega_{12}^2 cs^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 -$

$v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14} - 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 + 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 +$

$v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - 3\omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 -$

$\omega_9^2\omega_{12}^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^2\omega_{12} cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 -$

$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5 + 3\omega_9\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 -$

$v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5 + v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 6\omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 3\omega_9^2\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5 - v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_5 -$

$9\omega_9\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 +$

$v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5 + \omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_5^2 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 3\omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 -$

$\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_5^2 -$

$2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_5^2 + 3\omega_9^3 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 +$

$v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_5 + 2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$

$3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5 - 3\omega_9\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$

$\omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5 + v_1^2\omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$

$3\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_{14}\omega_5^2 + 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}\omega_6\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_5 +$

$6\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 +$

$v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - \omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 6\omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 -$

$v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 6\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_5 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 +$

$v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 + 6\omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 -$

$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_5 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - 3\omega_9^3 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - \omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5^2 -$

$\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - 3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 +$

$3\omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 +$

$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - \omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 6\omega_9^2\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3\omega_9^2\omega_{12}^2 cs^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_5 +$

$\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 3\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 3\omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 +$

$\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 + 3\omega_9\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2)\dfrac{v_1 v_2 v_3}{\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho} = 0$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho} = 0$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho} = 0$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho} = (36\omega_1^3 cs^2 + 36\omega_1^2 cs^2\omega_2^2 + 6\omega_1\omega_2^3 - 4v_1^2\omega_2^3 + 6v_2^2\omega_1^2\omega_2^2 + 4v_3^2\omega_3^3 - 12\omega_1\omega_2^2 - 3v_2^2\omega_1^3\omega_2 - 6v_2^2\omega_1^2\omega_2 - 3v_3^2\omega_1\omega_2^3 - 72\omega_1^2 cs^2\omega_2 +$

$4v_2^2\omega_1^3 + 12v_1^2\omega_1\omega_2^2 + 2v_3^2\omega_2^3 - 3v_3^2\omega_3^3\omega_2 + 6v_3^2\omega_1^2\omega_2^2 + 24\omega_1^2\omega_2 + 4v_1^2\omega_1^3 - 12\omega_1^2\omega_2^2 - 18\omega_1^3 cs^2\omega_2 + 36\omega_1 cs^2\omega_2^2 - 12\omega_1^3 + 2v_2^2\omega_2^3 - 6v_3^2\omega_1^2\omega_2 -$

$3v_2^2\omega_1\omega_2^3 - 18\omega_1 cs^2\omega_2^3 + 6\omega_1^3\omega_2 - 12v_1^2\omega_1^2\omega_2)\dfrac{v_1 v_2 v_3}{6\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_1}$ **at** $\dfrac{\partial^4 v_1}{\partial x_1^2 \partial x_2 \partial x_3}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_1} = 0$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_1} = (-\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$

$\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5 + \omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$

$3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$

$2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8 cs^2\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2 + 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 +$

$3v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^2\omega_{12}^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5 -$

$6v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2 + \omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5 - \omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8 cs^2\omega_5^2 +$

$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5 - 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 +$

$\omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_8\omega_5^2 - \omega_9^3\omega_{12}\omega_6\omega_{13}\omega_8 cs^2\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8 cs^2\omega_5^2 +$

$3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 + 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 - 3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_8\omega_5^2 -$

$3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5 + \omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_5^2 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$

$3v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 + 6v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 +$

$\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - \omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 -$

$\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 + 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_8\omega_5 + 3v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 +$

$\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8 cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8 cs^2\omega_5^2 - \omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2 cs^2\omega_5^2 + \omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 + 6v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 +$

$$6v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5 - \omega_9^3\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5 - \omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5 + 3v_1^2\omega_9^2\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 3v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2 cs^2\omega_5 - \omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 + 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$\omega_9^3\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5 - \omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14} cs^2\omega_5 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5 + 3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - \omega_9\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8 cs^2\omega_5 + 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 -$$
$$3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8 cs^2\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14} - \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8 cs^2\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 -$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 - \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_8\omega_5^2 +$$
$$\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8 cs^2\omega_5 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_5^2 - \omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - 9v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8 cs^2\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8 cs^2\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14} cs^2\omega_5^2 + 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 - \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2\omega_5^2 + 6v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 -$$
$$\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 + 3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5 - \omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2 cs^2\omega_5^2 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_5 +$$
$$\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2 cs^2\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14} cs^2\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_5^2 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2) \frac{\rho v_2 v_3}{\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2}$$

$$C^{(1),\text{MRT2}}_{D_x^2 D_y D_z v_1} = (-\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 - \omega_9^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_5^2 +$$
$$\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_5^2 + \omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 -$$
$$3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$6v_1^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12}^2 cs^2\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 -$$
$$3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5 - \omega_9^2\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 + \omega_9^2\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 +$$
$$3v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5 - 6v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 -$$
$$\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12} cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 -$$
$$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_5 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5 + \omega_9\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 -$$
$$3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5 + 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 2\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - 3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_5^2 - 3\omega_9\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 -$$
$$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 + 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_5^2 + \omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_5^2 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8 - 3v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_8\omega_5^2 +$$
$$6v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8 - \omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 +$$
$$\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - 6v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5^2 + \omega_9^3 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 -$$
$$3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 + 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5^2 - \omega_9^2\omega_{12} cs^2\omega_6^2\omega_{14}\omega_8\omega_5^2 + \omega_9\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_5 +$$
$$6v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - \omega_9^3\omega_{12} cs^2\omega_6\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_8\omega_5 -$$
$$\omega_9\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5 + 3v_1^2\omega_9^2\omega_{12}^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - \omega_9^3\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 -$$
$$3v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_{14}\omega_5^2 + 3\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 -$$
$$3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_5^2 + 2\omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5 +$$
$$3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - \omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 +$$
$$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_9^3\omega_{12} cs^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}\omega_5 +$$
$$\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + \omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5 + 2\omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 -$$
$$3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}\omega_5 - 3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8 - \omega_9^3\omega_{12} cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}\omega_6\omega_{13}\omega_8\omega_5^2 -$$
$$\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_5^2 - \omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 9v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9\omega_{12} cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_9^3\omega_{12} cs^2\omega_6\omega_{13}^2\omega_8\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$\omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2 cs^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 3v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - \omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + \omega_9^2\omega_{12}^2 cs^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_5 +$$
$$\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9^2\omega_{12}^2 cs^2\omega_6^2\omega_{13}\omega_8\omega_5^2 - 3v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_5 + 3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_8\omega_5 + \omega_9^3\omega_{12} cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2) \frac{\rho v_2 v_3}{\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5^2}$$

$$C^{(1),\text{CLBM1}}_{D_x^2 D_y D_z v_1} = 0$$

$$C^{(1),\text{CLBM2}}_{D_x^2 D_y D_z v_1} = 0$$

$$C^{(1),\text{CuLBM1}}_{D_x^2 D_y D_z v_1} = 0$$

$$C^{(1),\text{CuLBM2}}_{D_x^2 D_y D_z v_1} = (-18\omega_3^2\omega_4\omega_1^3 cs^2\omega_2 - 4v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 + 6\omega_3^2\omega_1^3\omega_2^2 + 3v_3^2\omega_3\omega_1^3\omega_2^2 - 12\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 + 6\omega_3^2\omega_4\omega_1^3\omega_2 - 2v_3^2\omega_3\omega_4\omega_1^3\omega_2 +$$
$$18\omega_3^3\omega_1^2 cs^2\omega_2^3 - 3v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 + 18\omega_3\omega_1^3 cs^2\omega_2^2 + 6\omega_3\omega_4\omega_1 cs^2\omega_2^3 - 3v_2^2\omega_3\omega_1^2\omega_2^3 + 18\omega_3^2\omega_1^2 cs^2\omega_2^2 - 12\omega_3^2\omega_4\omega_1^2\omega_2^2 + v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 +$$
$$v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 18\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 - 6\omega_4\omega_1^2\omega_2^3 + 4v_3^2\omega_3^2\omega_4\omega_1^3 - 3v_2^2\omega_3\omega_1\omega_2^3 - 12\omega_3\omega_4\omega_1^3 cs^2\omega_2 - 36v_1^2\omega_3^2\omega_4\omega_1^2\omega_2 - 18\omega_4\omega_1^3 cs^2\omega_2^2 +$$
$$18\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 4v_3^2\omega_3^2\omega_4\omega_1^3 - 4\omega_3^2\omega_4\omega_2^3 + 20\omega_3^2\omega_4\omega_1^2\omega_2 - 6\omega_3^2\omega_4\omega_2^2 - 3v_3^2\omega_3\omega_1\omega_2^3 + 12v_1^2\omega_3\omega_4\omega_1^3 - 3v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 4v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 +$$
$$6\omega_4\omega_1^3\omega_2^2 + 3v_2^2\omega_3\omega_1^3\omega_2^2 + 20\omega_3^2\omega_4 cs^2\omega_2^3 - 3v_3^2\omega_3\omega_4\omega_1\omega_2^3 + 6v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 2\omega_3\omega_4\omega_1\omega_2^3 + 3v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 6\omega_3^2\omega_1^2\omega_2^3 - 3v_3^2\omega_3\omega_1^2\omega_2^3 +$$
$$4v_3^2\omega_3^2\omega_4\omega_2^3 + 3v_2^2\omega_4\omega_1^2\omega_2^3 + 4\omega_3\omega_4\omega_1^3\omega_2 - 3v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 3v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 - 18\omega_3\omega_1^2 cs^2\omega_2^3 + 6\omega_3\omega_4\omega_1^2\omega_2^3 - 18\omega_3\omega_1^3 cs^2\omega_2^2 - 4v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 +$$
$$6\omega_3\omega_1\omega_2^3 + 3v_2^2\omega_3\omega_1^2\omega_2^2 - 3v_2^2\omega_4\omega_1^2\omega_2 + 18\omega_4\omega_1^2 cs^2\omega_2^3 + 36v_1^2\omega_3\omega_4\omega_1^2\omega_2 + 6\omega_3\omega_1^3\omega_2^3 + 3v_3^2\omega_3^2\omega_1^3\omega_2 + 3v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 36\omega_3^2\omega_4\omega_1^2 cs^2\omega_2 -$$
$$2\omega_3\omega_4\omega_1^2\omega_2 + 6v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 - 3v_2^2\omega_3\omega_4\omega_1\omega_2^2 - 2v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 18\omega_3^2\omega_1 cs^2\omega_2^3 - 6\omega_3\omega_1^3\omega_2^2 - 3v_3^2\omega_3\omega_4\omega_1^2\omega_2 - 3v_3^2\omega_3^2\omega_1^2\omega_2 +$$
$$36\omega_3^2\omega_4\omega_1^2 cs^2\omega_2 - 4\omega_3^2\omega_4\omega_1\omega_2^2 - 4v_3^2\omega_3^2\omega_4\omega_1\omega_2 + 3v_2^2\omega_3^2\omega_1^2\omega_2^3 - 18\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 - 12\omega_3^2\omega_4\omega_1^3 - 6\omega_3\omega_4\omega_1^3\omega_2^2 + 28\omega_3^2\omega_4\omega_1^3 cs^2 + 3v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 +$$
$$4v_3^2\omega_3^2\omega_4\omega_2^3 + v_3^2\omega_3\omega_4\omega_1\omega_2^3 + v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 + 6\omega_3^2\omega_4\omega_1\omega_2^3 - 3v_2^2\omega_4\omega_1^3\omega_2^2 + 6\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 + 3v_2^2\omega_3^2\omega_1^2\omega_2^2 - 12v_1^2\omega_3\omega_4\omega_1^3) \frac{\rho v_2 v_3}{6\omega_3^2\omega_4\omega_1^3\omega_2^3}$$

coefficient $C^{(1)}_{D_x^2 D_y D_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{MRT1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = (-2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^3 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^3 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^3 +$$
$$2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 - 2v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^3 - 11\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^3 + 4v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 +$$
$$\ldots$$
$$13\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2v_1^2\omega_9\omega_{12}^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3)\frac{\rho v_1 v_3}{2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3}$$

$$C^{(1),\text{MRT2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_2} = (-2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^3 + 2\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^3 + 4\omega_9^3\omega_{12}^2cs^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^3 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_9^2\omega_{12}^2cs^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9^2\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 8\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^3 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 +$$
$$\ldots$$
$$4\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9^3\omega_{12}cs^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_8^3\omega_5^3 + 2\omega_9\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 -$$

$$2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{12}^3cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3 - 6\omega_9^3\omega_{12}^2cs^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 -$$
$$3\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 2\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + 4v_1^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 +$$
$$v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 2\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^3 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5^3 + 6\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + 4\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^3 -$$
$$4\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^3 - 3\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 -$$
$$2\omega_9\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^3 + 2\omega_9^3\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 6\omega_9^3\omega_{12}^2cs^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^3 +$$
$$3v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 2\omega_9^3cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5^3 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3 - 2\omega_9^3\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^3 +$$
$$2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5^3 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5^3 + 2\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^3 -$$
$$2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3 + 2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2v_1^2\omega_9^3\omega_{12}^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2)\frac{\rho v_1 v_3}{2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^3}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = (72v_2^2\omega_3^2\omega_4^2\omega_2^3 + 63\omega_3\omega_4^2\omega_1^3\omega_2^3 + 24v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 144\omega_3^2\omega_4^2\omega_1^3 + 54v_1^2\omega_4^2\omega_1^3\omega_2^2 + 24\omega_3^2\omega_4\omega_1\omega_2^3 + 144\omega_3^2\omega_4\omega_1^2\omega_2^3 -$$
$$36v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 36v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 12v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 48v_1^2\omega_3^2\omega_4^2\omega_2^3 - 72\omega_3^2\omega_4\omega_1^2\omega_2^2 - 24v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 - 36v_1^2\omega_4^2\omega_1^3\omega_2^2 + 108\omega_3^2\omega_4\omega_1cs^2\omega_2^3 -$$
$$36\omega_3^2\omega_4^2\omega_1\omega_2^3 + 336\omega_3^2\omega_4^2\omega_1^3cs^2 - 72v_3^2\omega_4^2\omega_1^2\omega_2^3 + 20v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 108\omega_3\omega_4^2\omega_1^3\omega_2^2 - 144\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 - 36v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 24v_1\omega_3\omega_4^2\omega_1^3\omega_2 -$$
$$432\omega_4^2\omega_1^2cs^2\omega_2^3 + 216\omega_3\omega_4\omega_1^3cs^2\omega_2^2 + 324\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 + 36v_1^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 36v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 36v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 72v_1^2\omega_4^2\omega_1^2\omega_2^3 - 63\omega_3^2\omega_4\omega_1^3\omega_2^3 -$$
$$108\omega_3\omega_4^2\omega_1^2\omega_2^3 - 20v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 48\omega_3\omega_4^2\omega_1^3\omega_2 + 180\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 - 36v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 72v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 189\omega_3^2\omega_4\omega_1^3cs^2\omega_2^3 - 48v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 -$$
$$96v_3^2\omega_3^2\omega_4^2\omega_2^3 + 36v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 324\omega_3\omega_4\omega_1^3cs^2\omega_2^3 - 144\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 + 54v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 60\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 72v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 216\omega_3\omega_4\omega_1^3cs^2\omega_2^2 +$$
$$48\omega_3\omega_4^2\omega_1^2\omega_2^3 - 108v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 36v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 36v_3\omega_3\omega_4\omega_1^3\omega_2^2 + 72\omega_3^2\omega_4\omega_1^3\omega_2^2 - 36v_1^2\omega_3\omega_4\omega_1\omega_2^3 + 72v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 324\omega_4^2\omega_1^3cs^2\omega_2^3 +$$
$$36v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 - 36\omega_3\omega_4^2\omega_1cs^2\omega_2^3 - 72\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 + 24v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 72\omega_4^2\omega_1^3\omega_2^2 + 54v_1^2\omega_3^2\omega_1^3\omega_2^2 - 144\omega_3\omega_4\omega_1^2\omega_2^3 - 108v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 -$$
$$180v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 360\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 - 63v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 96\omega_3^2\omega_4^2\omega_1^2\omega_2 - 120\omega_3^2\omega_4^2cs^2\omega_2^3 - 108v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 - 216\omega_4^2\omega_1^3cs^2\omega_2^2 + 24\omega_3^2\omega_4^2\omega_2^3 -$$
$$144\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 36v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 144v_3^2\omega_3^2\omega_4\omega_1^3 + 108v_3^2\omega_3^2\omega_4^2\omega_1^3 + 48v_1^2\omega_3^2\omega_4^2\omega_1^3 + 72v_3\omega_3\omega_4^2\omega_1^3\omega_2^2 - 20\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 36v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 +$$
$$216v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 108\omega_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 108\omega_4^2\omega_1^3\omega_2^3 + 180\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 + 12\omega_3\omega_4\omega_1\omega_2^3 + 20\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 144v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3\omega_2 +$$
$$216\omega_3^2\omega_4\omega_1^2cs^2\omega_2^2 - 24v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 + 48v_3^2\omega_3^2\omega_4^2\omega_1^3 - 108v_1^2\omega_3^2\omega_1^2\omega_2^3 + 63v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^3 - 216v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 108\omega_3\omega_4\omega_1^3\omega_2^3 + 12v_1^2\omega_3\omega_4^2\omega_1\omega_2^3 +$$
$$324\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 + 432\omega_3\omega_4\omega_1^2cs^2\omega_2^3 - 36v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 72\omega_3\omega_4\omega_1^3\omega_2^2 + 144\omega_4^2\omega_1^2\omega_2^3 - 432\omega_3\omega_4\omega_1^2cs^2\omega_2^3 - 54v_3^2\omega_3^2\omega_3^2\omega_1^3\omega_2 - 36\omega_3^2\omega_4\omega_1\omega_2^3 +$$
$$60\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 - 108\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 60v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 189\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 - 48v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 180v_1^2\omega_3\omega_4\omega_1^2\omega_2^3)\frac{\rho v_1 v_3}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(1)}_{\text{D}_x^2\text{D}_y\text{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}_x^2\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(1),\text{MRT1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_3} = (2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^3\omega_7\omega_8\omega_5 - 2v_1^2\omega_9^2\omega_{12}\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 3\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 - v_1^3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2v_1^3\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2 - 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_9^3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8^2cs^2\omega_5^2 +$$
$$4v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8cs^2\omega_5^2 - 2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 -$$
$$4\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5^2 + 3v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 2v_1^2\omega_9^2\omega_{12}^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}cs^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2 - 8\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^3\omega_7\omega_8^2cs^2\omega_5^2 +$$
$$2v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 6\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_9^3\omega_{12}^2\omega_6^3\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4v_1^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}cs^2\omega_5^2 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + 11\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 + v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 -$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$5\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2v_1^2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8cs^2\omega_5^2 - 2v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8cs^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8cs^2\omega_5 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 + 4v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8\omega_5^2 +$$
$$2\omega_9^2\omega_{12}^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_9^3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 9\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 -$$
$$2v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 6\omega_9^3\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 2v_1^2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 +$$
$$8\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 8\omega_9^3\omega_{12}^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 + 3v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8\omega_5^2 +$$
$$8\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2v_1^2\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 9\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 -$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$2v_1^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8cs^2\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2 - 3\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 -$$
$$2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 6\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2 +$$
$$6\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 9\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8\omega_5^2 + 6\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2 + 3\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5^2 - 3\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2 -$$

$$15\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5 - 2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2cs^2\omega_5 - 4\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2 - 5v_1^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2 +$$
$$2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + \omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 +$$
$$4\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8^2cs^2\omega_5 - 2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2v_1^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 11\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_9\omega_8\omega_5 + 3\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}cs^2\omega_5^2 + 15\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 8\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 +$$
$$2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6\omega_9^3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - \omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 13\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 -$$
$$2\omega_9\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 - 2v_1^2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 4\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2)\frac{\rho v_1 v_2}{2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = (4\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 2v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$3\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 8\omega_9^2\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 -$$
$$v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5 - 4\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_9^3\omega_{12}^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 -$$
$$4\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5 + 3v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 -$$
$$v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 13\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 -$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5 - 3v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2v_1^2\omega_9^3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2 + 4v_1^2\omega_9^2\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5^2 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 +$$
$$v_1^2\omega_9^3\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2v_1^2\omega_9^3\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_9^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$9\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 +$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_{14}\omega_8\omega_5 + 5\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_5 + 2\omega_9^3\omega_{12}cs^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8^2\omega_5 -$$
$$2v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 + 2\omega_9^3\omega_{12}cs^2\omega_6^3\omega_{13}^2\omega_7\omega_8\omega_5 +$$
$$4v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 6\omega_9cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 + 8\omega_9^2\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^3\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6\omega_9\omega_{12}cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^3\omega_9^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}\omega_6\omega_9\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}^2cs^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 + \omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^2\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8\omega_5^2 +$$
$$4\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5^2 -$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2v_1^2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 + 8\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9\omega_9\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$9\omega_9^3\omega_{12}cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 + \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2v_1^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}\omega_7\omega_8^2\omega_5 + 15\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2 -$$
$$3\omega_9^3\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9^3cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_9^3\omega_{12}cs^2\omega_6^3\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$9\omega_9^2\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 6\omega_9\omega_{12}cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 11\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - \omega_9^3\omega_{12}\omega_6\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 3\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 -$$
$$8\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 8\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 -$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 5v_1^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5 - \omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + \omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 - 2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 4\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$$
$$6\omega_9^3cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2cs^2\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5 + 4\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 +$$
$$2\omega_9^3\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9\omega_{12}^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 3\omega_9^3\omega_{12}cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 -$$
$$15\omega_9\omega_{12}^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 11\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}^2cs^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^2\omega_{12}^2cs^2\omega_9^3\omega_7\omega_{14}\omega_8^2\omega_5^2 -$$
$$2v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 + 2\omega_9\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9^3\omega_{12}cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 - \omega_9^3\omega_{12}\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$2\omega_9^3\omega_{12}cs^2\omega_6^3\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_8^2\omega_5 - 4\omega_9^3\omega_{12}^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9^3\omega_{12}^2cs^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2)\frac{\rho v_1 v_2}{2\omega_9^3\omega_{12}^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}^2_x\text{D}_y\text{D}_z v_3} = (-96v_2^2\omega_3^2\omega_4^2\omega_2^3 + 63\omega_3\omega_4^2\omega_1^3\omega_2^2 - 216v_3^2\omega_3^3\omega_4^2\omega_1^2\omega_2 + 63v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 144\omega_3^2\omega_4^2\omega_1^3 + 54v_1^2\omega_4^2\omega_1^3\omega_2^2 + 144v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^2 +$$
$$24\omega_3^2\omega_4^2\omega_1\omega_2^2 - 24v_2^2\omega_3\omega_4^2\omega_1^3\omega_2 + 144\omega_3^2\omega_4\omega_1^2\omega_2^3 - 36v_1^2\omega_3^2\omega_4\omega_1^3\omega_2 + 54v_2^2\omega_4^2\omega_1^3\omega_2^2 + 12v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 48v_1^2\omega_3^2\omega_4^2\omega_2^3 - 72\omega_3^2\omega_4\omega_1^2\omega_2^2 -$$
$$60v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 36v_1^2\omega_4^2\omega_1^3\omega_2^2 + 108\omega_3^2\omega_4\omega_1cs^2\omega_2^3 - 36\omega_3^2\omega_4\omega_1\omega_2^3 + 336\omega_3^2\omega_4^2\omega_1^3cs^2 - 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 - 108\omega_3\omega_4\omega_1^3\omega_2^2 - 144\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 -$$
$$36v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 - 24v_1^2\omega_3\omega_4^2\omega_1^3\omega_2 - 36v_2^2\omega_4^2\omega_1^3\omega_2 - 432\omega_4^2\omega_1cs^2\omega_2^3 + 216\omega_3\omega_4\omega_1^3cs^2\omega_2^2 + 324\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 + 36v_1^2\omega_3\omega_4^2\omega_1^3\omega_2 + 36v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^2 -$$
$$72v_2^2\omega_4^2\omega_1^2\omega_2^3 - 36v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 72v_1^2\omega_4^2\omega_1^2\omega_2^3 - 63v_2^2\omega_3\omega_4\omega_1^3\omega_2^3 - 63\omega_3\omega_4\omega_1^3\omega_2^3 - 108\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 24v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 - 180v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 +$$
$$48\omega_3\omega_4^2\omega_1^3\omega_2 + 180\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 - 108v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2 + 189\omega_3\omega_4\omega_1^3cs^2\omega_2^2 - 48v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 72v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 324\omega_3\omega_4\omega_1^2cs^2\omega_2^2 -$$
$$144\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 - 60\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 + 36v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 216\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 + 48\omega_3\omega_4^2\omega_1^2\omega_2^2 + 108v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 216\omega_3^2\omega_4^2\omega_1^2\omega_2^3 +$$
$$72\omega_3^2\omega_4\omega_1^3\omega_2^2 + 72v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 36v_1^2\omega_3\omega_4\omega_1\omega_2^3 + 72v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 324\omega_4^2\omega_1^3cs^2\omega_2^2 + 36v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 - 54v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 36\omega_3\omega_4^2\omega_1cs^2\omega_2^3 -$$
$$72\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 20v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 72\omega_4^3\omega_1^3\omega_2 + 54v_1^2\omega_3^2\omega_4^2\omega_2^3 - 144\omega_3\omega_4^2\omega_1^2\omega_2^3 - 72v_2^2\omega_3^2\omega_4^3\omega_2 - 360\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 96\omega_3^2\omega_4^2\omega_1\omega_2 -$$
$$120\omega_3^2\omega_4^2cs^2\omega_2^3 - 108v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 - 216\omega_4^2\omega_1^3cs^2\omega_2^2 + 24\omega_3^2\omega_4^2\omega_2^3 - 144\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 36v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 + 48v_2^2\omega_3\omega_4^2\omega_1^3 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 +$$
$$48v_1^2\omega_3^2\omega_4^2\omega_1^3 - 20\omega_3^2\omega_4^2\omega_1^3\omega_2 + 72v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 36v_2^2\omega_3\omega_4^2\omega_1^2\omega_2 - 108v_3^2\omega_3^3\omega_4^2\omega_1\omega_2 - 108\omega_4^2\omega_1^3\omega_2^3 + 180\omega_3^2\omega_4\omega_1cs^2\omega_2^3 + 12\omega_3\omega_4^2\omega_1\omega_2^3 +$$
$$20\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3\omega_2 - 36v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 + 216\omega_3^2\omega_4\omega_1^2cs^2\omega_2^2 + 144v_3^2\omega_3^2\omega_4^2\omega_1^3 - 108v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 108\omega_3\omega_4\omega_1^3\omega_2^2 +$$

$$108v_2^2\omega_3^2\omega_1^2\omega_2^3 + 12v_1^2\omega_3\omega_4^2\omega_1\omega_2^3 + 324\omega_3\omega_4^2\omega_1^3cs^2\omega_2^2 + 432\omega_3\omega_4\omega_1^2cs^2\omega_2^3 - 72\omega_3\omega_4\omega_1^3\omega_2^2 + 144\omega_4^2\omega_1^2\omega_2^3 + 20v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 432\omega_3^2\omega_4\omega_1^2cs^2\omega_2^3 -$$
$$36\omega_3^2\omega_4\omega_1\omega_2^3 + 60\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 - 108\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 24v_2^2\omega_3\omega_4^2\omega_1\omega_2^2 - 189\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 - 48v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 180v_1^2\omega_3\omega_4\omega_1^2\omega_2^3)\frac{\rho v_1 v_2}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3}$ **:**

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = 0$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} =$

$(\omega_6\omega_5^3 - \omega_6\omega_8^2\omega_5 + \omega_6^2\omega_8\omega_5 - \omega_8^2\omega_5^2 - 2\omega_6^2\omega_8\omega_5^2 + 2\omega_6\omega_8^2\omega_5^2 + \omega_6^2\omega_8\omega_5^3 + \omega_8\omega_5^3 - 2\omega_6^2\omega_8^2 - 2\omega_6\omega_8\omega_5^3 - \omega_6^2\omega_8^2\omega_5^2 + 3\omega_6^2\omega_8^2\omega_5 + \omega_6^2\omega_5^2 - \omega_6^2\omega_5^3)\frac{2v_3cs^4}{\omega_6^2\omega_8^2\omega_5^3}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} =$

$(\omega_6\omega_5^3 - \omega_6\omega_8^2\omega_5 + \omega_6^2\omega_8\omega_5 - \omega_8^2\omega_5^2 - 2\omega_6^2\omega_8\omega_5^2 + 2\omega_6\omega_8^2\omega_5^2 + \omega_6^2\omega_8\omega_5^3 + \omega_8\omega_5^3 - 2\omega_6^2\omega_8^2 - 2\omega_6\omega_8\omega_5^3 - \omega_6^2\omega_8^2\omega_5^2 + 3\omega_6^2\omega_8^2\omega_5 + \omega_6^2\omega_5^2 - \omega_6^2\omega_5^3)\frac{2cs^4v_3}{\omega_6^2\omega_8^2\omega_5^3}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = 0$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = 0$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = 0$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = (144\omega_3^2\omega_4^2cs^4\omega_2^3 - 96v_2^2\omega_3^2\omega_4^2\omega_2^3 - 72\omega_4^2\omega_1^3cs^4\omega_2^2 + 8v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3 - 24\omega_3\omega_4^2\omega_1^3cs^4\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 -$
$108\omega_3^2\omega_1^2cs^2\omega_2^3 + 54v_3^2\omega_4^2\omega_1^3cs^2\omega_2^3 - 8v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 - 162\omega_3^2\omega_1^3cs^4\omega_2^3 - 432v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 60v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 24\omega_3\omega_4^2\omega_1cs^4\omega_2^3 -$
$54v_3^2\omega_3^2\omega_1^3cs^2\omega_2^3 + 48\omega_4^2\omega_3^2\omega_4^2\omega_1^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2^3 + 162\omega_4^2\omega_1^3cs^4\omega_2^3 - 104\omega_3^2\omega_4^2\omega_1^3cs^2 - 168\omega_3\omega_4^2\omega_1cs^4\omega_2^3 + 80\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 -$
$96v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 432v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 216\omega_3^2\omega_4^2\omega_1cs^4\omega_2^3 + 72v_2^2v_3^2\omega_3^2\omega_4^2\omega_2^3 + 32v_3^2\omega_3^2\omega_4^2cs^2\omega_2^3 - 432v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 -$
$168\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2 - 24v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 84\omega_4^2\omega_1^2cs^2\omega_2^3 - 108\omega_3\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 - 10v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 + 30\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2 - 324\omega_3\omega_4\omega_1^2cs^4\omega_2^3 -$
$81\omega_3\omega_4^2\omega_1^3cs^4\omega_2 + 64v_3^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 + 96v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 176\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 + 8v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 27\omega_3\omega_4\omega_1^3cs^2\omega_2^3 - 36v_4^2\omega_3^2\omega_4^2\omega_1\omega_2^3 -$
$8v_3^2\omega_3^2\omega_4^2\omega_2^3 + 27v_3^2\omega_3\omega_4\omega_1^3cs^2\omega_2^3 + 32v_3^2\omega_3\omega_4^2\omega_4^2cs^2\omega_2^2 - 64\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 + 10\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 108v_3^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 + 96v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 -$
$16v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 432v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 36v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 54\omega_4^2\omega_1^3cs^2\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_2^3 + 8v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 72\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2 -$
$432v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 + 56\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 + 128\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 + 8v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 96v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 108v_3^2\omega_3^2\omega_1^2cs^2\omega_2^3 + 112\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 +$
$48v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3 - 8v_3^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 252\omega_4^2\omega_1^2cs^4\omega_2^3 - 8\omega_3^2\omega_4^2cs^2\omega_2^3 - 24v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 84v_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 -$
$56v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 + 24\omega_4^2\omega_1^3cs^2\omega_2^2 + 8\omega_3^2\omega_4^2\omega_2^3 + 72v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 8\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 40v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 324\omega_3^2\omega_1cs^4\omega_2^3 - 96v_2^2\omega_3^2\omega_4^2\omega_4^3 +$
$32v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 56v_3^2\omega_3\omega_4^2\omega_1cs^2\omega_2^3 + 54\omega_3^3\omega_1^3cs^2\omega_2^3 - 192v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 8v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 64\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 27v_3^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 -$
$8\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8v_3^2\omega_3^2\omega_4^2\omega_1^3 + 192\omega_3\omega_4^2\omega_1^2cs^4\omega_2^2 + 96v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 30\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^3 + 120v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 72v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_2 +$
$10v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 - 108v_3^2\omega_3\omega_4\omega_1^2cs^2\omega_2^3 + 324\omega_3\omega_4^2\omega_1^2cs^4\omega_2^3 + 108\omega_3\omega_4\omega_1^2cs^2\omega_2^3 - 10\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 432v_2^2\omega_3^2\omega_4^2cs^2\omega_2^3 +$
$27\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3cs^4 + 864v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 + 81\omega_3\omega_4\omega_1^3cs^4\omega_2^3 - 60v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 192\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^2)\frac{v_3}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^2}$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3}$ **:**

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = 0$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = (-4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^3 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^3 +$
$4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3 - 4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^3 + 8\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^3 + 12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 8\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_8^2\omega_5^3 +$
$4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$4\omega_9\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 8\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 +$
$4\omega_9\omega_9^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3 + 5\omega_9^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 4\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 8\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$4\omega_9^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_8^2\omega_5^3 - 4\omega_9^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 10\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^3 -$
$8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_7\omega_8^2\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8^2\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^3 + 8\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$
$4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^3 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 8\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^3 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 +$
$4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3)\frac{\rho v_1 v_3 cs^2}{2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = (-4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^3 - 2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^3 +$
$4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3 - 4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^3 + 8\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$

$4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 8\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_8^2\omega_5^3 +$
$4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 +$
$4\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 8\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 + 4\omega_9^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 +$
$4\omega_9\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3 + 5\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 4\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 8\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$4\omega_9\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_8^2\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$4\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 10\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 4\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3 -$
$8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_7\omega_8^2\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^3 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^3 + 8\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$
$4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8^2\omega_5^3 + 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 8\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^3 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\omega_5 +$
$4\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2) \frac{\rho v_1 cs^2 v_3}{2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = 0$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = 0$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = 0$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = (27\omega_3\omega_1 cs^2\omega_2 - 9\omega_3\omega_1\omega_2 - 2v_3^2\omega_3\omega_4\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 - 6\omega_3\omega_4 cs^2\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 +$
$6\omega_3\omega_4\omega_1 cs^2 + 9v_3^2\omega_3\omega_1\omega_2 + 2\omega_3\omega_4\omega_2) \frac{\rho v_1 v_3}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = 0$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = (\omega_{15}^2\omega_6\omega_{17}\omega_5^3 + \omega_{15}^2\omega_{17}\omega_8\omega_5^3 - 4\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_8\omega_5^2 + \omega_{15}^2\omega_6\omega_8\omega_5^3 - 3\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2\omega_6\omega_8\omega_5^3 +$
$\omega_{15}^2\omega_6^2\omega_{17}\omega_8\omega_5^3 - \omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^2 + 3\omega_{15}^2\omega_6^2\omega_{17}\omega_8\omega_5 + 2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}\omega_6^2\omega_8^2\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{17}\omega_8^2\omega_5^2 -$
$\omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^3 + 5\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^3 + 2\omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2 - \omega_{15}^2\omega_6^2\omega_{17}\omega_5^3 -$
$4\omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}^2\omega_6^2\omega_8^2\omega_5^3 - \omega_{15}^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}^2\omega_6^2\omega_{17}\omega_5^2 + \omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}^2\omega_6\omega_8\omega_5^3 + 2\omega_{15}^2\omega_6^2\omega_8^2\omega_5^2) \frac{\rho v_2 v_3 cs^2}{\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = (\omega_{15}^2\omega_6\omega_{17}\omega_5^3 + \omega_{15}^2\omega_{17}\omega_8\omega_5^3 - 4\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_8\omega_5^2 + \omega_{15}^2\omega_6\omega_8\omega_5^3 - 3\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2\omega_6\omega_8\omega_5^3 +$
$\omega_{15}^2\omega_6^2\omega_{17}\omega_8\omega_5^3 + \omega_{15}\omega_6^2\omega_8\omega_5^3 - \omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^2 + 3\omega_{15}^2\omega_6^2\omega_{17}\omega_8\omega_5 + 2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}\omega_6^2\omega_8^2\omega_5^2 + 2\omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^2 -$
$\omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^3 + 5\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^3 + 2\omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2 - \omega_{15}^2\omega_6^2\omega_{17}\omega_5^3 -$
$4\omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}^2\omega_6^2\omega_8^2\omega_5^3 - \omega_{15}^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}^2\omega_6^2\omega_{17}\omega_5^2 + \omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}^2\omega_6\omega_8\omega_5^3 + 2\omega_{15}^2\omega_6^2\omega_8^2\omega_5^2) \frac{\rho v_2 cs^2 v_3}{\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = 0$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = 0$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = 0$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = (12\omega_1^2 cs^2\omega_2^2 + 2\omega_1\omega_2^3 - 13v_3^2\omega_3\omega_1^3\omega_2 - 4v_3^2\omega_3\omega_1^2\omega_2 + 26v_3^2\omega_3\omega_1^2\omega_2^2 - 12\omega_3\omega_1^3 + 10v_3^2\omega_3\omega_2^3 - 22v_3^2\omega_3\omega_1^2\omega_2 + 6v_3^2\omega_3\omega_1^2\omega_2^2 +$
$10\omega_3\omega_1\omega_2^3 + 4v_3^2\omega_3\omega_1^3 - 24\omega_3\omega_1 cs^2\omega_2^2 + 28\omega_3\omega_1^3 cs^2 - 2v_3^2\omega_3\omega_1\omega_2^2 - 24\omega_3\omega_1 cs^2\omega_2^2 + 8\omega_3\omega_1\omega_2^2 - 3v_3^2\omega_3\omega_1^3\omega_2 - 24\omega_3\omega_1^3 cs^2\omega_2 - 2v_3^2\omega_3\omega_1^3\omega_2 -$
$10\omega_3\omega_2^3 - 3v_3^2\omega_3\omega_1\omega_2^3 - 20\omega_3\omega_1^2\omega_2^2 + 4v_3^2\omega_3\omega_1^2\omega_2^2 - 4v_3^2\omega_3\omega_1\omega_2^2 + 10\omega_3\omega_1^3\omega_2 + 48\omega_3\omega_1^2 cs^2\omega_2^2 - 4\omega_1^2\omega_2^2 - 6\omega_1^3 cs^2\omega_2 - 30\omega_3\omega_1^2 cs^2\omega_2 +$
$26\omega_3 cs^2\omega_2^3 - 4v_3^2\omega_3\omega_1\omega_2^2 - 6\omega_1 cs^2\omega_2^3 + 2\omega_1^3\omega_2 + 16v_3^2\omega_3\omega_1^3 + 14\omega_3\omega_1^2\omega_2 + 4v_3^2\omega_3\omega_2^3 - 13v_3^2\omega_3\omega_1\omega_2^3) \frac{\rho v_2 v_3}{6\omega_3\omega_1^3\omega_2^2}$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = (-36 - 16\omega^2 - \omega^3 + 54\omega) \frac{\rho cs^4}{12\omega^3}$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = (-6\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^2 - 18\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2 -$
$24\omega_{15}\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5 - 12\omega_{15}v_1^2\omega_9\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 +$
$30\omega_{15}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 24\omega_{15}v_1^2\omega_{12}\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 +$
$12\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_6^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}\omega_6^3\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 +$

$$24\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5 - 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 -$$
$$48\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 +$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{7}\omega_{17}\omega_{8}^2cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 + 10\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 + 6\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2cs^2\omega_5^3 -$$
$$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^3 - 6\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^3cs^2 - 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}cs^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}\omega_5^3 -$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}cs^2\omega_5^3 - 6\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{6}^3\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 -$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 - \omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 - 24\omega_{15}v_1^2\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}cs^2\omega_5^3 +$$
$$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 -$$
$$6\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}cs^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 -$$
$$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}\omega_5^2 - 48\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 -$$
$$2\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^2 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{6}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^3\omega_5^3 +$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 +$$
$$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 24\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 +$$
$$12\omega_{15}v_1^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 24\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2 -$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}cs^2\omega_5^2 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 - 24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}\omega_5 -$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}cs^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 + 24\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5 -$$
$$12\omega_{15}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^3\omega_5^2 + 18\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$$
$$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^3\omega_5^3 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^3\omega_5^3 +$$
$$12\omega_{15}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 + 6\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 + 24\omega_{15}v_1^2\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 - 6\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}cs^2\omega_5^3 +$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}\omega_5^3 + 24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2cs^2\omega_5^2 +$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2cs^2\omega_5^2 + 12\omega_{15}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 + 36\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 -$$
$$18\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 - 12\omega_{15}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^2 - 24\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 -$$
$$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 12\omega_{15}\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{17}\omega_{14}\omega_{8}^3\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 -$$
$$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^2 +$$
$$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{6}^3\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^2 - 18\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$$
$$24\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^2 - 12\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^2 + 12\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 -$$
$$12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2cs^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{8}^2\omega_5^3 -$$
$$18\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2cs^2\omega_5^3 - 6\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2cs^2\omega_5^3 + 6\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2cs^2\omega_5^3 +$$
$$6\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 + 36\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 + 6\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 - 24\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 +$$
$$12\omega_{15}v_1^2\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^3\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^2\omega_{6}\omega_{7}\omega_{17}\omega_{8}^2cs^2\omega_5^3 - 36\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5) \frac{\rho cs^2}{12\omega_{15}\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3}$$

$C_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3}^{(1),\mathrm{MRT2}} = (12\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 24\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5 - 12\omega_{15}v_1^2\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 -$

$2\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 + 30\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 -$

$24\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 12\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$

$12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5 + 12\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}\omega_5^3 +$

$10\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^3\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}\omega_5^3 +$

$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 - 48\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^3\omega_5^3 +$

$12\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - \omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 -$

$6\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}\omega_5^2 -$

$18\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 6\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}\omega_5^3 -$

$6\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{8}^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5 +$

$6\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 24\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2 - 24\omega_{15}v_1^2\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 -$

$6\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5 -$

$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 6\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 -$

$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}\omega_5^2 + 12\omega_{15}\omega_{12}cs^2\omega_{6}^3\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^2 - 48\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 -$

$18\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 +$

$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^2 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$

$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 + 24\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 18\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$

$24\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5 + 12\omega_{15}v_1^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 -$

$6\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}\omega_{9}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^2 -$

$24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}\omega_5 + 24\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5 - 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}\omega_5^3 +$

$18\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^3\omega_5^3 -$

$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^3\omega_5^3 + 24\omega_{15}v_1^2\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^3\omega_5^3 + 12\omega_{15}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 +$

$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}\omega_5^3 - 12\omega_{15}\omega_{9}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^2 + 24\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 +$

$12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 - 12\omega_{15}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 + 12\omega_{15}cs^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$

$12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 - 12\omega_{15}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 36\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^7\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$

$12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^2\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^2 - 24\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 -$

$12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{17}\omega_{14}\omega_{8}^3\omega_5^3 - 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}^3\omega_5^3 -$

$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}\omega_5^3 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 - 12\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^3 +$

$12\omega_{15}\omega_{9}cs^2\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^2 - 12\omega_{15}v_1^2\omega_{9}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^2 - 12\omega_{15}cs^2\omega_{6}^3\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 - 18\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$

$24\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^2 - 12\omega_{9}\omega_{12}v_2^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^2 + 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2 + 12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 +$

$12\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{6}^3\omega_{13}\omega_{7}\omega_{17}\omega_{8}^2\omega_5^3 + 12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{14}\omega_{8}\omega_5^2 -$

$12\omega_{15}\omega_{9}\omega_{12}cs^2\omega_{6}^3\omega_{13}\omega_{7}^2\omega_{17}\omega_{8}^2\omega_5^3 + 6\omega_{15}\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 + 36\omega_{15}v_1^2\omega_{9}\omega_{12}\omega_{6}^2\omega_{13}\omega_{7}\omega_{17}\omega_{14}\omega_{8}^2\omega_5^3 + 6\omega_{9}\omega_{12}v_2^2\omega_{6}^2\omega_{13}\omega_{7}^2\omega_{14}\omega_{8}^2\omega_5^3 -$

$24\omega_{15}v_1^2\omega_{12}\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}v_1^2\omega_9\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}cs^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}cs^2\omega_6^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 -$

$12\omega_{15}\omega_9cs^2\omega_6^3\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 6\omega_9\omega_{12}cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5)\frac{\rho cs^2}{12\omega_{15}\omega_9\omega_{12}\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3}$

$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (12\omega_{15}\omega_9\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{17}\omega_{14}\omega_8\omega_5^3 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 18\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^2 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_5^2 + 10\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_5^3 -$

$6\omega_{15}\omega_9\omega_{12}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^2 + 6\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_7\omega_{17}\omega_8\omega_5^3 +$

$12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_7\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_5^2 -$

$18\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_5^3 - 12\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 -$

$18\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^3 -$

$\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^3 - 2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 24\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 -$

$12\omega_{15}\omega_{12}\omega_6^2\omega_7\omega_{17}\omega_8\omega_5^3 + 6\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 6\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 +$

$12\omega_{15}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2)\frac{\rho cs^4}{12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3}$

$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (12\omega_{15}\omega_9\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{17}\omega_{14}\omega_8\omega_5^3 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 18\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^2 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_5^2 + 10\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_5^3 -$

$6\omega_{15}\omega_9\omega_{12}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^2 + 6\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_7\omega_{17}\omega_8\omega_5^3 +$

$12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_7\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_5^2 -$

$18\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_5^3 - 12\omega_{15}\omega_9\omega_6^3\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 -$

$18\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^3 -$

$\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^3 - 2\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 -$

$12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 24\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 -$

$12\omega_{15}\omega_{12}\omega_6^2\omega_7\omega_{17}\omega_8\omega_5^3 + 6\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^3 - 6\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 +$

$12\omega_{15}\omega_6^2\omega_{13}\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2)\frac{\rho cs^4}{12\omega_{15}\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3}$

$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (12\omega_3\omega_{13}\omega_1\omega_2 - 6\omega_{13}\omega_1^3\omega_2 - 24\omega_3\omega_{13}\omega_2^2 - 6\omega_{13}\omega_1^2\omega_2^2 - 12\omega_3\omega_1^3 - 2\omega_{13}\omega_1^3\omega_2^2 + 24\omega_3\omega_{13}\omega_1\omega_2^2 - 2\omega_3\omega_{13}\omega_1^2\omega_2^2 + 12\omega_1^3\omega_2^2 +$

$12\omega_3\omega_1^2\omega_2^2 + 24\omega_3\omega_1^3\omega_2 - 12\omega_1^2\omega_2^2 - 12\omega_3\omega_1^3\omega_2 + 12\omega_{13}\omega_1\omega_2^2 - \omega_3\omega_{13}\omega_1^3\omega_2^2 - 12\omega_1^3\omega_2 + 12\omega_{13}\omega_1^3 - 12\omega_3\omega_1^2\omega_2 - 6\omega_3\omega_{13}\omega_1^2\omega_2)\frac{\rho cs^4}{12\omega_3\omega_{13}\omega_1^3\omega_2^2}$

$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (-8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 216v_2^2v_3^2\omega_3^2\omega_4^2\omega_5\omega_2 - 8\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 36v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 336v_3^2\omega_3\omega_3^2\omega_1cs^2\omega_5\omega_2^3 + 240v_3^2\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 -$

$9v_1^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 2v_1^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 32\omega_3^2\omega_4^2\omega_1cs^4\omega_5 + 24v_3^2\omega_3\omega_3^2\omega_4\omega_1\omega_5\omega_2 + 36\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 + 264v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5 - 288\omega_3^2\omega_4^2\omega_1cs^4\omega_2^3 -$

$88\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 - 6v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 27v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 + 288\omega_3^2\omega_4\omega_1cs^2\omega_5\omega_2^3 + 64\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 +$

$24v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 9v_1^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 + 24v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 8\omega_3^2\omega_4^2\omega_5\omega_2^3 + 2v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 24v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 + 180v_3^2\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^3 +$

$160\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^3 + 36\omega_3^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 648v_3^2\omega_3^2\omega_4\omega_1cs^2\omega_5\omega_2^3 + 54v_2^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 36v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 36v_2^4\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 +$

$18v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 54v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 12v_2^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 + 8\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^3 + 36\omega_3^4\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 + 54v_2^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 36v_2^4\omega_3\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 +$

$300v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^3 - 180v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 168v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 + 36v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 + 152\omega_3^2\omega_4^2cs^4\omega_5\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_5\omega_2^3 -$

$72\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2^3 + 6v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 - 54v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 + 36v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 288\omega_3^2\omega_4\omega_1cs^4\omega_5\omega_2^3 - 84v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 54v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 -$

$18v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 108v_2^2\omega_3^2\omega_4\omega_1cs^2\omega_5\omega_2^3 - 288v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 24v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 - 96v_3^4\omega_3^2\omega_4^2\omega_5\omega_2^3 - 120v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^3 +$

$12v_2^4\omega_3^2\omega_4\omega_4^2\omega_1\omega_5\omega_2^2 - 56\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^2 - 36v_2^2\omega_3\omega_4\omega_4^2\omega_1^2\omega_5\omega_2^3 - 36v_2^4\omega_4^2\omega_1^3\omega_5\omega_2^2 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 + 27v_1^2\omega_3\omega_4\omega_1^3cs^2\omega_5\omega_2^3 -$

$160\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^3 - 24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 180v_2^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 + 54v_2^2\omega_3^2\omega_1^3\omega_5\omega_2^3 - 216v_2^2\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 + 4\omega_3^2\omega_4^2\omega_1^3cs^4\omega_5\omega_2^2 +$

$2v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 72v_2^4\omega_3^2\omega_4^2\omega_5\omega_2^2 + 4\omega_3^2\omega_4^2\omega_1^2cs^2\omega_5\omega_2^2 + 60v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5 + 112\omega_3\omega_4^2\omega_1cs^4\omega_5\omega_2^2 +$

$24v_2^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 - 48v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 72\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 + 108v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 - 468v_3^2\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^3 +$

$108v_2^2\omega_3\omega_4\omega_1cs^2\omega_5\omega_2^3 - 72v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2 + 12v_2^4\omega_3\omega_4\omega_1\omega_5\omega_2^3 + 16\omega_3\omega_4^2\omega_1^3cs^4\omega_5\omega_2 + 108v_2^2\omega_3\omega_4\omega_1^3cs^2\omega_5\omega_2^3 - 24v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2 +$

$24v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 9v_1^4\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 72\omega_3^2\omega_4\omega_1^3cs^4\omega_5\omega_2^3 - 56\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^3 - 72v_2^2\omega_3\omega_4\omega_1^2cs^2\omega_5\omega_2^3 + 72\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 +$

$264v_3^2\omega_3\omega_4\omega_1^2cs^2\omega_5\omega_2^2 - 216\omega_3\omega_4\omega_4^2\omega_1^3cs^4\omega_5\omega_2^3 + 48v_3^4\omega_3^2\omega_4^2\omega_5 + 72v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 + 108v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 72v_2^2\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^2 +$

$6v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 - 6\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^2 - 2v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 - 24v_3^2\omega_3^2\omega_4^2\omega_5\omega_2^3 + 132v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 24v_2^4\omega_3\omega_4\omega_4^2\omega_1\omega_5\omega_2 -$

$162v_2^2\omega_3^2\omega_1^3cs^2\omega_5\omega_2^2 + 9v_1^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 - 96v_2^2\omega_3^2\omega_4^2\omega_1\omega_5 - 96v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_5\omega_2 - 162v_3^2\omega_3^2\omega_4\omega_1^3cs^2\omega_5\omega_2^3 - 288\omega_3^2\omega_4\omega_1^3cs^2\omega_5\omega_2^3 +$

$36\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2 + 108v_2^2\omega_3\omega_4\omega_1cs^2\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 12v_2^2\omega_3\omega_4\omega_1\omega_5\omega_2^3 + 360v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 48v_3^2\omega_3\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2 -$

$40\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5 - 216v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 + 36v_3^4\omega_3\omega_4\omega_1^3cs^2\omega_5\omega_2^3 - 28\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^3 + 72v_2^4\omega_3\omega_4\omega_4^2\omega_1\omega_5\omega_2^3 + 54v_2^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 -$

$4\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 - 60v_2^2\omega_3\omega_4^2\omega_1^2cs^2\omega_5\omega_2^3 + 132v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 + 72\omega_3\omega_4\omega_1^3cs^4\omega_5\omega_2^3 + 16\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^3 - 108v_3^2\omega_3^2\omega_1\omega_5\omega_2^3 -$

$112\omega_3\omega_4^2\omega_1^2cs^2\omega_5\omega_2^2 - 108v_2^2\omega_3\omega_4\omega_1^3cs^2\omega_5\omega_2^3 - 180v_3^2\omega_3\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 - 72v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 108v_2^2\omega_3\omega_4\omega_1^3cs^2\omega_5\omega_2^3 + 162v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 -$

$16\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2 + 288\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^3 + 648v_3^2\omega_3\omega_3\omega_4\omega_1^2cs^2\omega_5\omega_2^3 + 144v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 12v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2 - 108v_2^2\omega_3^2\omega_4\omega_4^2cs^2\omega_5\omega_2^2 +$

$64\omega_3^2\omega_4^2\omega_1^2cs^2\omega_5\omega_2^2 + 72\omega_3^2\omega_4\omega_1^3cs^2\omega_5\omega_2^2 + 324v_2^2\omega_3^2\omega_1^3cs^2\omega_5\omega_2^3 - 18v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 + 108v_2^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 + 144v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 -$

$36v_2^4\omega_3^2\omega_4\omega_4\omega_1^3\omega_5\omega_2^2 + 180v_2^2\omega_3\omega_4\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 + 216\omega_3\omega_4^2\omega_1^2cs^2\omega_5\omega_2^2 + 8\omega_3^2\omega_4^2\omega_1^3\omega_5 + 162v_3^2\omega_3\omega_4\omega_1^3cs^2\omega_5\omega_2^3 - 72v_2^2\omega_3\omega_4\omega_1^3cs^4\omega_5\omega_2^2 +$

$48v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_5\omega_2^3 - 6v_3^2\omega_3\omega_4^2\omega_1^2cs^2\omega_5\omega_2^3 - 72v_2^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 + 56\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^2 - 36v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 - 72v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 -$

$54v_2^4\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2^3 + 18v_2^4\omega_3^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 - 28\omega_3^2\omega_4^2\omega_1^3cs^4\omega_5\omega_2^3 - 144v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 288\omega_3^2\omega_4^2\omega_1^2cs^4\omega_5\omega_2^3 + 36v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 -$

$$348v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2 - 216v_2^2\omega_3^2\omega_4\omega_1^2cs^2\omega_5\omega_2^3 + 72v_2^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 48v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 108v_2^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3}$$

coefficient $C^{(1)}_{\mathrm{D}_y^3\mathrm{D}_z\rho}$ **at** $\frac{\partial^4\rho}{\partial x_2^3\partial x_3}$**:**

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} =$

$(-6\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 12\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}cs^2\omega_5 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2 + 6\omega_{15}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5 - 12\omega_{15}^2\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5^2 + 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5 - 4\omega_{15}^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2 - 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2v_2^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 3\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8 cs^2\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}cs^2\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 3\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 24\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 2\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 - 12\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 6\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2 + 4\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 - 9\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 12\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 4v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2v_2^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}cs^2\omega_5^2 + 24\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 2\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5^2 + 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 + 12\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2 + 8\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 + 6\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 2\omega_{15}^2v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 8\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8 cs^2\omega_5^2 + 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 9\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2)\frac{v_1v_2v_3}{4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} =$

$(-12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 4\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 12\omega_{15}^2 cs^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 12\omega_{15}cs^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 4\omega_6^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 6\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 12\omega_{15}^2 cs^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 6\omega_{15}^2 cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}^2 cs^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 2\omega_{15}v_2^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 3\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}cs^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 - 12\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 6\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 3\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 2\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 9\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 cs^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 + 12\omega_{15}^2 cs^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 12cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 4v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 cs^2\omega_{10}^2\omega_{17}\omega_8\omega_5 - 9\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2v_2^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 3\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 2\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 - 4\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 - 6\omega_{15}^2 cs^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 + 6cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 + 8\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 24\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 8\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5)\frac{v_1v_2v_3}{4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$$C^{(1),\text{CuLBM2}}_{\text{D}^3_y\text{D}_z\rho} = (v_3^2\omega_1 - \omega_1 + 3\omega_1 cs^2 - 3cs^2\omega_2 - v_3^2\omega_2 + \omega_2)\frac{v_1v_2v_3}{12\omega_1\omega_2}$$

coefficient $C^{(1)}_{\text{D}^3_y\text{D}_z v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_2^3 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}^3_y\text{D}_z v_1} = 0$$

$C^{(1),\text{MRT1}}_{\text{D}^3_y\text{D}_z v_1} = (-2\omega_{15}v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2\omega_6^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{17}cs^2\omega_5^3 - 2\omega_{15}^2\omega_6^2\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}^2\omega_6\omega_8^2\omega_5^3 + v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_{17}\omega_8cs^2\omega_5^3 + 6\omega_{15}^2\omega_6^2\omega_{17}\omega_8cs^2\omega_5 - 2v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2\omega_6^2\omega_8\omega_5^3 - \omega_{15}^2\omega_6\omega_8^2cs^2\omega_5^3 - \omega_{15}^2\omega_6^2\omega_{17}\omega_8\omega_5^3 - 2\omega_{15}^2v_2^2\omega_6^2\omega_8\omega_5^3 + 2\omega_{15}^2\omega_6\omega_8cs^2\omega_5^2 + \omega_{15}\omega_6^2\omega_8^2\omega_5 - 7\omega_{15}^2\omega_6\omega_{17}\omega_8cs^2\omega_5^3 - \omega_{15}^2v_2^2\omega_6\omega_{17}\omega_8\omega_5^3 - \omega_6^2\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 - 11\omega_{15}^2\omega_6^2\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^2 + 2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{17}\omega_8cs^2\omega_5^2 - 2\omega_{15}\omega_6^2\omega_8^2\omega_5^2 - \omega_{15}^2v_2^2\omega_6\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_8cs^2\omega_5^3 - \omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2v_2^2\omega_6\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8\omega_5 - \omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 5\omega_{15}^2\omega_6^2\omega_{17}\omega_8cs^2\omega_5^3 - 8\omega_{15}^2\omega_6^2\omega_{17}\omega_8cs^2 + \omega_{15}^2v_2^2\omega_6\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2^2\omega_6^2\omega_8^2\omega_5^2 - 2\omega_{15}^2\omega_6^2\omega_8^2cs^2\omega_5^2 - 2\omega_{15}\omega_6^2\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}^2\omega_6^2\omega_{17}cs^2\omega_5^3 + 2\omega_{15}^2v_2^2\omega_6\omega_8\omega_5^3 - \omega_{15}v_2^2\omega_6^2\omega_8^2\omega_5^3 - \omega_{15}\omega_6^2\omega_8^2cs^2\omega_5^3 + \omega_6^2\omega_{17}\omega_8^2cs^2\omega_5^3 - 5\omega_{15}^2\omega_6^2\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{15}^2\omega_6^2\omega_{17}cs^2\omega_5^2 + \omega_{15}^2\omega_6^2\omega_8^2cs^2\omega_5^3 + \omega_{15}^2v_2^2\omega_6^2\omega_8^2\omega_5^3 + \omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^3 + 7\omega_{15}^2\omega_6\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5 - 2\omega_6^2\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}^2\omega_6^2\omega_8^2cs^2\omega_5^2 + 2\omega_{15}^2v_2^2\omega_6^2\omega_8^2\omega_5^2 - 2\omega_{15}^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_2^2\omega_6\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{17}\omega_8^2cs^2\omega_5^2 - \omega_{15}^2\omega_6^2\omega_8^2\omega_5^3 - \omega_{15}\omega_6^2\omega_{17}\omega_8^2cs^2\omega_5^3 + \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8\omega_5^3 - 6\omega_{15}^2\omega_6\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}\omega_6\omega_{17}\omega_8^2cs^2\omega_5^3 - 2\omega_{15}v_2^2\omega_6\omega_{17}\omega_8^2\omega_5^2 + 13\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_8cs^2\omega_5^3 + \omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_8\omega_5^3 + 2\omega_{15}^2\omega_6^2\omega_8^2\omega_5^2 + 4\omega_{15}\omega_6^2\omega_{17}\omega_8^2cs^2\omega_5)\frac{\rho v_2 v_3}{2\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3}$

$C^{(1),\text{MRT2}}_{\text{D}^3_y\text{D}_z v_1} = (-2\omega_{15}cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2\omega_6^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6^2\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 + \omega_{15}^2\omega_6\omega_8^2\omega_5^3 - 5\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 - 2cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - 2v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2\omega_6^2\omega_8\omega_5^3 - \omega_{15}^2\omega_6\omega_{17}\omega_8\omega_5^3 - 2\omega_{15}^2cs^2\omega_6^2\omega_8\omega_5^3 - 2\omega_{15}^2v_2^2\omega_6^2\omega_8\omega_5^3 + \omega_{15}\omega_6^2\omega_8^2\omega_5^3 - 7\omega_{15}^2cs^2\omega_6\omega_{17}\omega_8\omega_5^3 - \omega_{15}^2v_2^2\omega_6\omega_{17}\omega_8\omega_5^3 - \omega_6^2\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}^2cs^2\omega_6\omega_{17}\omega_8\omega_5^2 + 2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2cs^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}\omega_6^2\omega_8^2\omega_5^2 - \omega_{15}^2cs^2\omega_6\omega_8^2\omega_5^3 - \omega_{15}^2v_2^2\omega_6\omega_8^2\omega_5^3 - \omega_{15}^2\omega_6\omega_{17}\omega_8^2\omega_5^2 + 13\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2v_2^2\omega_6^2\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2cs^2\omega_6^2\omega_8\omega_5^2 - \omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}v_2^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2cs^2\omega_6\omega_{17}\omega_5^3 + \omega_{15}^2v_2^2\omega_6\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5 + 7\omega_{15}^2cs^2\omega_6\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}^2v_2^2\omega_6^2\omega_8^2\omega_5^2 - 2\omega_{15}^2cs^2\omega_6^2\omega_8^2\omega_5^2 + 6\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2cs^2\omega_6\omega_8\omega_5^3 + 2\omega_{15}^2v_2^2\omega_6\omega_8\omega_5^3 - \omega_{15}cs^2\omega_6^2\omega_8^2\omega_5^3 - \omega_{15}v_2^2\omega_6^2\omega_8^2\omega_5^3 + 2\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_5^3 + \omega_{15}^2cs^2\omega_6^2\omega_8^2\omega_5^3 + \omega_{15}^2v_2^2\omega_6^2\omega_8^2\omega_5^3 + \omega_{15}\omega_6\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2cs^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_5^3 + 2\omega_{15}cs^2\omega_6^2\omega_{17}\omega_8^2 + 2\omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_2^2\omega_6^2\omega_8^2\omega_5^2 + 2\omega_{15}cs^2\omega_6^2\omega_8^2\omega_5^2 - 8\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_8^2 - 4\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_2^2\omega_6\omega_{17}\omega_8^2\omega_5^3 + \omega_{15}cs^2\omega_6\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}^2\omega_6^2\omega_8^2\omega_5^3 + 5\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_8\omega_5^3 + \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8\omega_5^3 - 2\omega_{15}v_2^2\omega_6\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2\omega_6\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}\omega_6^2\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}^2cs^2\omega_6\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^2 - 11\omega_{15}^2cs^2\omega_6^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_6^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_8^2\omega_5^2 + 2\omega_{15}^2\omega_6^2\omega_8^2\omega_5^2)\frac{\rho v_2 v_3}{2\omega_{15}^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3}$

$$C^{(1),\text{CLBM1}}_{\text{D}^3_y\text{D}_z v_1} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}^3_y\text{D}_z v_1} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}^3_y\text{D}_z v_1} = 0$$

$C^{(1),\text{CuLBM2}}_{\text{D}^3_y\text{D}_z v_1} = (-12\omega_3\omega_4 - 6\omega_3\omega_4^2\omega_1 cs^2 + 3v_2^2\omega_4^2\omega_1 + 6v_3^2\omega_3\omega_4^2 + 36\omega_3\omega_4 cs^2 - 6v_2^2\omega_4^2 + 3v_2^2\omega_3^2\omega_1 - 2v_3^2\omega_3\omega_4^2\omega_1 + 6\omega_3^2\omega_4\omega_1 cs^2 - 6v_3^2\omega_4^2 + 2v_3^2\omega_3^2\omega_4\omega_1 + 6\omega_3\omega_4\omega_1 - 6\omega_3\omega_4^2 - 36\omega_4^2cs^2 - 6v_3^2\omega_3^2\omega_4 + 2\omega_3\omega_4^2\omega_1 + 12\omega_4^2 - 6v_2^2\omega_3^2 + 3v_3^2\omega_4^2\omega_1 + 18\omega_4^2\omega_1 cs^2 - 2\omega_3^2\omega_4\omega_1 - 18\omega_3\omega_4\omega_1 cs^2 + 6v_3^2\omega_3^2 - 6\omega_4^2\omega_1 + 18\omega_3\omega_4^2cs^2 - 6v_2^2\omega_3\omega_4\omega_1 + 12v_2^2\omega_3\omega_4 - 3v_3^2\omega_3^2\omega_1 + 6\omega_3^2\omega_4 - 18\omega_3\omega_4 cs^2)\frac{\rho v_2 v_3}{8\omega_3^2\omega_4^2\omega_1}$

coefficient $C^{(1)}_{\text{D}^3_y\text{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_2^3 \partial x_3}$:

$$C^{(1),\text{SRT}}_{\text{D}^3_y\text{D}_z v_2} = 0$$

$C^{(1),\text{MRT1}}_{\text{D}^3_y\text{D}_z v_2} =$
$(-2\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 4\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7cs^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}cs^2\omega_5 - 12\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_8cs^2\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2 + 2\omega_{15}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 6\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8cs^2\omega_5 - 4\omega_{15}^2\omega_{10}^2\omega_7\omega_8cs^2\omega_5^2 + 12\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 4\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8cs^2\omega_5 - 12\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8cs^2\omega_5 - 4\omega_{15}^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8cs^2\omega_5^2 - 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}^2v_2^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 3\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8cs^2\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}cs^2\omega_5^2 + 12\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 + 6\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 + 12\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 9\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8cs^2\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 +$

$$12\omega_{15}^2 v_2^2 \omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 2\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 - 3\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5 +$$
$$4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 +$$
$$2\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 -$$
$$12 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 v_2^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17} cs^2\omega_5^2 + 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 -$$
$$9\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 6 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 -$$
$$6\omega_{15}^2 v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8 cs^2\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 -$$
$$4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5^2 + 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}^2\omega_{16}\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2 + 24\omega_{15} v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 + 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 -$$
$$24\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2) \frac{\rho v_1 v_3}{4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2}$$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_y^3 \mathrm{D}_z v_2} =$

$$(-4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 - 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15} v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 -$$
$$12\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}^2 cs^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15} cs^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15} cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 12\omega_{15} v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 +$$
$$4\omega_{15}^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 4\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 +$$
$$4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 2\omega_{15} cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 4\omega_{15}^2 cs^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 -$$
$$6\omega_{15} v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 2\omega_{15}^2 cs^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2 cs^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 6\omega_{15}^2 v_2^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 3\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 + 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5 + 6\omega_{15}^2 v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15} cs^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 + 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 - 4\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15} v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 2\omega_{15} cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 9\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15} cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 2\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 -$$
$$6\omega_{15} v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2 cs^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{15}^2 v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 4 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 8\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 -$$
$$12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 - 12 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2 cs^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2 v_2^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 -$$
$$3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 - 9\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8\omega_5 + 6 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$$
$$6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 - 6\omega_{15}^2 v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 -$$
$$2\omega_{15}^2 cs^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 + 2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_{17}\omega_8\omega_5 + 24\omega_{15} v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 8\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 +$$
$$8\omega_{15} cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5) \frac{\rho v_1 v_3}{4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2}$$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_y^3 \mathrm{D}_z v_2} = 0$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_y^3 \mathrm{D}_z v_2} = 0$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_y^3 \mathrm{D}_z v_2} = 0$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_y^3 \mathrm{D}_z v_2} = (v_3^2\omega_1 - \omega_1 + 3\omega_1 cs^2 - 3 cs^2\omega_2 - v_3^2\omega_2 + \omega_2) \frac{\rho v_1 v_3}{36\omega_1\omega_2}$

coefficient $C^{(1)}_{\mathrm{D}_y^3 \mathrm{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_y^3 \mathrm{D}_z v_3} = (2 + 3 cs^2\omega - 6 cs^2 + v_2^2\omega - \omega - 2 v_2^2) \frac{\rho v_1 v_2}{12\omega}$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_y^3 \mathrm{D}_z v_3} = (18\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5^2 - 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 36\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2 -$
$12\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 -$
$24\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2 cs^2\omega_5^2 - 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17} cs^2\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 -$
$6\omega_{15} v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 - 3\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 -$
$6\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 - 12\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 18\omega_{15}^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2 - 12\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2 + 12\omega_{15}^2\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$
$12\omega_{15}^2 v_2^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8 cs^2\omega_5^2 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8 cs^2\omega_5^2 + 30\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 +$
$4\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 - 6\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 + 36\omega_{15}^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 +$
$12\omega_{15}^2 v_2^2\omega_6^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 54\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5 - 18\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8^2 cs^2\omega_5 +$
$12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 + 18\omega_{15} v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 + 42\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2 +$
$6\omega_{15}^2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^2 + 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15} v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 24\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2 cs^2\omega_5^2 -$
$12\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 + 12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17} cs^2\omega_5 +$

$$6\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 9\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$$
$$12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 + 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5 + 12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8 cs^2\omega_5 + 18\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 +$$
$$12\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$$
$$12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 - 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 + 12\omega_{15}^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$$
$$9\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 + 24\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 - 36\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2 +$$
$$6\omega_{15}^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 18\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 +$$
$$12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 - 6\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 42\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5 - 24\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8^2 cs^2\omega_5 -$$
$$6\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2 cs^2\omega_5 - 6\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 54\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 + 12\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 -$$
$$24\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2 + 54\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 + 6\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 -$$
$$36\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 + 24\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2 -$$
$$9\omega_{15}^2 v_2^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_{17}\omega_8\omega_5 - 24\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 +$$
$$3\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2 cs^2\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5 -$$
$$12\omega_{15}^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 - 9\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 + 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}cs^2\omega_5 + 6\omega_{15}^2 v_2^2\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$$
$$54\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5 - 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5 + 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 + 6\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 + 12\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 - 12\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7\omega\omega_{17}\omega_8^2\omega_5 -$$
$$12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2 cs^2\omega_5 + 3\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 - 12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 - 36\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 -$$
$$12\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 - 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2 cs^2\omega_5 + 6\omega_{15}^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5 - 6\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2)\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5}$$

$C^{(1),MRT2}_{D_y^3 D_z v_3} = (18\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$

$12v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 + \omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 18\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$

$24\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2 - 12\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 -$

$6\omega_{15}^2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 - 36cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 3\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5 - 6\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 - 3\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 -$

$12\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 + 24\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 42\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 9\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2 cs^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2 v_2^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}^2 cs^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - \omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 24\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5 + 54\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 - 6\omega_{15}^2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 18\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$42\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 + 18\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 24\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 - 36\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 36\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 - 54\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 -$

$12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 + 18cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 -$

$12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 9\omega_{15}^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$6v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 36\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 36\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$

$54\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 + 12\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$

$6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 cs^2\omega_6^2\omega_{10}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$

$12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 + 6\omega_{15}^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 v_2^2\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 18\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 - 6\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 cs^2\omega_6^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 24\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8 -$

$12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 6\omega_{15}^2 v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2 cs^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 -$

$24\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 9\omega_{15}^2 v_2^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}^2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 +$

$3\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 + 24\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 24\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 + 6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}cs^2\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5 + 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 - 12\omega_{15}^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_5 -$

$12\omega_{15}^2 v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 54\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_5 -$

$6\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 30\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}^2 cs^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5)\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5}$

$C^{(1),CLBM1}_{D_y^3 D_z v_3} = (-9\omega_{10}cs^2 + 3\omega_{16}cs^2 + 3\omega_{16}\omega_{10}cs^2 - \omega_{16} + 3\omega_{10} - \omega_{16}\omega_{10} + v_2^2\omega_{16}\omega_{10} + v_2^2\omega_{16} - 3v_2^2\omega_{10})\frac{\rho v_1 v_2}{12\omega_{16}\omega_{10}}$

$C^{(1),CLBM2}_{D_y^3 D_z v_3} = (3cs^2\omega_{16}\omega_{10} - \omega_{16} - 9cs^2\omega_{10} + 3\omega_{10} - \omega_{16}\omega_{10} + 3cs^2\omega_{16} + v_2^2\omega_{16}\omega_{10} + v_2^2\omega_{16} - 3v_2^2\omega_{10})\frac{\rho v_1 v_2}{12\omega_{16}\omega_{10}}$

$C^{(1),CuLBM1}_{D_y^3 D_z v_3} = (3cs^2\omega_{11} - \omega_{11}\omega_5 + v_2^2\omega_{11} - 3v_2^2\omega_5 - 9cs^2\omega_5 - \omega_{11} + v_2^2\omega_{11}\omega_5 + 3\omega_5 + 3cs^2\omega_{11}\omega_5)\frac{\rho v_1 v_2}{12\omega_{11}\omega_5}$

$C^{(1),CuLBM2}_{D_y^3 D_z v_3} = (-27\omega_3\omega_1 cs^2\omega_2 + 9\omega_3\omega_1\omega_2 - 18v_3^2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 + 18\omega_3\omega_4\omega_1 cs^2\omega_2 - 8\omega_3\omega_4\omega_1 +$

$4v_2^2\omega_3\omega_4\omega_2 + 6v_2^2\omega_3\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 - 9v_2^2\omega_3\omega_1\omega_2 + 6\omega_3\omega_4 cs^2\omega_2 + 18v_3^2\omega_3\omega_4\omega_1 + 12\omega_3\omega_4\omega_1 cs^2 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_1 v_2}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(1)}_{D_x^2 D_z^2 \rho}$ **at** $\frac{\partial^4 \rho}{\partial x_1^2 \partial x_3^2}$:

$C^{(1),SRT}_{D_x^2 D_z^2 \rho} = (24 + 36v_1^2\omega + 5cs^2\omega^3 + 14\omega^2 - 46cs^2\omega^2 - \omega^3 + v_1^2\omega^3 + 108cs^2\omega - 14v_1^2\omega^2 - 24v_1^2 - 72cs^2 - 36\omega)\frac{v_1 cs^2}{12\omega^3}$

$$C^{(1),\text{MRT1}}_{\text{D}^2_x\text{D}^2_z\rho} = (18\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 108\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2 - 6\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 6\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^2 - $$
$$36\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^4 - 12\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}cs^2 - 36\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} - 88\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2cs^4 - 6\omega_{18}v_1^2\omega_9^3\omega_6\omega_6^2\omega_{13}^2cs^2 - $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} - 96\omega_{18}\omega_9^3\omega_{22}\omega_{13}^2cs^4 - 36\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13}^2cs^2 + 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22} + 18\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}cs^2 - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2 - $$
$$18\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}cs^2 + 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2 + \omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}^2\omega_{13}^2cs^2 + 6\omega_9^3\omega_6^3\omega_{13}^2cs^2 + 12\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}cs^2 - $$
$$12\omega_{18}\omega_9^3\omega_6^3\omega_{22}cs^4 + 12\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_6^2v_3^2\omega_{13} + 36\omega_9^3\omega_6^2v_3^2\omega_{13}^2cs^2 - 72\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} - 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} - $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}cs^2 + 36\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2cs^2 + 36\omega_{18}\omega_9^3\omega_{22}\omega_{13}cs^4 - 36\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^3v_3^2\omega_{13} - 6\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^2 - $$
$$6v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 + 36\omega_9^3\omega_6^2\omega_{13}^2cs^4 - 18\omega_9^3\omega_6^3v_3^2\omega_{13}^2cs^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 24\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 6\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 42\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}cs^4 + $$
$$12\omega_{18}\omega_9^2\omega_6^3\omega_{22}cs^4 + 24\omega_{18}v_1^2\omega_9^2\omega_6\omega_6v_3^2\omega_{22}\omega_{13}^2 + 36\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}cs^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2cs^2 + 6\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^3\omega_6^2\omega_{22}cs^2 - $$
$$6\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 6v_1^2\omega_9^3\omega_6^3\omega_{13}^2cs^2 + 6\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2cs^2 - 12\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13} - 72\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13}^2cs^2 - 84\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2cs^4 + 6\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - $$
$$36\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^4 - 12\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22} + 24\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^2 + 72\omega_{18}\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13}^2cs^2 - 6\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{13}^2 + $$
$$36\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^4 + 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}cs^4 + 12\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 36\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}cs^2 + 24\omega_{18}\omega_9^3\omega_6v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6^2\omega_{13}cs^2 + $$
$$72\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2cs^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^4 + 18\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13}^2cs^2 + $$
$$36\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} + 6v_1^2\omega_9^3\omega_6^3\omega_6^2\omega_{13}^2cs^2 - 18\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2cs^4 + 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^2 - $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22} + 18\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 - 12\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13} + 12v_1^2\omega_9^3\omega_6^2\omega_6^2v_3^2\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + $$
$$180\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^4 + 18\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2cs^2 - 36\omega_{18}\omega_9^3v_3^2\omega_{13}cs^2 - 12\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 36\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^4 + 18\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^4 + $$
$$6v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^2 + 12\omega_{18}\omega_9^2\omega_6^3\omega_{22}cs^2 - 18\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^2\omega_{22}cs^4 + 30\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}cs^4 - $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}cs^2 + 12\omega_{18}v_1^2\omega_9^3\omega_{22}\omega_{13}^2cs^2 - 6\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2cs^4 - 12\omega_{18}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13} + $$
$$36\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 - \omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 12\omega_{18}\omega_9^3v_3^2\omega_{22} - 18\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13}^2cs^2 + 18\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}cs^2 + 36\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}cs^2 - $$
$$36\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^2 - 12v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}cs^2 + 6\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} + 36\omega_{18}\omega_9^3\omega_6^2\omega_{13}cs^4 + $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}cs^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{13} - 6\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22} - 24\omega_{18}\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2cs^2 + $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} + 150\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^4 - 12\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}^2cs^2 + 24\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 + $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22} - 24\omega_{18}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} + 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^2 + 6v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 36\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 + 12\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^2 - $$
$$36\omega_{18}\omega_9^2v_3^2\omega_{22}cs^2 - 24\omega_{18}v_1^2\omega_9^3\omega_6v_3^2\omega_{22}\omega_{13} + 12\omega_{18}v_1^2\omega_9^3v_3^2\omega_{22}\omega_{13} + 18\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 + 12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_9^3\omega_6^2v_3^2\omega_{13}^2 - $$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{13}^2cs^2 + 12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22} + 18\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^4 - 54\omega_{18}\omega_9\omega_9^3v_3^2\omega_{22}\omega_{13}^2cs^2 + 12\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{13}cs^2 - 42\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}cs^4 - $$
$$36\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13} - 18\omega_9^3\omega_6^2\omega_{13}^2cs^4 + 12v_1^2\omega_9\omega_6^2\omega_{13}^2cs^2 - 12v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2cs^2 - 36\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2cs^4 + 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13}^2 - $$
$$12\omega_{18}\omega_9^3\omega_6^3\omega_{22}cs^2 + 36\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13}cs^2 - 2\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} - 48\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^4)\frac{v_1}{12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}^2_x\text{D}^2_z\rho} = (72\omega_{18}\omega_9^2cs^2\omega_6v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^3cs^2\omega_6\omega_{22}\omega_{13}^2 - 6\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 180\omega_{18}\omega_9^3cs^4\omega_6\omega_{22}\omega_{13}^2 - $$
$$12\omega_{18}v_1^2\omega_9^2cs^2\omega_6^3\omega_{22} + 6\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 6\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2cs^4\omega_6^3\omega_{22} + 30\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{22}\omega_{13} + 150\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{22}\omega_{13}^2 + $$
$$18\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^3v_3^2\omega_6v_3^2\omega_{22}\omega_{13} + 12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} - 6\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22} + 18\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{13}^2 + $$
$$12\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 48\omega_{18}\omega_9cs^4\omega_6^2\omega_{22}\omega_{13}^2 + 6\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{22} - 36\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{22} - 36\omega_9^2cs^4\omega_6^2\omega_{22}\omega_{13}^2 + $$
$$12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} + 2\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 18\omega_9^3cs^2\omega_6^3v_3^2\omega_{13}^2 - 18\omega_{18}\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} - 36\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 6\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} + $$
$$36\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13} + 12\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{22} - 6v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{22} + 12\omega_{18}\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13}^2 - $$
$$24\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13} + 24\omega_{18}v_1^2\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{22} - 36\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{22} - 6\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13} + $$
$$12\omega_{18}\omega_6^3cs^2\omega_6\omega_{22}\omega_{13}^2 + 6\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22} + 24\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} - 18\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2 + 108\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{22}\omega_{13} - $$
$$6\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} + 18\omega_{18}\omega_9cs^4\omega_6^2\omega_{22} - 12\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{22} - 12\omega_{18}\omega_9^3cs^4\omega_6^3v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3cs^2\omega_6\omega_{22}\omega_{13} + 12\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3cs^4\omega_6\omega_{22}\omega_{13} + $$
$$12\omega_{18}\omega_9^3cs^2\omega_6^2\omega_{22} + 36\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13} + \omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} - 12v_1^2\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13}^2 + 5\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{22}\omega_{13}^2 - $$
$$96\omega_{18}\omega_9^3cs^4\omega_{22}\omega_{13}^2 - 12\omega_9^3cs^2\omega_6^2\omega_{13}^2 + 18\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{13}^2 + 6\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 + 6\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13}^2 + 72\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} - $$
$$12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22} - 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13} + 12v_1^2\omega_9^3\omega_6^2v_3^2\omega_{13}^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^2\omega_6\omega_{22}\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2 + $$
$$18\omega_9^3cs^4\omega_6^3\omega_{22}\omega_{13}^2 - 54\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 36\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} - 18\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13} + $$
$$12\omega_{18}v_1^2\omega_9^2cs^2\omega_6\omega_{13} + 36\omega_9^3cs^2\omega_6^2v_3^2\omega_{13}^2 - 72\omega_{18}\omega_9^2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13} + 36\omega_{18}\omega_9^2cs^4\omega_6^3\omega_{13} + 12\omega_{18}\omega_9^3cs^2\omega_6^2\omega_{22} + 18\omega_9^3cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - $$
$$18\omega_9^3cs^4\omega_6^3\omega_{13} - 12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} - 2\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 6\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22} + $$
$$12\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} + 36\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{13} + 6\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{13}^2 - 36\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 - 6v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 + $$
$$12\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{13} + 36\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{13} - 12v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 42\omega_{18}\omega_9^3cs^4\omega_6\omega_{22}\omega_{13} + 6\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} + $$
$$18\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{13} - 6\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{13}^2 - 18\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{13} + 12\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22} - 24\omega_{18}\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13} - $$
$$72\omega_{18}\omega_9^3cs^2\omega_6v_3^2\omega_{22}\omega_{13} + 36\omega_9^3cs^4\omega_6^2\omega_{13} - 88\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{22}\omega_{13} + 6v_1^2\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{13} + 24\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} - $$
$$12\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} - 24\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} + 18\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13} + 6v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} - 42\omega_{18}\omega_9^2cs^4\omega_6^3\omega_{22}\omega_{13} - $$
$$12\omega_{18}v_1^2\omega_9^3cs^2\omega_6\omega_{22}\omega_{13} + 6\omega_9^3cs^2\omega_6^3\omega_{13}^2 + 36\omega_{18}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{13} - 12\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{13} - 36\omega_{18}\omega_9cs^4\omega_6^3\omega_{13} + $$
$$36\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{13} - 84\omega_{18}\omega_9^3cs^4\omega_6\omega_{22}\omega_{13}^2 - 24\omega_{18}v_1^2\omega_9^3\omega_6v_3^2\omega_{22}\omega_{13} + 12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} - 36\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} - $$
$$12\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}v_1^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13} - 12\omega_9^3\omega_6^3v_3^2\omega_{13}^2 + 12\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{13} - 18\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{13}^2 + $$
$$12v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22} - 36\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{22}\omega_{13} - 6\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 - 36\omega_9^2cs^2\omega_6^3v_3^2\omega_6v_3^2\omega_{22} + 18\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - $$
$$12\omega_{18}v_1^2\omega_9^3cs^2\omega_6\omega_{13} - 36\omega_{18}\omega_9^3v_3^2\omega_{22}\omega_{13} - \omega_{18}\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 36\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{13} + 36\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13}^2 + $$
$$36\omega_{18}\omega_9^3cs^2v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3cs^2\omega_6\omega_{22}\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 12\omega_{18}v_1^2cs^2\omega_6^3\omega_{22}\omega_{13}^2)\frac{v_1}{12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}^2_x\text{D}^2_z\rho} = (-36\omega_{18}\omega_9^3\omega_6\omega_{13}^2cs^2 + 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{13} + 6\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 + 36\omega_{18}\omega_9^3\omega_6^2\omega_{22}cs^2 + 6v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 - 18\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - $$
$$12\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2 - \omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 + 36\omega_9^3\omega_6\omega_{13}^2cs^2 - 40\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^2 - 6\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6\omega_{13} - $$
$$6\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 36\omega_{18}\omega_9^3\omega_6^2\omega_{13}cs^2 - 12\omega_{18}\omega_9^3\omega_6^3\omega_{22} + 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{13} + 6\omega_9^3\omega_6^2v_3^2\omega_{13} - 2\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^3\omega_{22}\omega_{13} + $$
$$36\omega_{18}\omega_9^2\omega_6\omega_{13}cs^2 + 18\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} + \omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6^2\omega_{22} + 12\omega_{18}\omega_9^3\omega_6\omega_{13} + 12\omega_{18}v_1^2\omega_9^3\omega_{13} - 6\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2cs^2 - $$
$$6\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_{22}\omega_{13} + 6\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13} - 18\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}cs^2 - 36\omega_{18}\omega_9^2\omega_6^2\omega_{22}cs^2 - 36\omega_{18}\omega_9^3\omega_{22}\omega_{13}cs^2 - $$
$$36\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2 + 18\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2cs^2 + 12v_1^2\omega_9^3\omega_6\omega_{13} + 12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22} - 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{13} - 12\omega_{18}\omega_9^3\omega_6\omega_{13} + 2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 + $$

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$$5\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 cs^2 - 12\omega_{18}v_1^2\omega_9^2\omega_{22}\omega_{13}^2 - 6v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + 36\omega_{18}\omega_9^3\omega_{22}\omega_{13}^2 cs^2 - 36\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} cs^2 + 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} +$$
$$6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22} - 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13} - 18\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 cs^2 - 12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2 -$$
$$18\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} + 12\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 6\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 + 54\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2 + 54\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2 +$$
$$12\omega_{18}\omega_9^3\omega_6^2\omega_{13} - 36\omega_{18}\omega_9^3\omega_6\omega_{22} cs^2 - 12v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22} + 18\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 cs^2 + 36\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2 cs^2 - 18\omega_9^3\omega_6^2\omega_{13}^2 cs^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_9^3\omega_6\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{13} - 36\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2 cs^2 + 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 36\omega_{18}\omega_9^3\omega_6\omega_{13} cs^2 +$$
$$12\omega_{18}\omega_9^2\omega_6\omega_{22} + 18\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13} + 18\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 36\omega_9^2\omega_6\omega_{22}\omega_{13}^2 cs^2 + 54\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13} cs^2) \frac{v_1 cs^2}{12\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2}$$

$C_{\mathrm{D}_x^2\mathrm{D}_z^2\rho}^{(1),\mathrm{CLBM2}} = (5\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{13} + 6\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 + 6v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 18\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_{22}\omega_{13}^2 +$
$12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}^2 + 54\omega_{18}\omega_9^2 cs^2\omega_6\omega_{22}\omega_{13}^2 - \omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 - 18\omega_9^3 cs^2\omega_6^2\omega_{13}^2 - 36\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6\omega_{13} -$
$36\omega_{18}\omega_9^2 cs^2\omega_6^2\omega_{13} - 6\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13} - 12\omega_{18}\omega_6^2\omega_{22}\omega_{13} + 12\omega_{18}v_1^2\omega_9^3\omega_{22}\omega_{13} + 18\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{13} + 6\omega_9^3\omega_6^3\omega_{13}^2 - 2\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} -$
$36\omega_{18}\omega_9^3 cs^2\omega_6\omega_{22} - 12\omega_{18}v_1^2\omega_9^3\omega_{22}\omega_{13} - 36\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{13} + 18\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13} + \omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} -$
$12\omega_{18}\omega_9^3\omega_6^2\omega_{22} + 12\omega_{18}\omega_9^3\omega_6\omega_{13}^2 - 18\omega_{18}\omega_9^2 cs^2\omega_6^2\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13} - 6\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_{22}\omega_{13} + 6\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} +$
$12v_1^2\omega_9^3\omega_6\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22} - 18\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{13} - 12\omega_{18}\omega_9^2\omega_6^2\omega_{13} + 2\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 -$
$6v_1^2\omega_9^3\omega_6^2\omega_{13}^2 + 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 6\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22} + 36\omega_{18}\omega_9^3 cs^2\omega_{22}\omega_{13}^2 - 36\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2 -$
$12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2 - 18\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2 + 54\omega_{18}\omega_9^2 cs^2\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_9^3\omega_6\omega_{22}\omega_{13}^2 + 36\omega_{18}\omega_9^3 cs^2\omega_6\omega_{13} - 6\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 +$
$12\omega_{18}\omega_9^3\omega_6\omega_{22} - 36\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22} - 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 + 54\omega_{18}\omega_9^3 cs^2\omega_6\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^2\omega_{13} - 12v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2 + 36\omega_9^3 cs^2\omega_6\omega_{13}^2 -$
$12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22} - 40\omega_{18}\omega_9^3 cs^2\omega_6\omega_{22}\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 36\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{22} - 12\omega_9^3\omega_6\omega_{13}^2 - 6\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}^2 +$
$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 - 36\omega_{18}\omega_9 cs^2\omega_6^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{13} + 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^2\omega_6^2\omega_{22} - 36\omega_{18}\omega_9^3 cs^2\omega_{22}\omega_{13} -$
$36\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}^2 + 18\omega_9^2 cs^2\omega_6^2\omega_{22}\omega_{13}^2 + 18\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2 + 18\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 - 36\omega_{18}\omega_9^2 cs^2\omega_{22}\omega_{13}) \frac{v_1 cs^2}{12\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2}$

$C_{\mathrm{D}_x^2\mathrm{D}_z^2\rho}^{(1),\mathrm{CuLBM1}} = (12\omega_{12}^2\omega_4^2 + 12v_1^2\omega_4^3\omega_2^2 + 12\omega_4^2\omega_2^2 - 12\omega_{12}\omega_4^2\omega_2 + 4v_1^2\omega_{12}^2\omega_4^2\omega_2^2 + 18\omega_{12} cs^2\omega_4^2\omega_2^2 - 12\omega_{12}\omega_4^3 - 12v_1^2\omega_{12}^2\omega_4^3\omega_2 + 54\omega_{12} cs^2\omega_4^3\omega_2 +$
$12\omega_4^3\omega_2 + 6\omega_{12}\omega_4^2\omega_2^2 + v_1^2\omega_{12}^2\omega_4^3\omega_2 - 18\omega_{12} cs^2\omega_4^3\omega_2 - 12\omega_4^3\omega_2 - 18\omega_{12}\omega_4^3\omega_2 - 12v_1^2\omega_4^3\omega_2 + 18\omega_{12}^2\omega_4\omega_2 - 12v_1^2\omega_{12}^2\omega_4 + 36\omega_{12} cs^2\omega_2^2 -$
$54\omega_{12}^2 cs^2\omega_4\omega_2 - 6\omega_{12}\omega_4^3\omega_2 - 12v_1^2\omega_4^3\omega_2 + 6v_1^2\omega_{12}^2\omega_4^2\omega_2 + 36\omega_{12} cs^2\omega_4^2\omega_2 - 36\omega_{12} cs^2\omega_4^3 + 12v_1^2\omega_{12}^2\omega_4^3 + 12\omega_{12}^2\omega_4^3\omega_2 + 12\omega_{12}^2 cs^2\omega_4^2\omega_2^2 - 6v_1^2\omega_{12}\omega_4^3\omega_2^2 +$
$12v_1^2\omega_{12}^2\omega_2^2 - 12v_1^2\omega_{12}\omega_4^3 - 36\omega_{12}^2 cs^2\omega_4^3 + 36 cs^2\omega_4^3\omega_2 + 12v_1^2\omega_{12}\omega_4^2\omega_2 - 4\omega_{12}^2\omega_4^2\omega_2 - 40\omega_{12}^2 cs^2\omega_4^3\omega_2 + 36\omega_{12}^2 cs^2\omega_4^3 + 12\omega_{12}\omega_4^3 - 12\omega_{12}^2\omega_2^2 +$
$6v_1^2\omega_{12}\omega_4^2\omega_2^2 - 36 cs^2\omega_4^3\omega_2 - 6\omega_{12}^2\omega_4\omega_2 + 5\omega_{12}^2 cs^2\omega_4^3\omega_2 - \omega_{12}^2\omega_4^3\omega_2 + 18\omega_{12} cs^2\omega_4^2\omega_2 + 18v_1^2\omega_{12}\omega_4^3\omega_2 - 18v_1^2\omega_{12}\omega_4\omega_2 - 36 cs^2\omega_4^2\omega_2) \frac{v_1 cs^2}{12\omega_{12}^2\omega_4^3\omega_2^2}$

$C_{\mathrm{D}_x^2\mathrm{D}_z^2\rho}^{(1),\mathrm{CuLBM2}} = (-36\omega_4^2\omega_1^3 cs^4\omega_2^2 + 12v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 4\omega_3^2\omega_4^2\omega_1^3 - 12\omega_3\omega_4^2\omega_1^3 cs^4\omega_2 - 4\omega_3^2\omega_4^2\omega_1\omega_2^2 + 36v_1^2v_3^2\omega_3^2\omega_4^2\omega_2^2 + 36\omega_3^2\omega_1^2 cs^2\omega_2^3 +$
$3v_1^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 + 54\omega_3^2\omega_1^3 cs^4\omega_2^3 - 4v_1^2\omega_3^2\omega_4^2\omega_2^2 + 78\omega_3^2\omega_4^2\omega_1 cs^4\omega_2^3 - 9v_1^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 54\omega_4^2\omega_1^3 cs^4\omega_2^3 - 52\omega_3^2\omega_4^2\omega_1^3 cs^2 -$
$84\omega_3\omega_4^2\omega_1 cs^4\omega_2^3 - 27v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 4\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2 - 72\omega_3^2\omega_4^2\omega_1 cs^4\omega_2^2 - 216v_3^2\omega_3^2\omega_4^2 cs^2\omega_2^2 + 36v_1^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^2 - 102\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2 +$
$8v_1^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^2 + 27v_4^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 24\omega_4^2\omega_1^2 cs^2\omega_2^3 + 24v_4^2\omega_3^2\omega_4^2\omega_1^3 + 16v_1^2\omega_3^2\omega_4^2\omega_1^3 cs^2 - 48v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 28v_1^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 -$
$36\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^3 - 138v_3^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^3 + 35\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^2 - 36v_4^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 20v_1^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 + 108\omega_3^2\omega_4\omega_1^2 cs^4\omega_2^3 - 27v_4^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 +$
$4v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 24v_1^2\omega_4^2\omega_1^2 cs^2\omega_2^3 - 27\omega_3\omega_4^2\omega_1^3 cs^4\omega_2^3 + 27v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 16\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 + 66v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 9\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 -$
$28v_1^2\omega_3\omega_4^2\omega_1 cs^2\omega_2^2 - 36v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 4v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_2^2 + 15\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^3 - 36v_1^2\omega_3^2\omega_1^2 cs^2\omega_2^2 + 4v_1^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 -$
$30v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 32\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^2 + 49\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^3 - 24\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 4v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2 - 8v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 36v_4^2\omega_3^2\omega_4^2\omega_1\omega_2^2 -$
$18\omega_4^2\omega_1^3 cs^2\omega_2^3 + 324v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 16v_1^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 - 9v_1^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^3 - 30v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 28\omega_3\omega_4^2\omega_1 cs^2\omega_2^2 + 28\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 +$
$12v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 36v_1^2\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^2 + 74\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 - 72\omega_3^2\omega_4^2\omega_1 cs^4\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1\omega_2 - 32v_1^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^3 + 24v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3 +$
$20\omega_3^2\omega_4^2 cs^2\omega_2^3 + 60v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 12\omega_4^3\omega_1^3 cs^2\omega_2^2 + 4\omega_3^2\omega_4^2\omega_2^3 + 72v_4^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 4\omega_3\omega_4^2\omega_1^3 cs^2\omega_2 + 4v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 - 324v_3^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 -$
$108\omega_3^2\omega_1^2 cs^4\omega_2^3 + 216v_3^2\omega_3^2\omega_4^2\omega_1^3 cs^2 - 4v_1^2\omega_3^2\omega_4^2\omega_1^3 - 18\omega_3^2\omega_1^3 cs^2\omega_2^3 - 42\omega_3^2\omega_4^2\omega_1\omega_2^3 - 58\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 + 32v_1^2\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^2 - 4\omega_3^2\omega_4^2\omega_1^3\omega_2 -$
$3\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^2 - 48v_3^2\omega_3^2\omega_4^2\omega_1^3 + 16v_1^2\omega_3^2\omega_4^2 cs^2\omega_2^3 + 96\omega_3\omega_4^2\omega_1^2 cs^4\omega_2^2 - 12v_1^2\omega_4^2\omega_1^3 cs^2\omega_2^2 + 18v_1^2\omega_3^2\omega_1^3 cs^2\omega_2^3 - 119\omega_3^2\omega_4^2\omega_1^2 cs^4\omega_2^3 -$
$12v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 138v_3^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^3 + 108\omega_3\omega_4^2\omega_1^2 cs^4\omega_2^3 + 18v_1^2\omega_4^2\omega_1^3 cs^2\omega_2^3 - 36\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 - 25\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3\omega_2^2 -$
$60v_3^4\omega_3^2\omega_4^2\omega_2^3 + 9\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^3 + 4v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 72\omega_3^2\omega_4^2\omega_1^3 cs^4 - 27\omega_3^2\omega_4\omega_1^3 cs^4\omega_2^3 - 4v_1^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2 + 24\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^2) \frac{v_1}{36\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1}^{(1)}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2}$:

$C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1}^{(1),\mathrm{SRT}} = (-24 - 108v_1^2\omega - cs^2\omega^3 - 12\omega^2 + 8cs^2\omega^2 - 18cs^2\omega + 36v_1^2\omega^2 + 72v_1^2 + 12cs^2 + 36\omega) \frac{\rho cs^2}{12\omega^3}$

$C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1}^{(1),\mathrm{MRT1}} = (18\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 36\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{22}\omega_{13} cs^2 - 6\omega_6^2\omega_9^3 v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 84\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 cs^2 -$
$12\omega_{18}\omega_9^3\omega_6^3\omega_{13} cs^4 + 24\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22} cs^2 - 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} cs^2 - 36\omega_{18}v_1^2\omega_9^3\omega_6^2 v_3^2\omega_{22}\omega_{13} - 4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 cs^4 - 18v_1^2\omega_9\omega_6^3\omega_6^2\omega_{13}^2 cs^2 +$
$36\omega_{18}v_1^2\omega_9\omega_9^3 v_3^2\omega_{13} - 12\omega_{18}\omega_9^3\omega_{22}\omega_{13}^2 cs^4 - 12\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 cs^2 + 12\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{22} - 144\omega_{18}v_1^2\omega_9\omega_9^2\omega_6\omega_{22}\omega_{13}^2 cs^2 - 24\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2 +$
$24\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} cs^2 + 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13} + 6\omega_9^3\omega_6^3\omega_{13}^2 cs^2 + 12\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2 + 72\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2 + 12\omega_{18}\omega_6\omega_{22}\omega_{13}^2 cs^4 +$
$36\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{13} cs^2 + 12\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^2 + 12\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 cs^2 - 24\omega_{18}\omega_9^3\omega_6 v_3^2\omega_{22}\omega_{13}^2 cs^2 - 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 +$
$60\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13} cs^2 + 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2 - 12\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2 + 12\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 6\omega_{18}\omega_9\omega_6^3\omega_{13}^2 cs^2 - 18v_1^2\omega_9\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 +$
$12\omega_9^3\omega_6^2\omega_{13}^2 cs^4 - 6\omega_9\omega_6^3 v_3^2\omega_{13}^2 cs^2 - 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 - 24\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13} - 6\omega_6^2\omega_6^3\omega_{22}\omega_{13}^2 cs^2 - 12\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} cs^4 +$
$72\omega_{18}v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} cs^2 - 42\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 cs^2 - 12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13} cs^2 - 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 18v_1^2\omega_9\omega_9^3\omega_6^3\omega_{13}^2 cs^2 +$
$6\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2 cs^2 - 12\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} - 24\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2 - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^4 + 6\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 12\omega_{18}\omega_9\omega_6^3\omega_{13}^2 cs^4 -$
$36\omega_{18}v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{22} + 24\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 24\omega_{18}\omega_9^2\omega_6\omega_6 v_3^2\omega_{22}\omega_{13}^2 cs^2 - 18\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_6^3 v_3^2\omega_{13} + 12\omega_{18}\omega_9^2\omega_6^3\omega_6^3\omega_{13} cs^4 + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} cs^4 +$
$12\omega_9^3\omega_6^2 v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22} cs^2 + 24\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^3\omega_{13} cs^2 + 24\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13} cs^2 - 12\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13} +$
$12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} + 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 60\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13} cs^2 + 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 cs^2 + 108\omega_{18}v_1^2\omega_9^3\omega_6^2 v_3^2\omega_{22}\omega_{13} -$

$36\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} + 18\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}^2cs^2 - \omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2cs^4 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2cs^4 + 12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}^2cs^2 - 36\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22} +$
$6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 - 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13} + 36v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 54\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 48\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 48\omega_{18}v_1^2\omega_9^3\omega_{22}\omega_{13}^2cs^2 +$
$18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2cs^4 + 180\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2cs^2 - 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13}cs^2 - 12\omega_9^3\omega_6^2\omega_{13}^2cs^2 + 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2cs^4 + 6\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^4 +$
$18v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^2 + 12\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}cs^4 - 36\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}cs^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^4 -$
$108\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2 - 36\omega_{18}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 - 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22} - 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2cs^2 -$
$132\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}cs^2 - 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2cs^2 - 36v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}cs^2 +$
$18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^2\omega_{13}cs^4 - 24\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}cs^2 - 36\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{13} + 78\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22} -$
$24\omega_{18}\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13}^2 + 36\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{13} + 24\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^4 - 36\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{13}cs^2 + 72\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} + 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 +$
$24\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22}cs^2 - 72\omega_{18}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} + 84\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2cs^2 + 18v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2 +$
$12\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^2 - 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22}cs^2 - 72\omega_{18}v_1^2\omega_9^3\omega_6v_3^2\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13} + 6\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 + 36\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2 -$
$12\omega_9^3\omega_6^2v_3^2\omega_{13}^2 + 36\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22} + 6\omega_{18}\omega_9^3\omega_6^3v_3^2cs^4 - 18\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 + 36\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}cs^2 - 24\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}cs^4 -$
$36\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13} - 6\omega_9^3\omega_6^3\omega_{13}^2cs^4 + 36v_1^2\omega_9^3\omega_6^2\omega_{13}^2cs^2 - 36v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 12\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2cs^4 + 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13}^2 -$
$12\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9\omega_6^2v_3^2\omega_{13}cs^2 - 18\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2 - 36\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^4) \frac{\rho}{12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2}$

$C_{D_x^2 D_z^2 v_1}^{(1),\mathrm{MRT2}} = (24\omega_{18}\omega_9^2cs^2\omega_6v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 84\omega_{18}v_1^2\omega_9^3cs^2\omega_6\omega_{22}\omega_{13}^2 - 6\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}\omega_9cs^4\omega_6\omega_{22}\omega_{13}^2 +$
$24\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_6^2v_3^2\omega_{22} + 18\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 + 78\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{22}\omega_{13} + 24\omega_{18}\omega_9^2cs^4\omega_6^3\omega_{22}\omega_{13}^2 +$
$180\omega_{18}v_1^2\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13}^2 - 36\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{13} - 6\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22} + 6\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{13}^2 -$
$6\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9cs^4\omega_6^2\omega_{22}\omega_{13}^2 + 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{22} - 108\omega_{18}v_1^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2 - 12\omega_9^2cs^4\omega_6^2\omega_{22}\omega_{13}^2 +$
$12\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} + 6\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 6\omega_9^3cs^2\omega_6^3v_3^2\omega_{13}^2 + 24\omega_{18}\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} +$
$12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13} - 18v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 + 24\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{22} - 24\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} + 72\omega_{18}v_1^2\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{22} -$
$6\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2 - 12\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13} + 12\omega_{18}\omega_9cs^2\omega_6\omega_{22}\omega_{13}^2 + 6\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 36\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22} + 24\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2 +$
$12\omega_{18}\omega_9^2cs^2\omega_6\omega_{22}\omega_{13} + 36\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2cs^4\omega_6^2\omega_{22}\omega_{13} - 18\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{13} - 24\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22} +$
$60\omega_{18}v_1^2\omega_9^2cs^2\omega_6\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{13} + 12\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 24\omega_{18}\omega_9^3\omega_6v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2 + 60\omega_{18}v_1^2\omega_9^3cs^2\omega_6\omega_{22}\omega_{13}^2 +$
$12\omega_{18}\omega_9\omega_6^3cs^4\omega_6\omega_{22}\omega_{13} + 108\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13} - 36\omega_{18}v_1^2\omega_9^3\omega_6^2v_3^2\omega_{13} - 48\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 36v_1^2\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13}^2 -$
$\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{22}\omega_{13}^2 - 12\omega_9^3cs^2\omega_6^2\omega_{13}^2cs^2 + 6\omega_{18}\omega_9^3cs^4\omega_6^3\omega_{13}^2 + 18\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3v_3^2\omega_{13} - 12\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13} +$
$24\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 36\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22} - 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{13} + 36v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13}^2 - 54\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2 +$
$6\omega_9^2cs^4\omega_6^3\omega_{22}\omega_{13}^2 - 18\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 6\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} - 24\omega_{18}\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13}^2 + 36\omega_{18}v_1^2\omega_9^2cs^2\omega_6^3\omega_{13} +$
$12\omega_9^3cs^2\omega_6^2v_3^2\omega_{13}^2 - 24\omega_{18}\omega_9^2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9cs^2\omega_6^3\omega_{13}^2 + 12\omega_{18}\omega_9^3cs^2\omega_6^2\omega_{13}^2 + 6\omega_9^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 6\omega_9^3cs^4\omega_6^3\omega_{13}^2 -$
$36\omega_{18}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} - 18\omega_{18}v_1^2\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2 - 6\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22} +$
$12\omega_{18}\omega_9^3cs^2\omega_6\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^3cs^4\omega_6\omega_{13} + 6\omega_{18}\omega_9cs^2\omega_6^3\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{13}^2 + 36\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{13} - 18v_1^2\omega_9^3cs^2\omega_6^3\omega_{13}^2 +$
$12\omega_{18}\omega_9^3cs^2\omega_6^3\omega_{13} + 12\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{13} - 36v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 24\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{22}\omega_{13} + 18\omega_{18}v_1^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 132\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} -$
$36\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} - 6\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{13}^2 - 6\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{13}^2 + 12\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22} - 24\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2 - 24\omega_{18}\omega_9^3cs^2\omega_6v_3^2\omega_{22}\omega_{13} +$
$12\omega_9^3cs^4\omega_6^2\omega_{13}^2 - 4\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{22}\omega_{13} + 18v_1^2\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{13} + 72\omega_{18}v_1^2\omega_9^3cs^2\omega_6^3\omega_{22}\omega_{13} - 42\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} -$
$72\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2 - 144\omega_{18}v_1^2\omega_9^2cs^2\omega_6\omega_{22}\omega_{13} + 18v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^2cs^4\omega_6^3\omega_{22}\omega_{13} - 84\omega_{18}v_1^2\omega_9^2cs^2\omega_6\omega_{22}\omega_{13}^2 + 6\omega_9^3cs^2\omega_6^3\omega_{13}^2 +$
$12\omega_{18}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 36\omega_{18}v_1^2\omega_9^3cs^2\omega_6^2\omega_{13}^2 - 12\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{13} - 12\omega_{18}\omega_9^3cs^4\omega_6^2\omega_{13} + 12\omega_{18}\omega_9^3cs^2\omega_6^2v_3^2\omega_{13} - 12\omega_{18}\omega_9^2cs^4\omega_6\omega_{22}\omega_{13}^2 -$
$72\omega_{18}v_1^2\omega_9^3\omega_6v_3^2\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13} + 72\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_9^3cs^2\omega_6^2v_3^2\omega_{13}^2 -$
$12\omega_{18}\omega_9^3cs^2\omega_6^2\omega_{13} - 6\omega_{18}\omega_9cs^4\omega_6^3\omega_{13}^2 + 36v_1^2\omega_9^3cs^2\omega_6^2\omega_{13}^2 + 36\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22} - 12\omega_{18}\omega_9^2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13}^2 -$
$18\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{13}^2 - 12\omega_9^2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2 + 6\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2 - 36\omega_{18}v_1^2\omega_9^3cs^2\omega_6\omega_{13} - 36\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^4\omega_6\omega_{13} +$
$12\omega_{18}\omega_9^3cs^2\omega_6^3v_3^2\omega_{22} + 12\omega_{18}\omega_9^3\omega_6^2v_3^2\omega_{13} + 12\omega_{18}\omega_9cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^3cs^2\omega_6\omega_{22}\omega_{13} - 36\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}) \frac{\rho}{12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2}$

$C_{D_x^2 D_z^2 v_1}^{(1),\mathrm{CLBM1}} =$
$(-12\omega_{18}\omega_9^2\omega_6\omega_{22} - 12\omega_{18}\omega_9^3\omega_{22}\omega_{13}cs^2 + 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22} + 18\omega_{18}v_1^2\omega_9^3\omega_6\omega_{13} - 12\omega_{18}\omega_9\omega_6^3 - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2 - 18v_1^2\omega_9^3\omega_6^3\omega_{13} +$
$12\omega_{18}\omega_9^2\omega_6^2cs^2 - 36\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22} + 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 18\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_9\omega_6^2\omega_{22} -$
$6\omega_{18}\omega_9\omega_6^3\omega_{13} - 6\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6^3cs^2 - 12\omega_{18}\omega_9^2\omega_6\omega_{13}cs^2 + 6\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_9\omega_6\omega_{22}cs^2 + 36\omega_{18}v_1^2\omega_9^2\omega_6^2 +$
$36v_1^2\omega_9^2\omega_6^2\omega_{13} - 36\omega_{18}v_1^2\omega_9\omega_6\omega_{22} + 18v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 36\omega_{18}v_1^2\omega_9^2\omega_6\omega_{13} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} + 12\omega_9^2\omega_6^2\omega_{13}cs^2 - 18\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$
$36\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13} - 24\omega_{18}\omega_9^2\omega_6^2\omega_{22}cs^2 - 36\omega_{18}v_1^2\omega_9\omega_6^3 - 6\omega_{18}\omega_9\omega_6\omega_{13}cs^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{22} + 12\omega_{18}\omega_9^2\omega_6^3\omega_{13} + 36\omega_{18}v_1^2\omega_9\omega_6^3 +$
$12\omega_9\omega_6^2\omega_{22} + 24\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9\omega_6^3cs^2 - 24\omega_{18}v_1^2\omega_9\omega_6^3 + 36\omega_{18}v_1^2\omega_9^2\omega_6^2 + 6\omega_9^3\omega_6^3\omega_{13} + 12\omega_{18}\omega_9^2\omega_6\omega_{22}cs^2 -$
$12\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_9^3\omega_6\omega_{22} - 4\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}cs^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13} - 72\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22} - \omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9^3\omega_6\omega_{22}cs^2 +$
$6\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2 + 72\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 18\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9^3\omega_6^2 - 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2 - 36v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 6\omega_{18}\omega_9\omega_6^3\omega_{13} +$
$24\omega_{18}\omega_9^2\omega_6^2\omega_{22} - 6\omega_9^2\omega_6^3\omega_{13}cs^2 + 6\omega_{18}\omega_9^3\omega_6^3\omega_{13}cs^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^3\omega_6^3 - 12\omega_9^2\omega_6^3\omega_{13} + 12\omega_{18}\omega_9\omega_6^2\omega_{22}cs^2) \frac{\rho cs^2}{12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}}$

$C_{D_x^2 D_z^2 v_1}^{(1),\mathrm{CLBM2}} =$
$(-12\omega_{18}\omega_9^2\omega_6\omega_{22} + 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22} + 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22} - 12\omega_{18}\omega_9\omega_6^3 - 18v_1^2\omega_9^2\omega_6^3\omega_{13} + 6\omega_9cs^2\omega_6^3\omega_{22}\omega_{13} - 36\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13} -$
$\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22} - 12\omega_{18}\omega_9^3cs^2\omega_6\omega_{13} + 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2\omega_{22} - 6\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9cs^2\omega_6^2\omega_{22} -$
$6\omega_{18}\omega_9\omega_6^3\omega_{13} - 6\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}cs^2\omega_6^2\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_9^2\omega_6^2 + 36v_1^2\omega_9^2\omega_6^3\omega_{22} - 36\omega_{18}v_1^2\omega_9\omega_6\omega_{22} +$
$12\omega_{18}\omega_9^2cs^2\omega_6\omega_{22} + 18v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9cs^2\omega_6\omega_{22}\omega_{13} - 36\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 12\omega_{18}\omega_9cs^2\omega_6^3 - 18\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$
$36\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13} - 6\omega_9^2cs^2\omega_6^3\omega_{13} + 18\omega_{18}\omega_9cs^2\omega_6\omega_{22}\omega_{13} - 36\omega_{18}v_1^2\omega_9^3\omega_6^3 + 12\omega_{18}\omega_9^2cs^2\omega_6^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{22} + 12\omega_{18}\omega_9\omega_6^2\omega_{13} -$
$12\omega_{18}\omega_9cs^2\omega_6^3\omega_{22} + 6\omega_{18}\omega_9cs^2\omega_6^3\omega_{13} + 36\omega_{18}v_1^2\omega_9\omega_6^3 - 12\omega_{18}\omega_9^3cs^2\omega_{22}\omega_{13} + 6\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_9\omega_6^2\omega_{22}\omega_{13} - 24\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} +$
$12\omega_{18}\omega_9cs^2\omega_6^3 + 24\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13} + 36\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22} + 6\omega_9^3\omega_6^3\omega_{13} - 4\omega_{18}\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_9cs^2\omega_6^2\omega_{22}\omega_{13} - 24\omega_{18}\omega_9cs^2\omega_6^2\omega_{22} -$
$12\omega_{18}\omega_9^3\omega_6^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13} - 72\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22} + 72\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 18\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2 - 36v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13} +$

$$6\omega_{18}\omega_9\omega_6^3\omega_{13} + 24\omega_{18}\omega_9^2\omega_6^2\omega_{22} - 6\omega_{18}\omega_9 cs^2\omega_6^3\omega_{13} + 12\omega_{18}\omega_9^2 cs^2\omega_6^3\omega_{22} - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2\omega_6^3 - 12\omega_9^2\omega_6^2\omega_{13})\frac{\rho cs^2}{12\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}}$$

$C^{(1),\text{CuLBM1}}_{D_x^2 D_z^2 v_1} = (36v_1^2\omega_2^3 + 24\omega_4^2\omega_2^2 - 4\omega_{12}cs^2\omega_4^2\omega_2^2 + 24cs^2\omega_4\omega_2^2 + 12\omega_{12}\omega_2^2 - 24cs^2\omega_4\omega_2^3 - \omega_{12}cs^2\omega_4^2\omega_2 + 36v_1^2\omega_{12}\omega_4\omega_2^2 - 12\omega_4^2\omega_2^2 + 36v_1^2\omega_4^2\omega_2 - 36v_1^2\omega_{12}\omega_4\omega_2 - 72v_1^2\omega_4^2\omega_2^2 - 12\omega_{12}cs^2\omega_4^2 + 36v_1^2\omega_4^2\omega_2^3 - 12\omega_4^2\omega_2 + 18\omega_{12}cs^2\omega_4^2\omega_2 - 36v_1^2\omega_{12}\omega_2^2 - 12\omega_2^3 - 12\omega_{12}\omega_4\omega_2^2 - 72v_1^2\omega_4\omega_2^3 + 12cs^2\omega_4^2\omega_2 - 12\omega_{12}cs^2\omega_4\omega_2 - 12\omega_{12}cs^2\omega_2^2 + 72v_1^2\omega_4\omega_2^2 + 12cs^2\omega_2^3 + 12cs^2\omega_4^2\omega_2^3 + 24\omega_4\omega_2^3 - 24\omega_4^2\omega_2^2 + 12\omega_{12}\omega_4\omega_2 + 12\omega_{12}cs^2\omega_4\omega_2^2 - 24cs^2\omega_4^2\omega_2^2)\frac{\rho cs^2}{12\omega_{12}\omega_4^2\omega_2^3}$

$C^{(1),\text{CuLBM2}}_{D_x^2 D_z^2 v_1} = (18\omega_3^2\omega_4\omega_1^3 cs^2\omega_2 + v_1^4\omega_3^2\omega_4\omega_1^3\omega_2^2 - 36v_3^2\omega_3\omega_4\omega_1^3 cs^2\omega_2 - 96v_1^2\omega_3^2\omega_4 cs^2\omega_2^3 - 48v_3^4\omega_3^2\omega_4\omega_2^3 + 18v_3^2\omega_3\omega_1^3\omega_2^2 + 32\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 - 4\omega_3^2\omega_4\omega_1^3\omega_2 - 126v_1^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 12v_3^2\omega_3\omega_4\omega_1^3\omega_2 + 72\omega_3^2\omega_1^2 cs^2\omega_2^3 + 54v_3^2\omega_3^2\omega_1^3 cs^2\omega_2^2 + 36v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 54v_3^2\omega_3\omega_1^2 cs^2\omega_2^3 - v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 150v_3^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 - 28\omega_3^2\omega_4\omega_1^2 cs^4\omega_2 + 66v_1^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^2 - 18v_3^4\omega_3^2\omega_1^2\omega_2 - 8\omega_3\omega_4\omega_1 cs^2\omega_2^3 - 36v_1^2 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 - 36v_3^4\omega_3\omega_4\omega_1^2\omega_2^3 + 18\omega_3^2\omega_1^3 cs^4\omega_2^3 - 18v_3^4\omega_4\omega_1^3\omega_2^2 - 12v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 18v_3^2\omega_3\omega_4\omega_1 cs^2\omega_2^3 + 8\omega_3^2\omega_4\omega_1^2\omega_2^2 - 6v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 - 18\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 + 132v_1^3\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 - 48v_3^2\omega_3^2\omega_4\omega_1^3 - 8\omega_3\omega_4\omega_1^3 cs^2\omega_2 + 16\omega_3^2\omega_4\omega_1^3 cs^4 + 6v_3^4\omega_3\omega_4\omega_1^2\omega_2^2 - 174v_3^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2 - 18v_3^4\omega_3^2\omega_1^2\omega_2^3 - 6v_1^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 + 12v_1^2\omega_3^2\omega_4\omega_1^2\omega_2 - 12v_3^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^2 + 54v_3^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 36\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 - 90v_1^2 v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 30v_3^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^2 + 72v_1^2 v_3^2\omega_3^3\omega_4\omega_1^3 - 24v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 12v_3^4\omega_3^2\omega_4\omega_1\omega_2^2 - 14\omega_3^2\omega_4\omega_1^2 cs^4\omega_2^3 + 18v_3^4\omega_3^2\omega_1^3\omega_2^2 + 4\omega_3^2\omega_4\omega_2^3 - 4\omega_3^2\omega_4\omega_1^2\omega_2 - 18v_3^2\omega_3^2\omega_1\omega_2^3 - 12v_1^2\omega_3^2\omega_4\omega_1^3 + 56\omega_3\omega_4\omega_1^2 cs^4\omega_2 + 54v_3^2\omega_3^3\omega_1 cs^2\omega_2^3 + 36v_3^2\omega_3^2\omega_4\omega_1\omega_2 + 12v_1^2\omega_3^2\omega_4\omega_1^3\omega_2 + 72\omega_3^2\omega_1 cs^4\omega_2^3 + v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 216v_1^2\omega_3^2\omega_1^2 cs^2\omega_2^3 + 28\omega_3^2\omega_4\omega_1^2 cs^4\omega_2 - 48v_1^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2 + 54v_3^4\omega_3^2\omega_4\omega_1\omega_2^3 + 180v_1^2 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 18v_3^4\omega_4\omega_1^2 cs^2\omega_2^3 - 18\omega_3\omega_4\omega_1^3 cs^2\omega_2^3 + 36v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 28\omega_3^2\omega_4 cs^2\omega_2^3 - 24v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - v_1^4\omega_3^2\omega_4\omega_1^2\omega_2^2 - 2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^3 + 90v_3^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 - 36\omega_3\omega_4\omega_1^2 cs^4\omega_2^3 - 36v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 132v_3^2\omega_3^2\omega_4\omega_1^2 cs^2 - 18v_3^2\omega_3\omega_1^2\omega_2^3 - 12v_3^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 - 9v_3^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 12v_3^2\omega_3^2\omega_4\omega_2^3 - 18v_3^4\omega_3^2\omega_1^2\omega_2^2 + 12v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 36v_3^4\omega_3^2\omega_4\omega_1^2\omega_2 + 76\omega_3^2\omega_4\omega_1 cs^4\omega_2^3 - 144v_1^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 12v_1^2\omega_3^2\omega_4\omega_1^3 cs^2 + 8\omega_3\omega_4\omega_1^3 cs^4\omega_2 - 90v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 18v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 66v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 - 54v_3^2\omega_3\omega_1^3 cs^2\omega_2^2 - 54v_3^2\omega_3^2\omega_1^2 cs^2\omega_2^3 + 9v_3^3\omega_3^2\omega_4\omega_1^2\omega_2^3 + 18v_3^2\omega_3^2\omega_1^2\omega_2^2 - 90v_1^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 6v_1^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^2 - 14\omega_3^2\omega_4\omega_1^3 cs^4\omega_2 - 54v_3^2\omega_3\omega_1^3 cs^2\omega_2^2 + 24v_3^4\omega_3^2\omega_4\omega_1^3 + 216v_1^2\omega_3^2\omega_1 cs^2\omega_2^3 - 28\omega_3^2\omega_4\omega_1 cs^4\omega_2^3 - 18v_3^4\omega_3^2\omega_4\omega_1^2\omega_2^2 + 12v_1^2\omega_3^2\omega_4\omega_1\omega_2^2 - 72\omega_3^2\omega_1^2 cs^4\omega_2^3 + 18v_3^2\omega_3^2\omega_1^2\omega_2^3 + 8\omega_3\omega_4\omega_1 cs^4\omega_2^3 + 32\omega_3^2\omega_4\omega_1^2 cs^2\omega_2 - 42v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 54v_3^2\omega_3^2\omega_1^2 cs^2\omega_2^2 - 18\omega_3^2\omega_1^3 cs^2\omega_2^3 + 54v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^3 + 54v_3^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 - 72\omega_3^2\omega_1 cs^2\omega_2^3 - 18v_3^2\omega_3\omega_1^3\omega_2^3 - 36\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^2 + 60v_1^2\omega_3\omega_4\omega_1 cs^2\omega_2^3 - 4\omega_3^2\omega_4\omega_1\omega_2^3 - 68\omega_3^2\omega_4 cs^4\omega_2^3 + 18\omega_3\omega_4\omega_1^3 cs^4\omega_2^3 - 6v_1^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_2 + 2\omega_3^2\omega_4\omega_1^3 cs^4\omega_2^3 + 54v_1^2\omega_3^2\omega_1^3 cs^2\omega_2^3 - 84v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 + 36\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 18v_3^4\omega_3^2\omega_1\omega_2^3 + 12v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 - 30v_3^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 - 9v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 4\omega_3^2\omega_4\omega_1^3 - 36\omega_3\omega_4\omega_1^3 cs^4\omega_2^3 + 24v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2 - 20\omega_3^2\omega_4\omega_1^3 cs^2 - 18v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 - 6v_3^2\omega_3\omega_4\omega_1\omega_2^3 - 4\omega_3^2\omega_4\omega_1\omega_2^3 + 108v_1^2 v_3^2\omega_3^2\omega_4\omega_2^3 - 90v_3^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 24v_3^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^2 + 18v_3^4\omega_3^2\omega_1^2\omega_2^3 - 108v_3^2\omega_3^2\omega_4 cs^2\omega_2^3 + 48v_1^2\omega_3^2\omega_4\omega_1 cs^2\omega_2^3 - 56\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 9v_3^3\omega_3^2\omega_4\omega_1^3\omega_2^3 - 12v_1^2\omega_3^2\omega_4\omega_2^3 - 3\omega_3^2\omega_4\omega_1^3 cs^4\omega_2^3 + 6v_3^3\omega_3\omega_4\omega_1\omega_2^3)\frac{\rho}{36\omega_3^2\omega_4\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{D_x^2 D_z^2 v_3}$ at $\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2}$:

$C^{(1),\text{SRT}}_{D_x^2 D_z^2 v_3} = 0$

$C^{(1),\text{MRT1}}_{D_x^2 D_z^2 v_3} = (-24\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 4\omega_{18}^2 v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{11} + 11\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 4\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{11} - 8\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - 2\omega_{18}^2 v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + \omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{11} + 2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - \omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2 v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{11} + 8\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{11}cs^2 + 4\omega_{18}^2 v_1^2\omega_9^2\omega_6^3\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^2 + 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - \omega_{18}^2 v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 - 4\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}\omega_{11} - 4\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2 - 7\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 4\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11} - 2\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}cs^2 - 6\omega_{18}^2 v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 4\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 2\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}\omega_{11} - 4\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^2 + 7\omega_{18}^2 v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 4\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 4\omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{11} + 13\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - 4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 6\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11} - 8\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{11}cs^2 + 2\omega_{18}^2 v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}^2 v_1^2\omega_9^3\omega_{22}\omega_{13}\omega_{11} - 16\omega_{18}^2\omega_9^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 4\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{11} - \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 4\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{11} + \omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^2 - 2\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2\omega_{11} + 2\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}^2\omega_{11}cs^2 + 5\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + \omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^2 + 3\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 2\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 cs^2 + 3\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - \omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 2\omega_{18}^2 v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{13}^2\omega_{11} + 2\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 - 2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 8\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 5\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 3\omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 2\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}^2\omega_{11} - 2\omega_{18}^2 v_1^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11} - 15\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 8\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{11}cs^2 + 4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2 cs^2 - 2\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}^2\omega_{11} + 3\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 8\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 4\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{11} + 2\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{11} + 9\omega_{18}^2 v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 2\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 8\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 5\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - 4\omega_{18}^2 v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{11} - 3\omega_{18}^2 v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}\omega_{11} - 2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2\omega_{11}cs^2 - 9\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 2\omega_{18}^2 v_1^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 26\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 4\omega_{18}^2 v_1^2\omega_9^3\omega_6^2\omega_{13}\omega_{11} - 4\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^2)\frac{\rho v_1 v_3}{2\omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}}$

$C^{(1),\text{MRT2}}_{D_x^2 D_z^2 v_3} = (-4\omega_{18}\omega_9^2 cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2 v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{11} - 4\omega_{18}^2\omega_9^3 cs^2\omega_6^2\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{11} - 2\omega_{18}^2 v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + \omega_{18}^2\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{11} - 8\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - \omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11} + 4\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11} + 2\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}^2 + 13\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 2\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - \omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 4\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}\omega_{11} - 4\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2\omega_{11} - 6\omega_{18}^2\omega_9^2 cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 7\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2 cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}^2\omega_9^2 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 4\omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{13}\omega_{11} - 16\omega_{18}^2\omega_9^3 cs^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}^2 v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 8\omega_{18}\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 4\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 2\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_9^3 cs^2\omega_6^3\omega_{13}\omega_{11} + 4\omega_{18}^2\omega_9^3\omega_6^3\omega_{13}\omega_{11} + 7\omega_{18}^2 v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 2\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9^3 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{11} + 8\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}\omega_9^3 cs^2\omega_6^2\omega_{13}^2\omega_{11} + 6\omega_{18}^2\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11} + 2\omega_{18}^2 v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 2\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}^2 v_1^2\omega_9^3\omega_{22}\omega_{13}\omega_{11} + 8\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{11} - 4\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{11} + 4\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{13}\omega_{11} + \omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2\omega_{11} + 26\omega_{18}^2\omega_9^3 cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 5\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + \omega_{18}^2 v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 3\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 5\omega_{18}^2\omega_9^3 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - \omega_{18}^2\omega_9^2 cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 8\omega_{18}^2\omega_9^3 cs^2\omega_6^3\omega_{22}\omega_{11} - \omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 15\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} +$

$$2\omega_{18}^2 v_1^2 \omega_9^3 \omega_6 \omega_{22} \omega_{13}^2 \omega_{11} + 2\omega_{18}^2 v_1^2 \omega_9^3 \omega_6^3 \omega_{13}^2 \omega_{11} + 8\omega_{18} \omega_9^3 cs^2 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11} + 4\omega_9^3 cs^2 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11} - 5\omega_{18}^2 v_1^2 \omega_9 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11} -$$
$$3\omega_{18}^2 v_1^2 \omega_9^3 \omega_6^3 \omega_{22} \omega_{13} \omega_{11} - 2\omega_{18}^2 \omega_9^3 \omega_6^3 \omega_{13}^2 \omega_{11} + 2\omega_{18}^2 \omega_9^3 cs^2 \omega_6^3 \omega_{13}^2 \omega_{11} - 2\omega_{18}^2 v_1^2 \omega_9^3 \omega_6^3 \omega_{13}^2 \omega_{11} + 2\omega_{18} \omega_9 cs^2 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11} - 2\omega_{18} v_1^2 \omega_9^3 \omega_6 \omega_6^2 \omega_{13}^2 \omega_{11} +$$
$$3\omega_{18}^2 \omega_9^3 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11} + 4\omega_{18}^2 \omega_9^3 \omega_6^2 \omega_{22} \omega_{11} + 3\omega_{18}^2 \omega_9^3 cs^2 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11} - 8\omega_{18}^2 \omega_9^3 cs^2 \omega_6^2 \omega_{22} \omega_{11} + 2\omega_{18}^2 \omega_9 \omega_6^3 \omega_{13}^2 \omega_{11} + 9\omega_{18}^2 v_1^2 \omega_9^3 \omega_6^2 \omega_{22} \omega_{13} \omega_{11} -$$
$$2\omega_9^3 cs^2 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11} - 2\omega_{18} \omega_9^3 cs^2 \omega_6^3 \omega_{13}^2 \omega_{11} + 2\omega_{18}^2 v_1^2 \omega_9 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11} - 24\omega_{18} \omega_9^3 cs^2 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11} - 4\omega_{18}^2 v_1^2 \omega_9^3 \omega_6 \omega_{22} \omega_{11} -$$
$$3\omega_{18}^2 v_1^2 \omega_9 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11} - 4\omega_{18}^2 \omega_9^3 cs^2 \omega_6 \omega_{22} \omega_{13} - 4\omega_{18}^2 \omega_9^3 \omega_6^2 \omega_{13} \omega_{11} + 4\omega_{18}^2 \omega_9^3 cs^2 \omega_6^2 \omega_{13} \omega_{11} + 11\omega_{18}^2 \omega_9^3 cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{11} -$$
$$2\omega_{18} \omega_9^3 cs^2 \omega_6^3 \omega_{22} \omega_{13}^2 - 9\omega_{18}^2 \omega_9^3 \omega_6^3 \omega_{22} \omega_{13} \omega_{11} - 2\omega_{18} v_1^2 \omega_9^3 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11} - 2\omega_{18}^2 \omega_9 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11} + 4\omega_{18}^2 v_1^2 \omega_9^3 \omega_6^2 \omega_{13} \omega_{11}) \frac{\rho v_1 v_3}{2\omega_{18}^2 \omega_9^3 \omega_6^2 \omega_{22} \omega_{13}^2 \omega_{11}}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_x^2 \text{D}_z^2 v_3} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x^2 \text{D}_z^2 v_3} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_x^2 \text{D}_z^2 v_3} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_x^2 \text{D}_z^2 v_3} =$$
$$(-9v_1^2 \omega_3 \omega_1^3 \omega_2 + 36\omega_1^2 cs^2 \omega_2^2 + 50v_3^2 \omega_3 \omega_1^3 \omega_2^2 + 6\omega_1 \omega_2^3 + 42\omega_3 \omega_1^3 cs^2 \omega_2^2 + 6v_3^2 \omega_3 \omega_1^2 \omega_2 + 18v_1^2 \omega_3 \omega_1^2 \omega_2^2 - 36\omega_3 \omega_1^3 - 6v_1^2 \omega_1 \omega_2^3 - 66v_3^2 \omega_3 \omega_1^2 \omega_2^2 -$$
$$60\omega_3 \omega_1 \omega_2^3 + 48v_3^2 \omega_3 \omega_1^3 + 108\omega_3 \omega_1 cs^2 \omega_2^3 - 12v_1^2 \omega_3 \omega_1^3 \omega_2 + 84\omega_3 \omega_1^3 cs^2 + 12v_1^2 \omega_3 \omega_1^3 - 12\omega_3 \omega_1 \omega_2^3 - 75v_3^2 \omega_3 \omega_1^3 \omega_2 - 108\omega_3 \omega_1^3 cs^2 \omega_2 - 50v_3^2 \omega_3 \omega_1^2 \omega_2^2 +$$
$$42\omega_3 \omega_2^3 - 42\omega_3 \omega_1^2 cs^2 \omega_2^3 + 141v_3^2 \omega_3 \omega_1 \omega_2^3 + 12v_1^2 \omega_1^2 \omega_2^2 + 12\omega_3 \omega_1^2 \omega_2^3 - 6v_1^2 \omega_1^3 \omega_2 + 23\omega_3 \omega_1^2 \omega_2^3 + 60v_3^2 \omega_3 \omega_1 \omega_2^3 + 48\omega_3 \omega_1^3 \omega_2 - 12\omega_1^2 \omega_2^3 - 18\omega_3^2 cs^2 \omega_2 -$$
$$23\omega_3 \omega_1^3 \omega_2 - 18\omega_3 \omega_1^2 cs^2 \omega_2 + 12v_1^2 \omega_3 \omega_2^3 - 12v_1^2 \omega_3 \omega_1 \omega_2^2 - 66\omega_3 cs^2 \omega_2^3 - 9v_1^2 \omega_3 \omega_1 \omega_2^3 - 18\omega_1 cs^2 \omega_2^3 + 6\omega_1^3 \omega_2 + 6\omega_3 \omega_1^3 \omega_2 - 114v_3^2 \omega_3 \omega_3 \omega_2^3) \frac{\rho v_1 v_3}{18\omega_3 \omega_1^3 \omega_2^3}$$

coefficient $C^{(1)}_{\text{D}_x \text{D}_y \text{D}_z^2 \rho}$ **at** $\frac{\partial^4 \rho}{\partial x_1 \partial x_2 \partial x_3^2}$:

$$C^{(1),\text{SRT}}_{\text{D}_x \text{D}_y \text{D}_z^2 \rho} = (-36v_2 v_3^2 cs^2 \omega + 36v_1 v_3^2 cs^2 \omega - 14v_1 v_2^2 v_3^2 \omega^2 + v_1 v_2^2 v_3^2 \omega^3 - 36v_1^2 v_2 v_3 \omega + v_1 v_3^2 cs^2 \omega^3 + 24v_2 v_3^2 cs^2 + 14v_1^2 v_2 v_3^2 \omega^2 - v_2 v_3^2 cs^2 \omega^3 -$$
$$v_1^2 v_2 v_3^2 \omega^3 + 36v_1 v_2^2 v_3 \omega - 14v_1 v_3^2 cs^2 \omega^2 + 14v_2 v_3^2 cs^2 \omega^2 + 14v_1^2 v_2 cs^2 \omega^2 - 24v_1 v_2^2 cs^2 - v_1^2 v_2 cs^2 \omega^3 + 36v_1 v_2^2 cs^2 \omega + 24v_1^2 v_2 cs^2 - 24v_1 v_3^2 cs^2 -$$
$$14v_1 v_2^2 cs^2 \omega^2 + 24v_1^2 v_2 v_3^2 - 24v_1 v_2^2 v_3^2 + v_1 v_2^2 cs^2 \omega^3 - 36v_1^2 v_2 cs^2 \omega) \frac{1}{2\omega^3}$$

$$C^{(1),\text{MRT1}}_{\text{D}_x \text{D}_y \text{D}_z^2 \rho} = (2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + \omega_{18} \omega_9 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + 4\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^4 \omega_5^2 - 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5 -$$
$$\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 + 4\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} cs^4 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5 + \omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - \omega_{18} v_1^2 \omega_{12} \omega_9 \omega_6^3 v_3^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18} v_1^2 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5^2 +$$
$$2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 + 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_{12} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_6 cs^2 \omega_5^2 +$$
$$4\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} cs^4 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8 cs^2 \omega_5 - 4\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^4 \omega_5^2 -$$
$$2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - \omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5 + 2\omega_{18} v_1^2 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5 +$$
$$2v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 - 2v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5 - 2\omega_{18} v_1^2 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} v_1^2 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 v_3^2 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5^2 +$$
$$\omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + \omega_{18} v_1^2 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$\omega_{18} \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 + 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5 - \omega_{18} v_1 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 + \omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5 - 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$\omega_{18} v_1 \omega_9 v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5^2 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8 cs^2 \omega_5 + 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5^2 +$$
$$2v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 + \omega_{18} v_1 \omega_9 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5 - 2\omega_{18} v_1 \omega_{12} \omega_6^3 v_3^2 \omega_{22} \omega_{22} \omega_8^2 cs^2 \omega_5^2 +$$
$$v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 v_3^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 - 8\omega_{18} \omega_9 \omega_{12} v_2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^4 \omega_5^2 + \omega_{18} v_1 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 +$$
$$2v_1 \omega_9 \omega_{12} \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + \omega_{18} v_1 \omega_9 v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5 - \omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 4\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^4 -$$
$$2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5 - 2\omega_{18} v_1^2 \omega_{12} \omega_9 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18} v_1 v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + \omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$2v_1 \omega_9 \omega_{12} \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - \omega_{18} v_1 \omega_9 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 v_3^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - \omega_{18} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$4\omega_{18} \omega_9 \omega_{12} v_2 \omega_6 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^4 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 v_3^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5 -$$
$$\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5 -$$
$$\omega_{18} v_1^2 \omega_9 v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5 + v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 -$$
$$\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1 \omega_{12} v_2^2 \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_9 \omega_{12} v_2 \omega_6^2 v_3^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_6^2 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5 - v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18} v_1^2 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5^2 + \omega_{18} v_1 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$

$$
\begin{aligned}
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&2\omega_{18}v_1\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5 + 8\omega_{18}\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^4\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8 cs^2\omega_5 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 - \\
&2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&2\omega_{18}\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \\
&v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&8\omega_{18}\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_6 cs^4\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_{18}v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5 - \omega_{18}\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8 cs^2\omega_5^2 - 4\omega_{18}\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14} cs^4\omega_5^2 + \omega_{18}v_1\omega_{12}v_2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_{18}v_1^2\omega_9 v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \\
&\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 2v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&12\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_6^3 cs^4\omega_5^2 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_1\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_{18}v_1\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 - \\
&\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_{18}\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5 - \omega_{18}v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5 - 2\omega_{18}v_1^2\omega_9 v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&2\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}\omega_{12}v_2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - \\
&\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 cs^2\omega_5 + \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 - \\
&\omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 + 2v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&2\omega_{18}v_1\omega_9 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1\omega_{12}\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - \omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \\
&2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \omega_{18}v_1^2\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 - \\
&\omega_{18}v_1^2\omega_{12}v_2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9 v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^3\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&2\omega_{18}v_1^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&\omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 - \omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 cs^2\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9 v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + \omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 cs^2\omega_5 - \\
&v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5 - \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^4 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + \\
&2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 + \omega_{18}v_1\omega_9 v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9 v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 + \\
&\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5 - 8\omega_{18}\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^2 - \omega_{18}v_1\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1^2\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 cs^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5 + \\
&v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 - \\
&\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^4\omega_5 - \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 + \\
&\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + \omega_{18}v_1\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - \omega_{18}v_1 v_2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - \omega_{18}\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2 cs^2\omega_5 - \\
&2\omega_{18}\omega_9 v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2 cs^2\omega_5^2\Big)\frac{1}{2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2}
\end{aligned}
$$

$$
\begin{aligned}
C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = &\Big(\omega_{18}v_1 cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + \\
&2\omega_{18}v_1\omega_{12}v_2 cs^2\omega_6^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}v_1^2\omega_9\omega_{12}v_2 cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2 cs^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9 v_2 cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2 cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&2\omega_{18}v_1^2 v_2 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1\omega_{12}v_2^2 cs^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}\omega_9\omega_{12}v_2 cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 -
\end{aligned}
$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - \omega_{18}v_1^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$

$$2v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 -$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}\omega_{13}v_2cs^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}v_1\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 -$$

$$\omega_{18}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$

$$2v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$

$$12\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 + v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 - 2v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$

$$2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 + 2v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$

$$2\omega_{18}v_1^2v_2v_3cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - 8\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 +$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 +$$

$$\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 - \omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 -$$

$$\omega_{18}v_1\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 -$$

$$2v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1\omega_{12}v_2^2cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 8\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$

$$2\omega_{18}v_1\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_9\omega_5 - \omega_{18}v_1^2\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_9v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \omega_{18}v_1\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1v_2^3\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{20}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2 -$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_9\omega_5 + v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 + v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 +$$

$$\omega_{18}v_1\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$

$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 - 2v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$8\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_{12}cs^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + 2v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1^2\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 -$$

$$2v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}v_1\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5 + v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$

$$2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + \omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5 - 2v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 +$$

$$\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 8\omega_{18}v_1\omega_{12}cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$

$$\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 +$$

$$2v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 +$$

$$\omega_{18}v_1\omega_9v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_9v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 + v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$

$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \omega_{18}v_1^2v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$

$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 +$$
$$\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 + \omega_{18}v_1v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 - \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}v_1\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}v_1\omega_9v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1^2\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 - \omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2cs^2\omega_6^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1^2\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}v_1^2\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_{14}\omega_5^2 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - v_1\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_9\omega_{12}v_2cs^4\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + v_1\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2\big)\frac{1}{2\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2}$$

$$C_{D_xD_yD_z^2\rho}^{(1),\text{CLBM1}} = \big(2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20} + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 +$$
$$2v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_{12}\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1^2\omega_9\omega_{12}v_2v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 - \omega_{18}v_1^2\omega_9\omega_{12}v_2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14} -$$
$$\omega_{18}v_1^2\omega_{12}v_2v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 +$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 - v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 +$$
$$2\omega_{18}v_1\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20} + 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 - 2v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20} + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} - 2v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} - 2\omega_{18}v_1v_1^2\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_{12}v_2\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 - v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 + v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20} + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 -$$
$$\omega_{18}v_1^2\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 - v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 +$$
$$\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_{12}\omega_6v_3^2cs^2\omega_{20} - 2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}v_1^2\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 + v_1^2\omega_9\omega_{12}v_2v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 + 2v_1^2\omega_9\omega_{12}v_2v_2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$

$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}\omega_9\omega_{12}v_2v_6v_3^2\omega_{22}cs^2\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 -$$
$$\omega_{18}v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + \omega_{18}v_1\omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\varsigma_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + \omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{14}\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\varsigma_5 -$$
$$\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{14}\varsigma_5 - 2\omega_{18}v_1\omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\varsigma_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 - \omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 -$$
$$\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + \omega_{18}\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{14} - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14} -$$
$$\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} +$$
$$2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20} - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^3\omega_{22}cs^2\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{20}\omega_8\varsigma_5 -$$
$$2\omega_{18}v_1^2\omega_9v_2\omega_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14} - 2\omega_{18}\omega_{12}v_2\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + \omega_{18}\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$\omega_{18}\omega_{12}v_2\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 - \omega_{18}\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\varsigma_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\varsigma_5 - 2\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\varsigma_5 - \omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 +$$
$$\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$2v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - \omega_9\omega_{12}v_2\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1\omega_{12}\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\varsigma_5 - 2v_1\omega_9\omega_{12}v_2^3\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$\omega_{18}v_1\omega_{12}\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\varsigma_5 - 2v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 + 2\omega_{18}\omega_9\omega_{12}v_2v_3^2cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{14}\varsigma_5 + v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 +$$
$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 - \omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\varsigma_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$\omega_{18}v_1\omega_9\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 - 2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}\omega_{12}v_2\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_8\varsigma_5 + \omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14} + \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\varsigma_5 -$$
$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 + \omega_{18}v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\varsigma_5 - 2\omega_{18}v_1\omega_{12}\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{20}\omega_8\varsigma_5 +$$
$$2\omega_9v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 - \omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 - 2v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\varsigma_5 - \omega_{18}v_1\omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\varsigma_5 + \omega_{18}v_1v_2\omega_{12}v_2^2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 - \omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 +$$
$$v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2v_1\omega_9\omega_{12}v_2^3\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 +$$
$$\omega_{18}\omega_9\omega_{12}v_2v_2\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\varsigma_5 - \omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\varsigma_5 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14} + 2\omega_{18}\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\varsigma_5 + \omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8) \frac{1}{2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5}$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = (2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20} - 2\omega_{18}v_1cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 +$$
$$\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_6v_3^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} + \omega_{18}v_1cs^2\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\varsigma_5 - 2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 - \omega_{18}v_1\omega_9cs^2\omega_{12}v_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\varsigma_5 -$$
$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\varsigma_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_6v_3^2\omega_{22}\omega_{13}\omega_{20} + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\varsigma_5 -$$
$$\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\varsigma_5 + v_1^2\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}\omega_9cs^2\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2v_2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}cs^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$v_1\omega_9cs^2\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{20}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 +$$
$$2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20} - 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\varsigma_5 + 2\omega_{18}v_1^2cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\varsigma_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2v_1^2\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 +$$
$$\omega_{18}\omega_9cs^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2v_1^2\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\varsigma_5 +$$
$$v_1\omega_9cs^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\varsigma_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 + 2\omega_{18}\omega_9cs^2\omega_{12}v_2v_3^2\omega_{22}\omega_{20}\omega_8\varsigma_5 +$$
$$\omega_{18}v_1\omega_9cs^2v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} + \omega_{18}cs^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 -$$
$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\varsigma_5 + 2\omega_{18}cs^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\varsigma_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20} -$$

$$\begin{aligned}
&2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 - \omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1^2\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1 cs^2\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&2\omega_{18}v_1\omega_9 cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2v_1^2\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20} + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 - \\
&2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1^2 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1^2\omega_9 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \\
&2v_1\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_5 + \omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + \\
&2v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1^2 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14} - \omega_{18}cs^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&\omega_{18}v_1^2\omega_9 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2v_1\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \\
&2v_1\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9 cs^2 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + \omega_{18}v_1\omega_9 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&\omega_{18}v_1 cs^2\omega_{12}\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14} + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1^2 cs^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - \\
&\omega_{18}v_1\omega_9 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - \\
&\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + \omega_{18}v_1^2 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&v_1\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + \omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14} - \\
&2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + \\
&\omega_{18}v_1\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_5 - v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \\
&2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + \\
&2\omega_{18}v_1 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \\
&2v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1 cs^2\omega_{12}v_2^2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1 cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 + \\
&2\omega_{18}v_1\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \\
&2\omega_{18}v_1^2\omega_{12}v_2\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - \omega_{18}cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 + \\
&\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1^2\omega_9 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20} + 2v_1^2\omega_9 cs^2\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} - \\
&\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 + v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 - \\
&\omega_{18}\omega_9 cs^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&\omega_{18}v_1^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - 2v_1\omega_9 cs^2\omega_{12}v_2^2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14} - \\
&2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20} + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&\omega_{18}v_1\omega_9 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2 cs^2\omega_{12}v_2\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2v_1\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_{12}v_2^2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \\
&\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} - \\
&2\omega_{18}v_1\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 - \\
&v_1^2\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \\
&2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14} + \omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 +
\end{aligned}$$

$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\omega_5)\frac{1}{2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5}$$

$$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = 0$$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = (144\omega_3^2\omega_4^2cs^4\omega_2^3 - 8v_2^2\omega_3^2\omega_4^2\omega_2^3 - 72\omega_4^2\omega_1^3cs^4\omega_2^2 + 96v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3 - 24\omega_3\omega_4^2\omega_1^3cs^4\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 - 8v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 108\omega_3^2\omega_1^2cs^2\omega_2^2 - 72v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 432v_3^2\omega_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 - 162\omega_3^2\omega_1^3cs^4\omega_2^3 + 8v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 60v_2^2v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 - 24\omega_3^2\omega_4^2\omega_1cs^4\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2^3 + 162\omega_4^2\omega_1^3cs^4\omega_2^3 - 104\omega_3^2\omega_4^2\omega_1^3cs^2 - 168\omega_3\omega_4^2\omega_1cs^4\omega_2^3 + 80\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 - 56v_2^2\omega_3\omega_4^2\omega_1cs^2\omega_2^3 - 96v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 56v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 - 216\omega_3^2\omega_4^2\omega_1cs^4\omega_2^2 + 72v_3^2v_3^2\omega_3^2\omega_4^2\omega_2^3 + 432v_3^2\omega_3^2\omega_4^2cs^2\omega_2^3 - 40v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 - 168\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2 + 84\omega_4^2\omega_1^2cs^2\omega_2^3 + 48v_3^4\omega_3^2\omega_4^2\omega_1^3 - 108\omega_3\omega_4^2\omega_1^2cs^2\omega_2 + 30\omega_3^2\omega_4^2\omega_1cs^4\omega_2^2 - 36v_3^4\omega_3^2\omega_4^2\omega_1\omega_2 - 108v_2^2\omega_3\omega_4\omega_1^2cs^2\omega_2^3 - 324\omega_3\omega_4\omega_1^2cs^4\omega_2^3 + 10v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 - 27v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 - 81\omega_3\omega_4^2\omega_1^3cs^4\omega_2^3 + 8v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 176v_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 + 108v_2^2\omega_3^2\omega_1^2cs^2\omega_2^3 + 96v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 27\omega_3^2\omega_4\omega_1^3cs^2\omega_2^3 + 72v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 96v_3^2\omega_3^2\omega_4^2\omega_2^3 + 864v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^2 - 84v_2^2\omega_4^2\omega_1^2cs^2\omega_2^3 - 64\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 + 10\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 + 8v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 192v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 32v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2 - 54\omega_4^3\omega_1^3cs^2\omega_2^3 - 432v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 72\omega_2^2\omega_4^2\omega_1^2cs^4\omega_2 - 8v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 + 56\omega_3\omega_4^2\omega_1cs^2\omega_2^2 + 128\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 + 96v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 112\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 + 48v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3 - 252\omega_4^2\omega_1^2cs^4\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2 - 104\omega_3^2\omega_4^2cs^2\omega_2^3 - 24v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 432v_3^2\omega_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_2^2 + 24\omega_4^2\omega_1^3cs^2\omega_2^2 + 8\omega_3^2\omega_4^2\omega_2^3 - 36v_3^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8\omega_3\omega_4^2\omega_1^3cs^2\omega_2 - 432v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2 + 324\omega_3^2\omega_1^2cs^4\omega_2^3 - 8v_2^2\omega_3^2\omega_4^2\omega_1^3 + 432v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2 + 54\omega_3^2\omega_1^3cs^2\omega_2^3 - 16v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 96v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 64\omega_3^2\omega_4^2\omega_1cs^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^3\omega_2 - 96v_3^2\omega_3^2\omega_4^2\omega_1^3 + 192\omega_3\omega_4^2\omega_1^2cs^4\omega_2^2 + 8v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 64v_2^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^2 - 10v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2^3 - 30\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^3 + 120v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 54v_2^2\omega_4^2\omega_1^3cs^2\omega_2^3 + 324\omega_3\omega_4^2\omega_1^2cs^4\omega_2^3 + 108v_2^2\omega_3\omega_4^2\omega_1^2cs^2\omega_2^3 + 108\omega_3^2\omega_4\omega_1^2cs^2\omega_2^3 - 10\omega_3^2\omega_4^2\omega_1^3cs^2\omega_2^2 - 54v_2^2\omega_3^2\omega_1^3cs^2\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 24v_3^4\omega_3^2\omega_4^2\omega_2^3 + 32v_2^2\omega_3^2\omega_4^2cs^2\omega_2^3 + 27\omega_3\omega_4^2\omega_1^3cs^2\omega_2^3 - 24v_2^2\omega_4^2\omega_1^3cs^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3cs^4 + 32v_2^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_2 + 81\omega_3^2\omega_4\omega_1^3cs^4\omega_2^3 + 27v_2^2\omega_3^2\omega_4\omega_1^3cs^2\omega_2^3 - 60v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 192\omega_3^2\omega_4^2\omega_1^2cs^4\omega_2^3)\frac{v_2}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2}$ **:**

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2v_1} = (-24v_2^2cs^2 + 28v_1v_2cs^2\omega^2 + 48v_1v_2v_3^2 + v_2^2v_3^2\omega^3 - 14v_2^2v_3^2\omega^2 + 36v_3^2cs^2\omega - 2v_1v_2cs^2\omega^3 - 14v_3^2cs^2\omega^2 + 36v_2^2v_3^2\omega - 24v_3^2cs^2 - 24v_2^2v_3^2 - 72v_1v_2cs^2\omega + v_3^2cs^2\omega^3 + 48v_1v_2cs^2 + 36v_2^2cs^2\omega - 72v_1v_2v_3^2\omega + 28v_1v_2v_3^2\omega^2 + v_2^2cs^2\omega^3 - 14v_2^2cs^2\omega^2 - 2v_1v_2v_3^2\omega^3)\frac{\rho}{2\omega^3}$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2v_1} = (-4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 + 2\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 4\omega_{18}v_1\omega_9^2v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_2^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_9\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 + \omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4v_1\omega_9^2\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_9^2v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 4\omega_{18}v_1\omega_9^2v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + \omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + \omega_{18}\omega_9^2v_3^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 + \omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - \omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - \omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_2^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8cs^2\omega_5^2 - \omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8cs^2\omega_5^2 - \omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9^2v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8cs^2\omega_5 + 6\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 2\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - 14\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$

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$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_3^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + \omega_{18}\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + \omega_9^2\omega_{12}\omega_6^3v_3^3\omega_{22}\omega_{13}^3\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9^2v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9\omega_6^3v_3^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2v_3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2\omega_6^3v_3^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 4v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 2v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2\omega_6^3v_3^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_8cs^2\omega_5^2 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 - 2v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_8\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 8\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 -$$
$$\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_8^2\omega_5^2 + \omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 -$$
$$4\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}v_1\omega_9v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 +$$
$$2\omega_{18}\omega_9^2v_2^3\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 4v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$2\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{18}v_1\omega_9^2v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9^2v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 + 4v_1\omega_9^2v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}\omega_9^2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 - 2\omega_{18}\omega_9^2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$9\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$8\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 8\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + \omega_{18}\omega_9^2v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 + 8\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9^2\omega_{12}v_2^2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 -$$
$$8\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5 + 4\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}cs^2\omega_5 - \omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9v_2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5\omega_5 + 2v_1\omega_9^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + \omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$\left. 2\omega_{18}\omega_9^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5\right)\frac{\rho}{2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2}$$

$C^{(1),\text{MRT2}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_1} = (-4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$

$\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 +$

$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 +$

$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 +$

$8\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$

$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$

$\omega_{18}\omega_9^2v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 -$

$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 + 6\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 8\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$

$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$

$\omega_{18}\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 12\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$

$2\omega_{18}\omega_9^2v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$

$2\omega_{18}\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$

$\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$

$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 -$

$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$

$$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2v_2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 + 2v_1\omega_9^2\omega_{12}v_2v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9^2v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8\omega_5 + 9\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + \omega_{18}\omega_9\omega_{12}v_2^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}\omega_9^2v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9v_2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - \omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_9v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9^2\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9^2v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$\omega_{18}\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 8\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{20}\omega_8^2 -$$
$$\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 14\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 4v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + 4v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + \omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_9^2v_2cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 +$$
$$\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_9^2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_9^2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_{18}\omega_9^2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_5 - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 8\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$8\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + \omega_9^2v_2^2cs^2\omega_6^3\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_9^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2v_2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_9v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_9^2\omega_{12}v_2^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2v_2cs^2\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + \omega_{18}\omega_9^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_9^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$4\omega_{18}v_1\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$

$$4\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1\omega_9^2\omega_{12}v_2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_9^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}\omega_9^2\omega_{12}cs^2\omega_6^2v_3^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2)\dfrac{\rho}{2\omega_{18}\omega_9^2\omega_{12}\omega_6^3\omega_{22}^2\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2}$$

$C^{(1),\text{CLBM1}}_{D_x D_y D_z^2 v_1} =$

$(-2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20} + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9v_2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$
$4v_1\omega_9\omega_{12}v_2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 -$
$2\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + \omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20} + 4v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 +$
$2v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9v_3^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$
$\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 - 2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + \omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 -$
$\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 + \omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20} - \omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 +$
$2\omega_{18}\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20} -$
$2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_9\omega_{12}v_2v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 -$
$4\omega_{18}v_1\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - \omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2cs^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 - 2\omega_{18}v_1\omega_{12}\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$\omega_{18}\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + 4\omega_{18}v_1\omega_{12}v_2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}v_1\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 + \omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}v_1\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_{12}v_2^2\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 - \omega_{18}\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_{12}\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 +$
$2\omega_{18}\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_{12}v_2^2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_9\omega_{12}\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$
$2v_1\omega_9\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20} - \omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 -$
$2\omega_{18}v_1\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} + \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$\omega_{18}\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20} + \omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 - 2\omega_{18}\omega_{12}v_3^2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 -$
$4v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 +$
$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_9\omega_{12}v_2^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 -$
$2\omega_9\omega_{12}v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14} - 2\omega_{18}v_1\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14} - 2\omega_9v_2^2v_2^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + \omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 4\omega_{18}v_1\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 4\omega_{18}v_1\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_9v_2^2v_2^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} - 2\omega_{18}\omega_{12}\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 -$
$2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 +$
$2\omega_{18}\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14} -$
$2\omega_{18}\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14} -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 - \omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 - 2\omega_{18}\omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - \omega_{18}\omega_9v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_{12}v_2^2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14} - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 +$
$2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14} - 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 -$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}\omega_9v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 +$
$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 2\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 -$
$4\omega_{18}v_1\omega_9\omega_{12}v_2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - \omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 4\omega_{18}v_1\omega_{12}v_2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 -$

$$2\omega_{18}\omega_9\omega_{12}\omega_6 v_3^2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14})\frac{\rho}{2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5}$$

$$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1} = (-2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20} + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_9\omega_{12}v_2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20} +$$
$$4\omega_{18}v_1 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \omega_{18}cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + 2v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$\omega_{18}cs^2\omega_{12}\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} + 2\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$4v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 -$$
$$\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20} - 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_9 cs^2 v_2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 -$$
$$2v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 +$$
$$2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 - 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - \omega_{18}\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + \omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_{12}v_2^2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 + 2\omega_{18}\omega_9 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_9 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_5 + \omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 -$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20} - 2\omega_{18}\omega_{12}v_2^2\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 4v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}cs^2\omega_{12}v_2^2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 - 2\omega_{18}cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 -$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_9\omega_{12}v_2^2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 +$$
$$2\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - \omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}cs^2\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14} + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$4v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 - 4\omega_{18}v_1\omega_9\omega_{12}v_2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 -$$
$$\omega_{18}\omega_9 cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14} - 2\omega_9 cs^2\omega_{12}v_2^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 -$$
$$4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} - \omega_{18}cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14} + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 + 4\omega_{18}v_1\omega_9 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 -$$
$$\omega_{18}\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 -$$
$$\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 -$$
$$2\omega_{18}cs^2\omega_{12}\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{20}\omega_8\omega_5 -$$
$$\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14} - 2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 + 2\omega_{18}cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2v_1\omega_9\omega_{12}v_2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9 cs^2 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2 v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 +$$
$$\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8 - 2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - \omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_6\omega_{20}\omega_8\omega_5 + \omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9 cs^2\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9 cs^2\omega_{12}v_3^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8 - 2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{14} -$$
$$2\omega_{18}\omega_9\omega_{12}v_2^2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 4\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 -$$
$$2v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_9\omega_{12}v_2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 +$$
$$2\omega_9 cs^2\omega_{12}v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9 cs^2\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1\omega_{12}v_2\omega_6 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9 cs^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 4\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{14})\frac{\rho}{2\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5}$$

$$C^{(1),\text{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1} = 0$$

$$C^{(1),\text{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1} = (27\omega_3\omega_1 cs^2\omega_2 - 9\omega_3\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 - 2\omega_3\omega_4\omega_1 - 2v_2^2\omega_3\omega_4\omega_2 + 9\omega_4\omega_1\omega_2 + 9v_2^2\omega_3\omega_1\omega_2 - 6\omega_3\omega_4 cs^2\omega_2 + 6\omega_3\omega_4\omega_1 cs^2 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_1 v_2}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_2}$ at $\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2}$:

$$C^{(1),\text{SRT}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-216v_1^2 cs^2\omega - 168v_1 v_2 cs^2\omega^2 - 288v_1 v_2 v_3^2 - 216v_3^2 cs^2\omega + 12v_1 v_2 cs^2\omega^3 + 84v_3^2 cs^2\omega^2 - 6v_1^2 cs^2\omega^3 + 144v_3^2 cs^2 + 432v_3^2 cs^2\omega - 6v_3^2 cs^2\omega^3 - 288v_1 v_2 cs^2 + 84v_1^2 cs^2\omega^2 - 36cs^4 - 16cs^4\omega^2 - 6v_1^2 v_3^2\omega^3 + 144v_1^2 v_3^2 + 432v_1 v_2 v_3^2\omega - cs^4\omega^3 + 84v_1^2 v_3^2\omega^2 + 144v_1^2 cs^2 - 216v_1^2 v_3^2\omega - 168v_1 v_2 v_3^2\omega^2 + 54cs^4\omega + 12v_1 v_2 v_3^2\omega^3)\frac{\rho}{12\omega^3}$$

$$C^{(1),\text{MRT1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2 cs^4\omega_5^3 - 18\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 - $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 + $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^3 - $$
$$12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14} cs^2\omega_5^3 - $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^3 - $$
$$24v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1^2\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 - $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^4\omega_5^2 - 24\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 - $$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^3 + $$
$$36\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}v_1\omega_9 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}\omega_9\omega_{12}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14} cs^2\omega_5^3 - 60\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 - $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 - 36\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^2 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + $$
$$12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + $$
$$6v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 + 12v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^4\omega_5^3 - 24\omega_{18}v_1\omega_9 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}v_1\omega_9 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - $$
$$18\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^3 + $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + $$
$$6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - $$
$$6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}\omega_9\omega_{12}\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 + $$
$$6\omega_{18}v_1^2\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 + $$
$$24v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8^2 cs^4\omega_5^3 - 12\omega_{18}v_1\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + $$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^4\omega_5^3 - 24\omega_{18}v_1\omega_9 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + $$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + $$
$$12\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 - $$
$$18\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2 - 6v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^2 + $$
$$12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^4\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5^2 - $$
$$12\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - $$
$$6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^3 v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - $$
$$6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5^3 - $$
$$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 - $$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 6\omega_{18}\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^4\omega_5^3 + 12v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^3 - 2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 + $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2 + 12\omega_{18}\omega_{12}\omega_6^3 v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 - $$
$$24\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 + 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + $$
$$6\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^4\omega_5^3 + 24\omega_{18}v_1\omega_9 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 + $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2 cs^4\omega_5^3 - 12\omega_{18}\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}v_1^2\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + $$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 6\omega_{18}v_1^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - $$
$$12\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^3 + 12\omega_{18}v_1\omega_{12}v_2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + $$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^4\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + $$
$$12\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^3 + 12v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^3 - $$
$$48\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - $$
$$24\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + $$
$$12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^3 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^3\omega_5^3 + $$
$$12\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5^3 + 12\omega_{18}v_1\omega_{12}\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 - $$
$$12\omega_{18}v_1\omega_9 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 6\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^4\omega_5^3 + $$

$$12\omega_{18}\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^3 - 12v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^2 +$$
$$36\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1\omega_{12}v_2\omega_6^3 v_3\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 +$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 -$$
$$6\omega_{18}v_1^2\omega_{12}\omega_6^3 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 6\omega_{18}\omega_{12}\omega_6^3 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8 cs^4\omega_5^3 -$$
$$12v_1^2\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_{12}v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^3 - 18\omega_{18}\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^3 + 12v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^3 - 6\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 -$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 +$$
$$42\omega_{18}v_1^2\omega_9\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 +$$
$$18\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 12\omega_{18}\omega_9\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^4\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}v_1v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1\omega_{12}v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8 cs^2\omega_5^3 + 24v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 6\omega_{18}v_1^2\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 - 24\omega_{18}v_1^2\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8 cs^4\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 24v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 + 12\omega_{18}v_1\omega_9 v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^4\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}\omega_9\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^4\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}cs^2\omega_5^3 +$$
$$6v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 - 6v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 +$$
$$10\omega_{18}\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 + 6\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2 -$$
$$24v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8 cs^4\omega_5^2 + 12\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8 cs^2\omega_5^2 +$$
$$6\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}\omega_9\omega_{12}\omega_6 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1^2\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 +$$
$$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^2\omega_5^3 - 6\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 24\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8 cs^2\omega_5 -$$
$$12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 6\omega_{18}v_1v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 -$$
$$6\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8\omega_5^2 - 6\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8 cs^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 + 24\omega_{18}v_1^2\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 +$$
$$12v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}cs^2\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8 cs^2\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3 v_3^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 - \omega_{18}\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 +$$
$$6\omega_{18}\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^4\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 - 12\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^4\omega_5^3 -$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8 cs^4\omega_5^3 - 24v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^2 - 6v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^2\omega_5^2 -$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5^3 - 24\omega_{18}v_1^2\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8 cs^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 6v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 + 6\omega_{18}\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^2 -$$
$$24v_1\omega_9\omega_{12}v_2\omega_6^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 6\omega_{18}\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^4\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 -$$
$$12\omega_{18}\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^4\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^4\omega_5^3 -$$
$$6v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}cs^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^3 +$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 cs^2\omega_5^3 - 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^3 - 12\omega_{18}v_1^2\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 - 6\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^3 -$$
$$12\omega_{18}\omega_9\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 cs^2\omega_5^3 \Big) \dfrac{\rho}{12\omega_{18}\omega_9\omega_{12}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^3 \omega_5^3}$$

$$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2} = (-12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 + 36\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 \omega_5^2 - 24\omega_{18}v_1^2\omega_{12}cs^2\omega_6^2 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 \omega_5^3 -$$
$$6v_1^2\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 - 6\omega_{18}cs^2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2 cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2 cs^2\omega_6^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 -$$
$$12\omega_{18}\omega_9 cs^4\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 - 24\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^3 +$$
$$12\omega_9\omega_{12}cs^2\omega_6^2 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 - 24v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2 \omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 -$$
$$6\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5 - 12v_1^2\omega_9\omega_{12}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5 +$$
$$24\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5 -$$
$$6\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^2 + 24\omega_{18}v_1\omega_{12}v_2 cs^2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 + 12\omega_{18}cs^4\omega_6^3 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 \omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2 cs^2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 + 24\omega_{18}\omega_9\omega_{12}cs^4\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^2 -$$
$$6\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 6\omega_9\omega_{12}cs^4\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^3 + 12\omega_{18}cs^2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^2 -$$
$$12\omega_{18}v_1\omega_9 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 + 12\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 -$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^3 + 12\omega_{18}\omega_9 cs^4\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8^2 \omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^3 - 60\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^3 + 24\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2 cs^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2 cs^2\omega_6^2 \omega_{22}\omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3 v_3^2 \omega_{22}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2 \omega_7^2 \omega_{20}\omega_{14}\omega_8^2 \omega_5^3 +$$

$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 - 18\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}\omega_{12}cs^4\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 6\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 -$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8\omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 + 12v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 +$$
$$6\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 36\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 +$$
$$24v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 -$$
$$6\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{12}cs^2\omega_6^3v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 -$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^3 + 6\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^3\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 - 18\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}\omega_9\omega_{12}cs^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_5^3 - \omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^2 - 24v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 +$$
$$10\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 6v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$6\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1\omega_9v_2\omega_6^2cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 +$$
$$6\omega_{18}\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_9^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 +$$
$$12\omega_{18}\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_{12}cs^4\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^3\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 +$$
$$6\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 + 6\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_5 - 12\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 6\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$6\omega_{18}v_1^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}\omega_9\omega_{12}cs^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 -$$
$$12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 6\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 6\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_5^3 +$$
$$24v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 2\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^3\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 +$$
$$12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{18}v_1v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_{12}v_2cs^2\omega_6^3\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 6v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 - 18\omega_{18}\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 6\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{18}\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 48\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 +$$
$$18\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 24\omega_{18}v_1\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5 +$$
$$12\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^3\omega_5^3 +$$
$$6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12\omega_{18}v_1^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^3\omega_5^3 -$$
$$18\omega_{18}\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}\omega_9cs^4\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_7^2\omega_{20}\omega_8^3\omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}v_1\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 6\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$

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$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{18}v_1^2\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^3 -$$
$$60\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^3\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 +$$
$$12\omega_{18}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^3 - 12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{18}v_1\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 6\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_9\omega_{12}cs^4\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 24\omega_{18}v_1^2\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$36\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 24v_1\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^2\omega_6^3\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{18}\omega_9\omega_{12}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{18}\omega_9\omega_{12}cs^4\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{18}\omega_9\omega_{12}cs^2\omega_6^2v_3^2\omega_{22}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 42\omega_{18}v_1^2\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 12\omega_{18}\omega_9\omega_{12}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^3 +$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^2)\frac{\rho}{12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3}$$

$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_2}^{(1),\mathrm{CLBM1}} = (12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_5^2 +$
$6\omega_{18}\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 -$
$12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 - 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 10\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$
$12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 +$
$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$
$12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_5 - 6\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$
$24\omega_{18}v_1\omega_9v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 +$
$12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 6\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 +$
$12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5^2 -$
$12\omega_{18}v_1^2\omega_{12}\omega_6^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_{12}v_2\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$6\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5 - 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 -$
$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5 +$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5 + 12v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_{12}\omega_6^3v_3^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5 -$
$12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5^2 +$
$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5 +$
$12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 - 12v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 +$
$12\omega_{18}v_1^2\omega_{12}\omega_6^3cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 +$
$12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 +$
$6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 -$
$12\omega_{18}\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$
$12\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 +$
$6\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$
$6\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$
$12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_5 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_5 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$
$24\omega_{18}v_1\omega_{12}v_2\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$
$12\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 +$
$12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 +$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$
$12\omega_{18}\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_8\omega_5 +$
$12\omega_{18}\omega_{12}\omega_6^3\omega_{22}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_5^2 + 12v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 6v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$
$12\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$
$12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_5 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 +$
$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5 +$
$12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$
$12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5 - 18\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5 +$

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$$12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_5 -$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 +$$
$$12\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 24\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 - 6\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12\omega_{18}\omega_{12}\omega_6^3v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 - 6\omega_{18}\omega_9\omega_{12}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 -$$
$$12\omega_{18}\omega_{12}\omega_6^3\omega_{22}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_{12}\omega_6^6\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_9v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_5^2 - 6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$24v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 18\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 -$$
$$6\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 - 18\omega_{18}\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_{18}\omega_{12}\omega_6^3v_3^2\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{20}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 6\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$24v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_5^2 + 6\omega_{18}\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}\omega_9\omega_{12}\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6v_1^2\omega_9\omega_{12}\omega_6^3\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 24v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 + 12\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 - 24v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 + 24v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5)\frac{\rho}{12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2}$$

$$C^{(1),\text{CLBM2}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_2} =$$

$$(-24\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 24\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9cs^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 + 12\omega_{18}cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 + 6\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_9cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 - 12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$6\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 -$$
$$12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1cs^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$6\omega_{18}cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 - 2\omega_{18}\omega_9cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 - 24\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 - 6v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 + 12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 6\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 +$$
$$12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 -$$
$$12\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$6\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_9cs^2\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$

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$$12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 6v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 +$$
$$12\omega_{18}\omega_9 cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 - 6v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_9 cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9 cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_9 cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 + 6\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 + 6\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 12v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}cs^4\omega_{12}\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2 cs^2\omega_{12}\omega_6^3\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$18\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 +$$
$$12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 - 24\omega_{18}v_1\omega_9 cs^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 +$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 - 24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 - 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 12v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6^3\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}\omega_9 cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 - 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 + 12v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$12v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 18\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}\omega_9 cs^4\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 + 12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1\omega_9v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$18\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 12\omega_{18}cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_{18}cs^2\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 - 12\omega_{18}v_1\omega_9 cs^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12\omega_{18}cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 -$$
$$24\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}v_1^2 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 + 24\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 24\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$6\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 + 12\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1 cs^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 - 24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 +$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12\omega_{18}cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_9v_2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5 + 12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 + 24\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1 cs^2\omega_{12}v_2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 6\omega_{18}v_1^2 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}cs^2\omega_{12}\omega_6^3v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 6\omega_9 cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$24v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_9 cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5^2 - 24v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 10\omega_{18}\omega_9 cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$24v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1\omega_9 cs^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$

$$12\omega_{18}cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 - 6\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_5 -$$
$$12\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_9\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 24v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12v_1^2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$24\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5^2 + 12\omega_{18}v_1^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 6\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^2\omega_{22}\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_9cs^2\omega_{12}\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 24v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}\omega_9cs^4\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_9cs^2\omega_{12}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2cs^2\omega_{12}\omega_6^3\omega_{22}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_9cs^4\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_9cs^2\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_5 -$$
$$6\omega_{18}v_1^2cs^2\omega_{12}\omega_6^3\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_9\omega_{12}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5)\frac{\rho}{12\omega_{18}\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2}$$

$C^{(1),\text{CuLBM1}}_{D_x D_y D_z^2 v_2} = (-12\omega_1\omega_2^3 + 12\omega_3\omega_{13}\omega_1\omega_2 - 2\omega_{13}\omega_1^2\omega_2^3 - 6\omega_{13}\omega_1^2\omega_2^2 + 12\omega_{13}\omega_2^3 + 12\omega_{13}\omega_1^2\omega_2 + 24\omega_3\omega_1\omega_2^3 - 6\omega_3\omega_{13}\omega_1\omega_2^2 - 12\omega_3\omega_1\omega_2^2 -$

$2\omega_3\omega_{13}\omega_1^2\omega_2^2 - 12\omega_3\omega_2^3 - 24\omega_3\omega_{13}\omega_1^2 + 12\omega_3\omega_1^2\omega_2^2 - \omega_3\omega_{13}\omega_1^2\omega_2^3 - 12\omega_3\omega_1^2\omega_2^3 - 12\omega_1^2\omega_2^2 + 12\omega_1^2\omega_2^3 - 6\omega_{13}\omega_1\omega_2^3 + 24\omega_3\omega_{13}\omega_1^2\omega_2)\frac{\rho cs^4}{12\omega_3\omega_{13}\omega_1^2\omega_2^3}$

$C^{(1),\text{CuLBM2}}_{D_x D_y D_z^2 v_2} = (-108v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 12v_3^4\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 24v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 + 216v_3^2v_2^2\omega_3^2\omega_4^2\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 -$

$72v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 108v_3^2\omega_3^2\omega_1^2\omega_5\omega_2^3 + 180v_3^2\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^3 - 216v_3^2\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_5\omega_2 - 9v_1^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 -$

$2v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 32\omega_3^2\omega_4^2\omega_1^3cs^4\omega_5 - 48v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 36\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^3 + 24v_3^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5 - 288\omega_3^2\omega_4^2\omega_1cs^4\omega_2^3 -$

$88\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 - 162v_3^2\omega_3^2\omega_4^3\omega_1^3cs^2\omega_5\omega_2^3 - 24v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 6v_1^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_5\omega_2^3 - 72v_3^4\omega_3^2\omega_1^2\omega_5\omega_2^3 - 216v_3^2\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 -$

$12v_3^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 - 27v_1^2\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 + 288\omega_3^2\omega_4\omega_1cs^2\omega_5\omega_2^3 + 64\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^2 + 108v_3^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 72v_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 +$

$72v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 9v_1^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 + 8\omega_3^2\omega_4^2\omega_5\omega_2^3 + 2v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 132v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 336v_2^2\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^3 + 160\omega_3\omega_4^2\omega_1cs^4\omega_5\omega_2^3 -$

$108v_3^2\omega_3\omega_4\omega_1cs^2\omega_5\omega_2^3 + 162v_3^2\omega_3^2\omega_4^3\omega_1^3cs^2\omega_5\omega_2^3 - 36\omega_4^3\omega_3\omega_4\omega_1^2\omega_5\omega_2 + 144v_3^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 - 18v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 324v_3^2\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 +$

$54v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 + 72v_3^2\omega_3\omega_4\omega_4^2\omega_1\omega_5\omega_2 + 36v_3^4\omega_3\omega_4\omega_1^2\omega_5\omega_2 + 8\omega_3^2\omega_4\omega_1cs^4\omega_5\omega_2^3 - 120v_2^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^3 - 180v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 -$

$24v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^3 + 36v_2^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^2 + 152\omega_3^2\omega_4^2cs^4\omega_5\omega_2^3 - 24v_2^2\omega_3^2\omega_4^2\omega_5\omega_2^3 - 72\omega_3^2\omega_4^2\omega_1^3cs^4\omega_2^3 - 144v_3^4\omega_3\omega_4\omega_4^2\omega_1\omega_5\omega_2^3 +$

$18v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 6v_1^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 - 108v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 - 288\omega_3^2\omega_4\omega_1cs^4\omega_5\omega_2^3 - 48v_2^2\omega_3^2\omega_4^2\omega_1^7\omega_5\omega_2^2 - 648v_2^2\omega_3^2\omega_4\omega_1cs^2\omega_5\omega_2^3 +$

$48v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 288v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 168v_3^2\omega_3^2\omega_4^2\omega_1cs^2\omega_5\omega_2^3 + 300v_3^2\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^3 - 56\omega_3^2\omega_4^2\omega_1cs^4\omega_5\omega_2^3 + 27v_1^2\omega_3^2\omega_4\omega_1^3cs^2\omega_5\omega_2^3 -$

$54v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 160\omega_3\omega_4^2\omega_1cs^2\omega_5\omega_2^3 - 96v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 72v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 180v_3^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 36v_3^2\omega_3\omega_4\omega_4^2\omega_1\omega_5\omega_2^3 +$

$240v_2^2\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 + 4\omega_3^2\omega_4^2\omega_1^3cs^4\omega_5\omega_2^2 + 2v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 4\omega_3^2\omega_4^2\omega_1^2cs^2\omega_5\omega_2^3 - 36v_3^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 6v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 -$

$54v_2^2\omega_3^2\omega_4^3\omega_1^3\omega_5\omega_2^2 + 264v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5 + 112\omega_3\omega_4^2\omega_4^2cs^4\omega_5\omega_2^2 + 24v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 72\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 + 264v_2^2\omega_3\omega_4\omega_4^2\omega_1^2cs^2\omega_5\omega_2^2 -$

$72v_3^2\omega_3\omega_4\omega_4^2\omega_1^2cs^2\omega_5\omega_2^2 + 54v_3^4\omega_4^2\omega_1^3\omega_5\omega_2^3 + 48v_2^2\omega_3\omega_4\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 + 16\omega_3\omega_4^2\omega_1^3cs^4\omega_5\omega_2^3 + 108v_3^2\omega_3^2\omega_4\omega_1^3cs^2\omega_5\omega_2^2 - 162v_2^2\omega_3^2\omega_4\omega_1^3cs^2\omega_5\omega_2^3 -$

$96v_2^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2 - 9v_1^4\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2^3 - 72\omega_3^2\omega_4\omega_1^3cs^4\omega_5\omega_2^3 - 56\omega_3^2\omega_4^2\omega_1^7cs^4\omega_5\omega_2 - 468v_3^2\omega_3\omega_4\omega_4^2\omega_1^2cs^2\omega_5\omega_2^3 - 54v_3^4\omega_3^2\omega_4^3\omega_1\omega_5\omega_2^3 +$

$72\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 + 108v_3^2\omega_3\omega_4\omega_4^2\omega_1^2cs^2\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 216v_3^2\omega_4^2\omega_1^7cs^4\omega_5\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 36v_3^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 -$

$72v_3^2\omega_3\omega_4^2\omega_1^7cs^2\omega_5\omega_2^2 + 60v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 + 36v_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 6\omega_3^2\omega_4^2\omega_1^3cs^4\omega_5\omega_2 - 2v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 24v_3^2\omega_3^2\omega_4^2\omega_5\omega_2 + 24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 +$

$9v_1^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 24v_3^2\omega_3^2\omega_4^2\omega_1^2cs^2\omega_5\omega_2 + 108v_3^2\omega_3^2\omega_4\omega_4\omega_1^3cs^2\omega_5\omega_2^2 + 54v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 - 288v_3^2\omega_4^2\omega_1^7cs^2\omega_5\omega_2^3 +$

$36\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2 - 96v_3^4\omega_3^2\omega_4^2\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 360v_2^2v_3^2\omega_3^2\omega_4^2\omega_5\omega_2^2 - 72v_3^2\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2 - 36v_3^4\omega_4^2\omega_1^3\omega_5\omega_2^2 +$

$108v_3^2\omega_3\omega_4\omega_1^7cs^2\omega_5\omega_2^3 - 40\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5 - 28\omega_3^2\omega_4^2\omega_1^7cs^4\omega_5\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 - 6v_3^2\omega_3^2\omega_4^2\omega_1^7cs^2\omega_5\omega_2^3 + 48v_3^2\omega_3^2\omega_4^2cs^2\omega_5\omega_2^3 +$

$72\omega_3\omega_4^2\omega_1^3cs^4\omega_5\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^7\omega_5\omega_2^3 - 112\omega_3\omega_4^2\omega_1^7cs^2\omega_5\omega_2^3 - 36v_3^4\omega_3\omega_4\omega_4^3\omega_1\omega_5\omega_2^3 + 162v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 + 36v_3^4\omega_3\omega_4\omega_4^2\omega_1\omega_5\omega_2^3 +$

$180v_3^2\omega_3\omega_4\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 - 72v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 - 12v_3^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 + 18v_3^2\omega_3^2\omega_4^2\omega_1^7\omega_5\omega_2^3 - 36v_3^4\omega_3^2\omega_4^2\omega_1^7\omega_5\omega_2^3 - 16\omega_3\omega_4^2\omega_1^7cs^2\omega_5\omega_2 -$

$36v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 + 54v_3^4\omega_3\omega_4\omega_4\omega_1\omega_5\omega_2^3 + 288\omega_3^2\omega_4^2\omega_1^7cs^4\omega_2^3 - 216v_3^2\omega_3\omega_4\omega_1^7cs^2\omega_5\omega_2^3 + 144v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 348v_3^2\omega_3^2\omega_4^2\omega_1^3cs^2\omega_5\omega_2 +$

$64\omega_3^2\omega_4^2\omega_1^7cs^2\omega_5\omega_2 + 72\omega_3^2\omega_4\omega_1^3cs^2\omega_5\omega_2^3 + 36v_3^2\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2^3 - 180v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^2 + 216\omega_3\omega_4^2\omega_1^7cs^2\omega_5\omega_2^3 - 36v_3^2\omega_3\omega_4^2\omega_1^7\omega_5\omega_2^3 +$

$8\omega_3^2\omega_4^2\omega_1^3\omega_5 - 108v_3^2\omega_3\omega_4\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 + 12v_3^4\omega_3\omega_4\omega_4^2\omega_1^2\omega_5\omega_2^2 - 72\omega_3\omega_4^2\omega_1^3cs^4\omega_5\omega_2^2 + 132v_2^2\omega_3\omega_4^2\omega_1^7cs^2\omega_5\omega_2^2 - 60v_3^2\omega_3^2\omega_4^2\omega_1^7cs^2\omega_5\omega_2^3 +$

$56\omega_3^2\omega_4^2\omega_1^7cs^4\omega_5\omega_2^2 - 28\omega_3^2\omega_4^2\omega_1^3cs^4\omega_5\omega_2^2 + 288\omega_3\omega_4^2\omega_1^7cs^4\omega_5\omega_2^3 - 108v_3^2\omega_3\omega_4\omega_4\omega_1^7cs^2\omega_5\omega_2^3 - 12v_2^2\omega_3\omega_4^2\omega_1^3cs^2\omega_5\omega_2^3 + 648v_2^2\omega_3^2\omega_4\omega_4\omega_1^7cs^2\omega_5\omega_2^3 -$

$18v_3^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 - 84v_3^2\omega_3^2\omega_4\omega_4^2\omega_1^7\omega_5\omega_2^2 - 108v_3^2\omega_3\omega_4\omega_1^7cs^2\omega_5\omega_2^2 + 36v_3^4\omega_3^2\omega_4\omega_4\omega_1\omega_5\omega_2^2 - 54v_3^2\omega_3\omega_4\omega_4\omega_1^3\omega_5\omega_2)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3}$

coefficient $C^{(1)}_{D_x D_y D_z^2 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2}$:

$C^{(1),\text{SRT}}_{D_x D_y D_z^2 v_3} = (v_1 v_2^2 \omega^3 + 14v_1^2 v_2 \omega^2 - v_2 cs^2 \omega^3 - 24v_1 cs^2 - v_1^2 v_2 \omega^3 - 14v_1 v_2^2 \omega^2 + 14v_2 cs^2 \omega^2 - 36v_2 cs^2 \omega + 36v_1 v_2^2 \omega - 24v_1 v_2^2 - 36v_1^2 v_2 \omega +$

$v_1 cs^2 \omega^3 - 14v_1 cs^2 \omega^2 + 36v_1 cs^2 \omega + 24v_2 cs^2 + 24v_1^2 v_2)\frac{\rho v_3}{\omega^3}$

$C^{(1),\text{MRT1}}_{D_x D_y D_z^2 v_3} = (-2\omega_{18}^2\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 +$

$2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \omega_{18}^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}cs^2\omega_5^2 + \omega_{18}^2\omega_9v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$

$\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 - \omega_{18}^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_{18}^2v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$

$2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 +$

$2\omega_{18}^2v_1\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 +$

$2\omega_{18}^2v_1\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}^2v_1^2\omega_9v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2cs^2\omega_5^2 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$

$6\omega_{18}^2\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}cs^2\omega_5 -$

$2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 -$

$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}^2v_1\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + \omega_{18}^2v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_{18}^2\omega_{12}v_2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 -$

$2\omega_{18}^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 -$

$\omega_{18}^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2 - 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 + \omega_{18}^2v_1\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 -$

$4\omega_{18}^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_{18}^2v_1\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$

$2\omega_{18}^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8cs^2\omega_5^2 - 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1\omega_9\omega_{12}\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2cs^2\omega_5 +$

$$\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - 3\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5 + 2\omega_{18}^2 v_1 \omega_9 v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 + 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_6 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 - \omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 + 5\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5 - \omega_{18}^2 v_1 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5 +$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5^2 - 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$\omega_{18}^2 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 \omega_{12} v_2 \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5^2 - 2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + \omega_{18}^2 v_1^2 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 - \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 -$$
$$\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5 + \omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 + \omega_{18}^2 v_1 \omega_{12} v_2^2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$2\omega_{18}^2 v_1 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} cs^2 \omega_5^2 + 2\omega_{18}^2 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5 + 2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - \omega_{18}^2 v_1^2 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 +$$
$$\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5 -$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - \omega_{18}^2 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_{12} \omega_6^3 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 -$$
$$2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 + \omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5 -$$
$$\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18}^2 v_1 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 +$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 cs^2 \omega_5^2 +$$
$$3\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + \omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5 - 2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 -$$
$$2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5 -$$
$$2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 + \omega_{18}^2 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 - \omega_{18}^2 v_1 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - \omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18}^2 v_1 \omega_9 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 + \omega_{18}^2 v_1 \omega_9 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 + 2\omega_{18}^2 v_1^2 \omega_9 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + \omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 - 6\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 4\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5 -$$
$$\omega_{18}^2 v_1 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18}^2 v_1^2 \omega_{12} v_2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1^2 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 -$$
$$2\omega_{18}^2 v_1 \omega_{12} v_2^2 \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + \omega_{18}^2 v_1 \omega_9 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 +$$
$$3\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$$
$$2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 + 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 +$$
$$\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 + \omega_{18}^2 v_1 \omega_9 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5 + 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 -$$
$$2\omega_{18}^2 v_1^2 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - \omega_{18}^2 v_1 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5 + 2\omega_{18}^2 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 -$$
$$2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 v_1^2 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 - \omega_{18} \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8 cs^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 -$$
$$2\omega_{18}^2 v_1 \omega_{12} \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 cs^2 \omega_5^2 - \omega_{18}^2 v_1 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 - 2\omega_{18}^2 v_1^2 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 + \omega_{18} v_1 \omega_9 \omega_{12} \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{18}^2 \omega_{12} v_2 \omega_6^3 \omega_{20} \omega_{14} \omega_8^2 cs^2 \omega_5^2 -$$
$$2\omega_{18}^2 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5^2 + 2\omega_{18}^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 cs^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 cs^2 \omega_5) \dfrac{\rho v_3}{\omega_{18}^2 \omega_9 \omega_{12} \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2}$$

$$C_{D_x D_y D_z^2 v_3}^{(1),\mathrm{MRT2}} = (-2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5^2 + \omega_{18}^2 \omega_9 \omega_{12} v_2 cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 +$$
$$\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5 -$$
$$\omega_{18}^2 v_1^2 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 cs^2 \omega_6^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5 - \omega_{18} \omega_9 v_2 cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 +$$
$$\omega_{18} \omega_9 \omega_{12} v_2 cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 + 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$2\omega_{18}^2 v_1 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 + \omega_{18}^2 v_1^2 \omega_9 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} cs^2 \omega_6^2 \omega_{22} \omega_{20} \omega_8^2 \omega_5^2 +$$
$$\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + \omega_{18} v_1 \omega_9 \omega_{12} cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$2\omega_{18}^2 \omega_9 v_2 cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8 \omega_5 - 2\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 \omega_9 \omega_{12} v_2 cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 -$$
$$\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + \omega_{18}^2 \omega_9 \omega_{12} v_2 cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 + 2\omega_{18}^2 v_1 \omega_9 \omega_{12} cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 +$$
$$2\omega_{18}^2 v_1 \omega_9 \omega_{12} cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} \omega_9 v_2 cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 + 2\omega_{18} \omega_9 \omega_{12} v_2 cs^2 \omega_6^2 \omega_6 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} \omega_9 v_2 cs^2 \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18} v_1 \omega_9 v_2 cs^2 \omega_6^3 \omega_6 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 + 3\omega_{18}^2 \omega_9 \omega_{12} v_2 cs^2 \omega_6 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18}^2 v_2 cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$\omega_{18}^2 v_1 \omega_9 \omega_{12} v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8 \omega_5 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} cs^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 - \omega_{18} v_1 \omega_9 \omega_{12} cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$\omega_9 \omega_{12} v_2 cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} cs^2 \omega_6^2 \omega_6 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$\omega_{18}^2 v_1^2 \omega_9 \omega_{12} v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5 + 2\omega_{18}^2 v_1 \omega_9 v_2^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5 - 2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 +$$
$$2\omega_{18} v_1^2 \omega_9 \omega_{12} v_2 \omega_6^2 \omega_{22} \omega_{13} \omega_{14} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} cs^2 \omega_6^3 \omega_{22} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - \omega_{18} v_1 \omega_9 \omega_{12} cs^2 \omega_6^3 \omega_6 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$2\omega_{18} v_1 \omega_9 \omega_{12} v_2^2 \omega_6^2 \omega_6 \omega_{13} \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 2\omega_{18}^2 v_1 \omega_9 cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{20} \omega_8^2 \omega_5^2 - 2\omega_{18}^2 v_1 \omega_9 \omega_{12} cs^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{14} \omega_8 \omega_5 -$$

$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 -$$
$$\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_9v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}^2v_1\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1^2\omega_{12}v_2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}^2v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1\omega_{12}cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1\omega_{12}v_2^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}^2v_1\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}^2\omega_{12}v_2cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2v_1^2\omega_9v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - \omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2v_1\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2\omega_9v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$3\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}^2v_1cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2v_1\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}^2v_1\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5^2 + 2\omega_{18}^2\omega_{12}v_2cs^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1\omega_9v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}^2v_1^2\omega_9v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5 - \omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_6v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 +$$
$$\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5^2 +$$
$$\omega_{18}^2v_1\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_{18}^2v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}^2v_1^2\omega_{12}v_2\omega_6^3\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}^2v_1\omega_{12}cs^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 3\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}^2v_1\omega_{12}v_2^2\omega_6^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{20}\omega_8^2\omega_5^2 - \omega_{18}^2v_1\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$5\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$2\omega_{18}^2v_1^2\omega_9v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}^2v_1\omega_9v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 +$$
$$\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}^2v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$6\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}^2v_1^2\omega_{12}v_2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}^2\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}^2v_1^2\omega_9\omega_{12}v_2\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}^2v_1\omega_9\omega_{12}cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}^2\omega_9\omega_{12}v_2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5) \frac{\rho v_3}{\omega_{18}^2\omega_9\omega_{12}\omega_6^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2}$$

$C^{(1),\text{CLBM1}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3} = (2\omega_{18}\omega_{12}v_2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$

$2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 - \omega_{18}\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 +$

$2\omega_{18}v_1\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 +$

$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$

$v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_{22}cs^2\omega_{20}\omega_8\omega_5 +$

$\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_{12}\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$

$\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2v_1^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_5 +$

$2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20} - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 +$

$2\omega_{18}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$

$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$

$2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 - v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14} -$

$2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{14} - v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 +$

$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + \omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 +$

$\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20} - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{20}\omega_{14}\omega_8\omega_5 +$

$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20} - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 -$

$2\omega_{18}\omega_9\omega_{12}v_2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{14}\omega_8 -$

$\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$

$2\omega_{18}v_1\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 -$

$2v_1\omega_9\omega_{12}v_2^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$

$2\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 -$

$2\omega_{18}v_1\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$

$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 + 2\omega_9\omega_{12}v_2\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20} + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20} - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14} +$$
$$2\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 - \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14} + 2\omega_{18}\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_5 - \omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$2v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 -$$
$$\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 +$$
$$v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 + \omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}\omega_{22}cs^2\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + \omega_{18}v_1\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_{12}v_2\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 - \omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14} + 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + \omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_{12}\omega_6\omega_{22}cs^2\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}\omega_9\omega_{12}v_2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_5 -$$
$$2v_1\omega_9\omega_{12}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_{12}\omega_6\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} +$$
$$2\omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_5 + 2\omega_{18}\omega_{12}v_2\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_5 - 2\omega_{18}v_1\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + v_1\omega_9\omega_{12}\omega_6\omega_{14}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{14} - 2\omega_{18}v_1\omega_{12}\omega_6\omega_{22}cs^2\omega_{20}\omega_8\omega_5 - \omega_{18}v_1\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 +$$
$$\omega_{18}\omega_9v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9\omega_{12}v_2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8)\dfrac{\rho v_3}{\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5}$$

$$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2v_3} = (-2v_1\omega_9cs^2\omega_{12}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2v_1^2\omega_9\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 -$$
$$\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_5 +$$
$$2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20} - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 -$$
$$2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{20}\omega_5 - \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20} +$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 - v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14} +$$
$$\omega_{18}\omega_9cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 -$$
$$\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{20}\omega_8\omega_5 +$$
$$\omega_{18}v_1\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - \omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_5 + 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_5 - \omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + \omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20} + 2\omega_{18}cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{13}\omega_{20}\omega_{14}\omega_5 -$$
$$\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} -$$
$$2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_9cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - \omega_{18}\omega_9cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 - \omega_{18}v_1cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 +$$
$$2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 - 2\omega_{18}v_1cs^2\omega_{12}\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20} -$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_5 + 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{20}\omega_8\omega_5 -$$
$$\omega_{18}cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14} + 2\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 -$$
$$\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{14} + \omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_5 - \omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + 2\omega_{18}v_1cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}v_1cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}\omega_9cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 - \omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_9cs^2\omega_{12}v_2\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9\omega_{12}v_2^2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_9v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 + \omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_5 + \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 +$$

$$\omega_{18}v_1cs^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{20}\omega_8\omega_5 + 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2v_2\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 - 2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} - 2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 + 2\omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_5 + v_1\omega_9cs^2\omega_{12}\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 - \omega_{18}v_1\omega_9\omega_{12}v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14}\omega_8\omega_5 + \omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1cs^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_9cs^2v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8 + \omega_{18}v_1cs^2\omega_{12}\omega_6\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1cs^2\omega_{12}\omega_6\omega_{22}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{18}\omega_9cs^2\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{14} +$$
$$2\omega_{18}v_1\omega_9cs^2\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14} - 2\omega_{18}v_1^2\omega_9\omega_{12}v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_8)\frac{\rho v_3}{\omega_{18}\omega_9\omega_{12}\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5}$$

$C^{(1),\text{CuLBM1}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3} = (12\omega_1^2cs^2\omega_2^2 + 2\omega_1\omega_2^3 + 4v_2^2\omega_1^2\omega_2^2 - 3v_2^2\omega_3\omega_1^3\omega_2 - 22v_3^2\omega_3\omega_1^2\omega_2 + 6v_2^2\omega_3\omega_1^2\omega_2^2 - 2v_2^2\omega_1^3\omega_2 - 12\omega_3\omega_1^3 + 4v_2^2\omega_3\omega_2^3 -$

$4v_2^2\omega_3\omega_1^2\omega_2 + 26v_3^2\omega_3\omega_1^2\omega_2^2 + 10\omega_3\omega_1\omega_2^3 + 16v_3^2\omega_3\omega_1^3 - 24\omega_3\omega_1cs^2\omega_2^3 + 28\omega_3\omega_1^3cs^2 - 24\omega_3\omega_1cs^2\omega_2^2 + 8\omega_3\omega_1\omega_2^3 - 13v_3^2\omega_3\omega_1^3\omega_2 -$

$24\omega_3\omega_1^3cs^2\omega_2 - 10\omega_3\omega_2^3 - 13v_3^2\omega_3\omega_1\omega_2^3 - 20\omega_3\omega_1^2\omega_2^2 - 4v_3^2\omega_3\omega_1\omega_2^2 + 10\omega_3\omega_1^3\omega_2 + 48\omega_3\omega_1^2cs^2\omega_2^2 - 4\omega_1^2\omega_2^2 - 6\omega_1^3cs^2\omega_2 - 30\omega_3\omega_1^2cs^2\omega_2 +$

$26\omega_3cs^2\omega_2^3 - 4v_2^2\omega_3\omega_1\omega_2^2 - 2v_2^2\omega_1\omega_2^3 - 6\omega_1cs^2\omega_2^3 + 2\omega_1^3\omega_2 + 4v_2^2\omega_3\omega_1^3 + 14\omega_3\omega_1^2\omega_2 + 10v_3^2\omega_3\omega_2^3 - 3v_2^2\omega_3\omega_1\omega_2^2)\frac{\rho v_2 v_3}{6\omega_3\omega_1^3\omega_2^2}$

coefficient $C^{(1)}_{\text{D}_y^2\text{D}_z^2\rho}$ at $\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2}$:

$C^{(1),\text{SRT}}_{\text{D}_y^2\text{D}_z^2\rho} = (3v_2^2v_3cs^2\omega^3 + 3v_1^2v_3cs^2\omega^3 - 4v_1cs^4\omega^2 + 108v_1^2v_2^2v_3\omega - 108v_1v_3^2cs^2\omega + 42v_1v_2^2v_3^2\omega^2 - 42v_2^2v_3cs^2\omega^2 - 3v_1v_2^2v_3^3\omega^3 + 2v_1cs^4\omega^3 -$

$42v_1^2v_3cs^2\omega^2 - 3v_1v_3^2cs^2\omega^3 + 3v_1^2v_2^2v_3\omega^3 + 108v_1^2v_3cs^2\omega - 72v_1^2v_2^2v_3 + 108v_2^2v_3cs^2\omega - 42v_1^2v_2^2v_3\omega^2 - 108v_1v_2^2v_3\omega + 42v_1v_3^2cs^2\omega^2 -$

$72v_2^2v_3cs^2 + 72v_1v_2^2cs^2 - 108v_1v_2^2cs^2\omega + 72v_1v_3^2cs^2 + 42v_1v_2^2cs^2\omega^2 - 72v_1^2v_3cs^2 + 72v_1v_2^2v_3 - 3v_1v_2^2cs^2\omega^3)\frac{1}{12\omega^3}$

$C^{(1),\text{MRT1}}_{\text{D}_y^2\text{D}_z^2\rho} = (3\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 -$

$6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 3\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$

$12\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 6\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 +$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 + 24\omega_{18}\omega_{15}v_1\omega_6^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 + 12\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 6\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 +$

$12\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 - 12\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5 -$

$6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8\omega_5^2 -$

$24\omega_{18}\omega_{15}v_1\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 - 6\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 6\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 +$

$6\omega_{18}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 12\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 - 3\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$

$12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{18}\omega_{15}v_1\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 +$

$6\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8\omega_5 + 3\omega_{18}\omega_{15}v_1^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$

$48\omega_{18}\omega_{15}v_1\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 + 6\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 +$

$3\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 -$

$6\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_8\omega_5^2 + 6\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 +$

$48\omega_{18}\omega_{15}v_1\omega_6\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 24\omega_{18}\omega_{15}v_1\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4 - 12\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 -$

$3\omega_{18}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$

$12\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 +$

$12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{17}\omega_8cs^2\omega_5 - 12\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 + 6\omega_{18}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 - 24\omega_{18}\omega_{15}v_1\omega_6\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 -$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 - 6\omega_{15}v_1^2v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$

$12\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 6\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$

$12\omega_{15}v_1\omega_6v_3^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 - 24\omega_{18}\omega_{15}v_1\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5 + 6\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 -$

$12\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 24\omega_{18}\omega_{15}v_1\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4 + 6\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$

$24\omega_{18}\omega_{15}v_1\omega_6\omega_7^2\omega_{20}\omega_{17}cs^4\omega_5^2 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 + 24\omega_{18}\omega_{15}v_1\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 - 12\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 +$

$12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5^2 - 6\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 - 6\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 +$

$24\omega_{18}\omega_{15}v_1\omega_6\omega_7^2\omega_{20}\omega_{17}cs^4\omega_5^2 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 3\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$

$6\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 28\omega_{18}\omega_{15}v_1\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 - 6\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 - 3\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 12\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8\omega_5 -$

$3\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 - 6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5 -$

$6\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + 6\omega_{18}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 + 6\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$

$12\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 12\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5 - 6\omega_{15}v_1v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 +$

$3\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 3\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 6\omega_{18}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 +$

$3\omega_{18}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 6\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 6\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_8cs^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 6\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 - 6\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 6\omega_{15}v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 6\omega_{18}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$

$12\omega_{18}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 - 12\omega_{18}\omega_{15}v_2\omega_6v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 12\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 3\omega_{18}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_1v_6\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 3\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 -$

$6\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 + 6\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 - 3\omega_{18}\omega_{15}v_1v_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$

$12\omega_{18}v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 12\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 6\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_7^2\omega_{20}\omega_8cs^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_7^2\omega_{17}\omega_8\omega_5^2 -$

$24\omega_{18}\omega_{15}v_1\omega_6^2\omega_7^2\omega_{20}\omega_{17}cs^4\omega_5^2 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 12\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8cs^2\omega_5 + 12\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 +$

$$48\omega_{18}\omega_{15}v_1\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5 + 12\omega_{18}v_1\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 3\omega_{18}v_1v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$$
$$48\omega_{18}\omega_{15}v_1\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1\omega_6v_3\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2) + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$3\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5) \frac{1}{12\omega_{18}\omega_{15}\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$C^{(1),\text{MRT2}}_{\text{D}^2_y\text{D}^2_z\rho} = (6\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 3\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 -$

$24\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{18}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 +$

$3\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 28\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$

$6\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5^2 +$

$2\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5^2 +$

$12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 3\omega_{18}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$

$3\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5^2 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$

$12\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 24\omega_{18}\omega_{15}v_1cs^4\omega_6\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 -$

$24\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8 - 6\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 3\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}v_1^2v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8\omega_5^2 +$

$3\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$

$3\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$

$12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 48\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 24\omega_{18}\omega_{15}v_1cs^4\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$

$12\omega_{18}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 - 6\omega_{18}v_1v_2^2cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 6\omega_{18}v_1\omega_6v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 +$

$24\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 48\omega_{18}\omega_{15}v_1cs^4\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 +$

$12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 6\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}v_1cs^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 -$

$24\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2 + 6\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 3\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8\omega_5 - 6\omega_{18}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 3\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$

$48\omega_{18}\omega_{15}v_1cs^4\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$

$6\omega_{18}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 3\omega_{18}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$

$12\omega_{18}^2cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 -$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 24\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8 + 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5 +$

$24\omega_{18}\omega_{15}v_1cs^4\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_5 - 3\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$

$6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 3\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 24\omega_{18}\omega_{15}v_1cs^4\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$

$48\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 + 24\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 3\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 +$

$12\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 +$

$3\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 3\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 +$

$6\omega_{18}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8^2\omega_5 + 3\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$

$6\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_1cs^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}v_1^2v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 +$

$6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 12\omega_{15}v_2^2cs^2\omega_6v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{17}\omega_8^2\omega_5 -$

$12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 3\omega_{18}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_6\omega_7^2\omega_{20}\omega_8^2\omega_5 - 6\omega_{15}v_1v_2^2\omega_6^2v_3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_8\omega_5 -$

$12\omega_{18}\omega_{15}v_1^2cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 24\omega_{18}\omega_{15}v_1cs^4\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 -$

$6\omega_{15}v_1v_2^2cs^2\omega_6^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 3\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5) \frac{1}{12\omega_{18}\omega_{15}\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$

$C^{(1),\text{CLBM1}}_{\text{D}^2_y\text{D}^2_z\rho} = (12\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{17}\omega_5 + 3\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$6\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8 - 3\omega_{18}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_1v_2^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$6\omega_{18}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{17}\omega_8 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8 - 6\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_7\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17} + 3\omega_{15}v_1v_2\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_7\omega_{20}\omega_5 +$

$6\omega_{18}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8\omega_5 + 6\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_1\omega_6cs^4\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{17} -$

$12\omega_{18}\omega_{15}v_1v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_5 + 6\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_5 + 12\omega_{15}v_1v_3^2cs^2\omega_7\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8 - 3\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 + 12\omega_{18}v_1v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8 -$

$12\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8 + 6\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8 -$

$6\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_8 +$

$12\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17} + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{17} - 12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_3cs^2\omega_7\omega_{17}\omega_5 +$

$6\omega_{18}\omega_{15}v_1^2v_3cs^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20} + 6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{17}\omega_8\omega_5 +$

$$12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20} + 12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_5 - 12\omega_{18}\omega_{15}v_2^2v_3cs^2\omega_7\omega_{17}\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_5 +$$
$$12\omega_{18}\omega_{15}v_2^2v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_8 -$$
$$6\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20} + 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_7\omega_{17}\omega_5 +$$
$$6\omega_{18}\omega_{15}v_1v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 3\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{15}v_2^2v_3cs^2\omega_7\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_5 + 3\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8 +$$
$$12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8 + 6\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{17}\omega_8 - 12\omega_{18}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8 - 6\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_7\omega_{20}\omega_8\omega_5 +$$
$$6\omega_{15}v_1^2v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}v_1\omega_6cs^4\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$3\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_8 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_5 -$$
$$3\omega_{18}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8 - 6\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{17} -$$
$$12\omega_{18}\omega_{15}v_1v_3^2cs^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_7\omega_{20}\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_3cs^2\omega_7\omega_{20}\omega_5 + 6\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{17}\omega_8\omega_5 -$$
$$6\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{17}\omega_8 - 3\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17} - 12\omega_{15}v_1^2v_3cs^2\omega_7\omega_{17}\omega_8\omega_5 +$$
$$3\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_8 - 12\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{17} -$$
$$12\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{17}\omega_5 + 6\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{17}\omega_8 - 12\omega_{18}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8 - 3\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_5 + 12\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_5 - 12\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_5 + 6\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_8\omega_5 +$$
$$6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_2^2v_3cs^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2cs^2\omega_7\omega_{17}\omega_5 - 6\omega_{18}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 - 12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_5 +$$
$$12\omega_{18}\omega_{15}v_1^2v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_5 + 6\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{15}v_1v_2^2cs^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8 -$$
$$12\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20} - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17} + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{17}\omega_8 + 3\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$6\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8 + 6\omega_{15}v_2^2v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{17} +$$
$$12\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8 + 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8 - 6\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8 - 6\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20} - 6\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{17}\omega_8 + 12\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{17}\omega_5 +$$
$$12\omega_{18}\omega_{15}v_2^2v_3cs^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_5 - 6\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{17}\omega_5 - 3\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17} + 12\omega_{18}\omega_{15}v_1v_3^2cs^2\omega_7\omega_{20}\omega_5 +$$
$$6\omega_{18}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17} - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20} -$$
$$12\omega_{18}\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{17} + 3\omega_{18}\omega_{15}v_2^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{17}\omega_5 - 6\omega_{18}\omega_{15}v_1v_3^2cs^2\omega_7\omega_{20}\omega_8\omega_5 +$$
$$3\omega_{18}v_1\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_2^2v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 3\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1\omega_6v_3^2cs^2\omega_7\omega_{17}\omega_8\omega_5 -$$
$$3\omega_{15}v_1^2\omega_6v_3cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{17}\omega_5 + 3\omega_{18}v_1v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_2^2v_3cs^2\omega_7\omega_{20})\,\frac{1}{12\omega_{18}\omega_{15}\omega_6\omega_7\omega_{20}\omega_{17}\omega_8\omega_5}$$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(1),\mathrm{CLBM2}} = (12\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{17}\omega_5 + 6\omega_{18}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 +$

$12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{17} - 12\omega_{15}cs^2v_2^2v_3\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_8 -$

$6\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_5 + 12\omega_{15}v_1cs^2v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_8 +$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8 + 6\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8 - 6\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17} +$

$6\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 - 3\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_7\omega_{17}\omega_5 +$

$6\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_8 - 3\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 3\omega_{18}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$6\omega_{18}\omega_{15}cs^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_8 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_8 +$

$12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_5 - 12\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8 - 3\omega_{18}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$12\omega_{18}\omega_{15}v_1cs^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_5 + 6\omega_{18}\omega_{15}v_1cs^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2cs^2v_3\omega_7\omega_{20}\omega_5 +$

$12\omega_{18}\omega_{15}cs^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_5 + 6\omega_{18}\omega_{15}v_1^2cs^2v_3\omega_7\omega_{20}\omega_8\omega_5 + 6\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8 - 12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_5 -$

$12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{17} + 6\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{17} + 6\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20} -$

$6\omega_{18}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_5 + 3\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$6\omega_{18}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 + 12\omega_{18}\omega_{15}v_1^2cs^2v_3\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_5 +$

$3\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_8 + 6\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_{17}\omega_8 - 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_5 +$

$12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20} - 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_5 -$

$6\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{20} + 6\omega_{15}cs^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 3\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17} + 12\omega_{18}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_8 -$

$12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_8 - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_5 -$

$12\omega_{18}\omega_{15}cs^2v_2^2v_3\omega_7\omega_{17}\omega_5 - 6\omega_{15}v_1cs^2v_3^2\omega_7\omega_{20}\omega_{17}\omega_8 + 6\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17} +$

$12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{17} - 12\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_5 - 6\omega_{15}v_1cs^2v_3^2\omega_7\omega_{17}\omega_5 - 6\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_8\omega_5 + 3\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17} + 6\omega_{15}v_1^2cs^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 3\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$6\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_8 + 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{17}\omega_5 -$

$6\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{17} - 6\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_5 -$

$6\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{17}\omega_8 - 12\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20} + 12\omega_{18}\omega_{15}cs^2v_2^2v_3\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_8\omega_5 -$

$6\omega_{18}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8 + 6\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 -$

$12\omega_{18}\omega_{15}v_1cs^2v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 + 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_7\omega_{20}\omega_5 + 3\omega_{18}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_5 - 6\omega_{18}\omega_{15}v_1cs^2v_3^2\omega_7\omega_{20}\omega_8 + 6\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17} +$

$3\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8 + 6\omega_{18}\omega_{15}v_1cs^2v_3^2\omega_7\omega_{20}\omega_8\omega_5 -$

$6\omega_{18}\omega_{15}v_1cs^2v_3^2\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2cs^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{17}\omega_5 +$

$12\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{17} + 12\omega_{15}v_1cs^2v_2^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_{15}cs^2v_2^2v_3\omega_7\omega_{20}\omega_8\omega_5 +$

$6\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1cs^2v_3^2\omega_7\omega_{20}\omega_5 + 12\omega_{18}\omega_{15}v_1^2cs^2v_3\omega_7\omega_{20}\omega_{17}\omega_5 - 3\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20} - 12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}cs^2v_2^2v_3\omega_7\omega_{20}\omega_5 + 6\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{17}\omega_8 -$

$6\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17} - 12\omega_{18}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8 - 3\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_5 + 6\omega_{18}\omega_{15}v_1cs^2\omega_6v_3^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1cs^4\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 3\omega_{18}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$$3\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^3\omega_7\omega_{20}\omega_{17} + 6\omega_{18}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_7\omega_{20} - 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{17}\omega_5 -$$
$$6\omega_{18}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_{17}\omega_8 - 3\omega_{18}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2cs^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_5 - 6\omega_{15}v_1cs^2v_2^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$3\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_{17} - 12\omega_{15}v_1^2cs^2v_3\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1cs^4\omega_6\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1v_2^2v_3^2\omega_7\omega_{17}\omega_5 - 12\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_7\omega_{20}\omega_{17}\omega_5 - 12\omega_{15}v_1^2v_2^2v_3\omega_7\omega_{17}\omega_8\omega_5 +$$
$$6\omega_{18}\omega_{15}v_1cs^2v_2^2\omega_6\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}\omega_{15}cs^2v_2^2\omega_6v_3\omega_7\omega_{20}\omega_8\omega_5)\frac{1}{12\omega_{18}\omega_{15}\omega_6\omega_7\omega_{20}\omega_{17}\omega_8\omega_5}$$

$$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(1),\mathrm{CuLBM1}} = (-2+\omega_3)\frac{v_1cs^4}{6\omega_3}$$

$$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(1),\mathrm{CuLBM2}} = (3v_2^2\omega_1 + 3v_3^2\omega_1 - 3v_2^2\omega_2 - 2\omega_1 + 6\omega_1cs^2\omega_2 + 2\omega_1cs^2 - 14cs^2\omega_2 - 3v_3^2\omega_2 + 2\omega_2)\frac{v_1cs^2}{36\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_y^2\mathrm{D}_z^2v_1}^{(1)}$ **at** $\frac{\partial^4 v_1}{\partial x_2^2 \partial x_3^2}$**:**

$$C_{\mathrm{D}_y^2\mathrm{D}_z^2v_1}^{(1),\mathrm{SRT}} = (24v_2^2cs^2 - v_2^2v_3^2\omega^3 - 48v_1v_3cs^2 + 14v_2^2v_3^2\omega^2 - 36v_3^2cs^2\omega + 14v_3^2cs^2\omega^2 - 36v_2^2v_3^2\omega + 24v_3^2cs^2 + 24v_3^2v_3^2 - v_3^2cs^2\omega^3 - 8cs^4 - 4cs^4\omega^2 -$$
$$48v_1v_2^2v_3 - 36v_2^2cs^2\omega + 2v_1v_3cs^2\omega^3 + 72v_1v_2^2v_3\omega - 28v_1v_3cs^2\omega^2 + 2v_1v_2^2v_3\omega^3 + 72v_1v_3cs^2\omega - v_2^2cs^2\omega^3 + 12cs^4\omega + 14v_2^2cs^2\omega^2 - 28v_1v_2^2v_3\omega^2)\frac{\rho}{4\omega^3}$$

$$C_{\mathrm{D}_y^2\mathrm{D}_z^2v_1}^{(1),\mathrm{MRT1}} =$$

$(4\omega_{18}\omega_{15}v_2^2\omega_6\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 + 2\omega_{18}\omega_6^3\omega_{20}\omega_8^2cs^4\omega_5^3 - 12\omega_{18}\omega_{15}\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{20}\omega_8cs^4\omega_5^3 + 4\omega_{15}\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$ ...

$\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^3 - 4\omega_{18}\omega_{15}\omega_6^3\omega_{20}\omega_{17}\omega_8cs^4\omega_5^3 - 16\omega_{18}\omega_{15}v_2^2\omega_6^3\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2)\frac{\rho}{4\omega_{18}\omega_{15}\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3}$

$$C_{\mathrm{D}_y^2\mathrm{D}_z^2v_1}^{(1),\mathrm{MRT2}} =$$

$(4\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 8\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{20}\omega_8\omega_5^2 - 2\omega_{18}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_5^3 +$
$4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 8\omega_{18}\omega_{15}cs^2\omega_6v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5^2 +$
$8\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^3 - 4\omega_{18}cs^4\omega_6^3\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{18}v_1cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^3 +$

$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^3\omega_3\omega_{20}\omega_8\omega_5^3 + 4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^3 - 2\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{17}\omega_8\omega_5^3 + 8\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_8\omega_5^3 + 4\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + \omega_{15}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_8^3\omega_5^3 - 4\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5^3 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3\omega_{20}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5^3 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}cs^2\omega_6^3v_3\omega_{17}\omega_8\omega_5^3 +$$
$$4\omega_{15}v_2^2cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}cs^4\omega_6^3\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{20}\omega_8^2\omega_5^3 + 4\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$8\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_8\omega_5^2 + 4\omega_{15}v_1cs^2\omega_6^3v_3\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}cs^4\omega_6^3\omega_{20}\omega_8^2\omega_5^3 - 2\omega_{18}v_1cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$12\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 8\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}cs^4\omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 8\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_2^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}v_2^2cs^2\omega_6^3\omega_{17}\omega_8^2\omega_5^3 +$$
$$8\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3\omega_{17}\omega_8^2\omega_5^3 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{17}\omega_8^2\omega_5^3 -$$
$$16\omega_{18}\omega_{15}v_2^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^3 - 4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{17}\omega_8\omega_5^3 + \omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$8\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{17}\omega_8\omega_5^3 + \omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^3\omega_5^3 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{17}\omega_8\omega_5^3 + 4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{17}\omega_8^2\omega_5^3 +$$
$$8\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_8\omega_5^3 - 4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8\omega_5^3 +$$
$$2\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{17}\omega_8^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8\omega_5^3 + 6\omega_{18}\omega_{15}v_2^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 8\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{17}\omega_8\omega_5^3 + 8\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{17}\omega_8^2\omega_5^3 -$$
$$4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{17}\omega_8^2\omega_5^3 + 8\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{17}\omega_8\omega_5^3 - 2\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$2\omega_{15}v_2^2\omega_6^3v_3^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}cs^4\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{18}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8^3\omega_5^3 - 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$8\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8\omega_5^3 - 8\omega_{18}v_1cs^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{17}\omega_8\omega_5^3 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^3\omega_5^3 + 2\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{17}\omega_8^2\omega_5^3 +$$
$$4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^3 + 4\omega_{18}v_1cs^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^3 + 4\omega_{15}v_2^2\omega_6^2v_3^2\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{17}\omega_8\omega_5^3 -$$
$$4\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2 - 16\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^3 + 4\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{20}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_8\omega_5^3 + \omega_{18}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^3 + \omega_{18}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3\omega_{17}\omega_8^2\omega_5^3 -$$
$$4\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^3 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{17}\omega_8^2\omega_5^2 + 8\omega_{18}\omega_{15}cs^2\omega_6v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_8\omega_5^3 - 4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^3 +$$
$$4\omega_{18}v_2^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3\omega_{20}\omega_8\omega_5^3 + 4\omega_{18}cs^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}cs^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}\omega_{15}cs^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^3 + 4\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^3 + 4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}cs^4\omega_6\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$2\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{17}\omega_8\omega_5^3 + 2\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_{20}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8\omega_5^3 - 2\omega_{18}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_5 +$$
$$8\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}cs^4\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 8\omega_{18}\omega_{15}v_1cs^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8\omega_5^3 + \omega_{18}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$4\omega_{18}\omega_{15}cs^4\omega_6\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{20}\omega_8\omega_5^2 - 2\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}cs^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_5^3 -$$
$$8\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{18}cs^2\omega_6^3v_3^2\omega_{20}\omega_8^2\omega_5^3 - 2\omega_{15}v_2^2v_3^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_8^2\omega_5^2 - 8\omega_{15}v_1cs^2\omega_6^2v_3\omega_{17}\omega_8^2\omega_5^3 +$$
$$4\omega_{18}\omega_{15}cs^4\omega_6^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{20}\omega_8^2\omega_5^3 - 2\omega_{18}v_2^2cs^2\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - \omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^3 -$$
$$4\omega_{18}\omega_{15}v_2^2cs^2\omega_6^2\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{18}\omega_{15}cs^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^3 - 2\omega_{15}v_2^2cs^2\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^3v_3\omega_{20}\omega_8^2\omega_5^3 - \omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}cs^2\omega_6^3v_3^2\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5^3 + 2\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3\Big)\frac{\rho}{4\omega_{18}\omega_{15}\omega_6^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_y^2\text{D}_z^2 v_1} =$$

$$\Big(8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}v_2^2\omega_6cs^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}cs^4\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6cs^4\omega_{20}\omega_{17}\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{20}\omega_{17}\omega_5 -$$
$$4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{17}\omega_5^2 - 4\omega_{18}\omega_{15}\omega_6v_3^2cs^2\omega_{20}\omega_{17}\omega_5^2 - 2\omega_{15}\omega_6^2cs^4\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_8\omega_5^2 -$$
$$\omega_{18}\omega_{15}\omega_6^2v_3^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 8\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6v_3^2\omega_{20}\omega_{17}\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6^2v_3cs^2\omega_{17}\omega_8\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_5^2 - 4\omega_{18}\omega_{15}\omega_6^2v_3^2cs^2\omega_{17}\omega_5^2 - 2\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}\omega_6^2v_3^2cs^2\omega_{20}\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}\omega_6cs^4\omega_{20}\omega_5^2 -$$
$$8\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_{17}\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6^2v_3cs^2\omega_{17}\omega_5^2 + 4\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_5^2 -$$
$$2\omega_{15}\omega_6^2v_3^2cs^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6v_3^2\omega_{17}\omega_5^2 - 8\omega_{18}v_1\omega_6^2v_3cs^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{20}\omega_5^2 + \omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{18}\omega_{15}\omega_6cs^4\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}\omega_6v_3^2cs^2\omega_{17}\omega_5^2 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_5^2 - 2\omega_{15}v_2^2\omega_6^2cs^2\omega_{17}\omega_8\omega_5^2 - \omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{17}\omega_5^2 - 4\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{20}\omega_{17}\omega_5^2 + 2\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_5^2 - 2\omega_{18}\omega_6^2v_3^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_6v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6cs^4\omega_{20}\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}\omega_6cs^4\omega_{17}\omega_5 + 4\omega_{15}\omega_6v_3^2cs^2\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{18}\omega_6^2v_3^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_{17}\omega_5^2 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6^2v_3cs^2\omega_{17}\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{20}\omega_5^2 + 4\omega_{18}v_1\omega_6^2v_3cs^2\omega_{20}\omega_8\omega_5^2 + 4\omega_{15}v_2^2\omega_6v_3^2\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{17}\omega_5^2 + 2\omega_{18}\omega_{15}\omega_6^2v_3^2cs^2\omega_{20}\omega_{17}\omega_5 -$$
$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{20}\omega_{17}\omega_5 + 4\omega_{15}v_2^2\omega_6cs^4\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}\omega_6^2cs^2\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}v_1\omega_6^2v_3cs^2\omega_{17}\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_6^2v_3^2\omega_{17}\omega_8\omega_5^2 + \omega_{18}v_2^2\omega_6^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 8\omega_{18}\omega_{15}v_1\omega_6^2v_3\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{18}\omega_{15}cs^4\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{20}\omega_{17}\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6^2v_3cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{15}\omega_6v_3^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}\omega_6^2v_3^2cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{20}\omega_5^2 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_8\omega_5^2 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6v_3^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}v_2^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1\omega_6^2v_3cs^2\omega_{20}\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{17}\omega_5^2 - 2\omega_{18}\omega_{15}v_2^2\omega_6^2cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6v_3^2\omega_{20}\omega_5^2 + \omega_{15}v_2^2\omega_6^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$4\omega_{18}\omega_{15}\omega_6v_3^2cs^2\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6^2v_3cs^2\omega_{20}\omega_5 + 4\omega_{18}\omega_6cs^4\omega_{20}\omega_{17}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_5^2 + 2\omega_{18}\omega_{15}\omega_6v_3^2cs^2\omega_{20}\omega_8\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6cs^4\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6v_3^2cs^2\omega_{20}\omega_5^2 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_6^2cs^4\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_{15}cs^4\omega_{20}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3cs^2\omega_{20}\omega_8\omega_5^2 - 2\omega_{18}v_2^2\omega_6^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}\omega_6^2v_3^2cs^2\omega_{17}\omega_8\omega_5^2 - \omega_{18}v_2^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_{15}\omega_6^2v_3^2cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}\omega_6cs^4\omega_{17}\omega_5^2 - 2\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_8\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_6^2v_3^2cs^2\omega_{20}\omega_8\omega_5^2 + \omega_{15}\omega_6^2v_3^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6^2v_3^2\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_{15}\omega_6cs^4\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_8\omega_5^2 + 4\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2v_3\omega_{17}\omega_5^2 +$$
$$4\omega_{15}v_1\omega_6^2v_3cs^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_6^2v_3^2cs^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_{15}\omega_6^2cs^4\omega_{20}\omega_8\omega_5^2 + 2\omega_{15}\omega_6^2cs^4\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{20}\omega_8\omega_5^2 +$$

$$2\omega_{18}\omega_{15}\omega_6 cs^4 \omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6 cs^2\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{17}\omega_5 +$$
$$2\omega_{18}\omega_6^2 cs^4\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6 v_3 cs^2\omega_{20}\omega_5^2 + 4\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}v_2^2\omega_6^2 cs^2\omega_{20}\omega_8\omega_5 +$$
$$\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}\omega_6 v_3^2 cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}\omega_6^2 cs^4\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}\omega_6^2 cs^4\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_8\omega_5^2 +$$
$$4\omega_{18}\omega_{15}\omega_6^2 v_3^2 cs^2\omega_{20}\omega_5 - 2\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6^2 cs^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2 cs^2\omega_{17}\omega_5 - 2\omega_{18}\omega_6 cs^4\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 8\omega_{18}\omega_{15}v_1\omega_6^2 v_3 cs^2\omega_{20}\omega_5^2 - 4\omega_{18}\omega_{15}\omega_6^2 v_3^2 cs^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}\omega_6^2 v_3^2 cs^2\omega_{17}\omega_8\omega_5^2 -$$
$$4\omega_{18}\omega_{15}\omega_6^2 cs^4\omega_{20}\omega_5 + 2\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6 v_3 cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6 cs^4\omega_{17}\omega_8\omega_5^2 -$$
$$2\omega_{15}v_2^2\omega_6 cs^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}\omega_6 cs^4\omega_{20}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2 cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}v_1\omega_6^2 v_3 cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$8\omega_{18}\omega_{15}v_1\omega_6^2 v_3 cs^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}\omega_6 v_3^2 cs^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5) \frac{\rho}{4\omega_{18}\omega_{15}\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^2}$$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_1} = (-4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6 v_3\omega_{20}\omega_5^2 + 4\omega_{18}cs^2 v_2^2\omega_6^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_8\omega_5^2 +$

$2\omega_{18}\omega_{15}cs^4\omega_6\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}cs^4\omega_6^2\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_5 - 8\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{20}\omega_{17}\omega_5 +$

$2\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6 v_3^2\omega_{20}\omega_5^2 + 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_5^2 - 2\omega_{15}cs^2 v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}cs^4\omega_6^2\omega_{20}\omega_8\omega_5^2 -$

$4\omega_{18}\omega_{15}cs^2\omega_6 v_3^2\omega_{20}\omega_{17}\omega_5 - 8\omega_{15}v_1 cs^2\omega_6 v_3\omega_{17}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_5 + 4\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{17}\omega_8\omega_5 - 2\omega_{18}cs^4\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 -$

$4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6 v_3\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{17}\omega_5 +$

$8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_8\omega_5 + \omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}cs^4\omega_6\omega_{20}\omega_5^2 + \omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$

$8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_{17}\omega_5^2 + 4\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_5^2 + 4\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6\omega_{17}\omega_5^2 + 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_5 +$

$\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{17}\omega_5 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{17}\omega_5 + 4\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}cs^2 v_2^2\omega_6\omega_{17}\omega_8\omega_5^2 -$

$4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_2^2\omega_6 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_5 +$

$2\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{17}\omega_8\omega_5 - 2\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}cs^4\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 +$

$4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_5 + 2\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{17}\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{17}\omega_8\omega_5^2 +$

$4\omega_{15}v_2^2\omega_6 v_3\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}cs^2\omega_6 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_5 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_5 -$

$2\omega_{15}cs^2\omega_6^2 v_3^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}cs^4\omega_6\omega_{20}\omega_{17}\omega_5^2 - 4\omega_{18}cs^4\omega_6^2\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{17}\omega_8\omega_5^2 +$

$8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_5 + 4\omega_{15}cs^2 v_2^2\omega_6\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}cs^2 v_2^2\omega_6^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_5 - 12\omega_{18}\omega_{15}cs^4\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 +$

$4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_8\omega_5 - \omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}cs^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6 v_3\omega_{20}\omega_{17}\omega_8\omega_5 -$

$4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6 v_3^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6\omega_{20}\omega_5^2 - 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{17}\omega_8\omega_5^2 -$

$\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_8 - 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_{17}\omega_8\omega_5 -$

$8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_5^2 + 4\omega_{18}\omega_{15}cs^4\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_5 +$

$4\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_5 + 2\omega_{18}\omega_{15}cs^4\omega_6\omega_{20}\omega_8\omega_5 - 4\omega_{15}cs^4\omega_6\omega_{17}\omega_8\omega_5^2 -$

$4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 - \omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}cs^4\omega_6\omega_{17}\omega_5^2 - 2\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_8\omega_5 -$

$4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{17}\omega_5^2 + 4\omega_{18}\omega_{15}cs^2\omega_6 v_3^2\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_5^2 -$

$2\omega_{18}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}cs^4\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5 -$

$2\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_8\omega_5^2 - 2\omega_{18}cs^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{17}\omega_8\omega_5^2 +$

$2\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{17}\omega_8\omega_5^2 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6 v_3\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6 v_3\omega_{17}\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{17}\omega_5^2 +$

$2\omega_{18}\omega_{15}cs^2 v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_8\omega_5 + \omega_{18}cs^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_5 - 8\omega_{18}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_5 -$

$2\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1 cs^2\omega_6 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}cs^2 v_2^2\omega_6\omega_{20}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_8 +$

$4\omega_{18}\omega_{15}v_1 cs^2\omega_6 v_3\omega_{20}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{17}\omega_5 + 2\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_5 + \omega_{18}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$

$4\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{20}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{20}\omega_8\omega_5^2 +$

$2\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$

$4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_5^2 - 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}cs^2 v_2^2\omega_6^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}cs^2\omega_6 v_3^2\omega_{20}\omega_8\omega_5^2 -$

$2\omega_{18}cs^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}cs^2\omega_6 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$

$4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2 v_3\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6^2 v_3^2\omega_{20}\omega_5 - 2\omega_{18}\omega_{15}cs^4\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{17}\omega_5^2 + 4\omega_{18}\omega_{15}cs^4\omega_6\omega_{17}\omega_8\omega_5^2 -$

$4\omega_{18}\omega_{15}cs^4\omega_6^2\omega_{20}\omega_{17}\omega_5^2 + 2\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}cs^2 v_2^2\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{20}\omega_8\omega_5) \frac{\rho}{4\omega_{18}\omega_{15}\omega_6^2\omega_{20}\omega_{17}\omega_8\omega_5^2}$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_1} = (\omega_{13}\omega_2 + 2\omega_1\omega_2^2 - \omega_2^2 - 2\omega_1\omega_2 - \omega_{13}\omega_1\omega_2 + \omega_{13}\omega_1 + 2\omega_1^2\omega_2 - \omega_1^2\omega_2^2 - \omega_1^2)\frac{\rho cs^4}{\omega_{13}\omega_1^2\omega_2^2}$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_1} = (-3v_3^2\omega_4^2\omega_1^3\omega_5 + 6v_3^2\omega_3\omega_4^2\omega_1^2 cs^2\omega_5 + 6v_3^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_5 - 18v_2^2\omega_4^2\omega_1^2 cs^2\omega_5 - 3v_3^4\omega_3^2\omega_1^3\omega_5 + 18v_2^2\omega_3^2\omega_1^2 cs^2\omega_5 + 6v_2^4\omega_3^2\omega_1^2\omega_5 +$

$6v_3^2\omega_3^2\omega_3\omega_4\omega_1^2\omega_5 + 2\omega_3^2\omega_4\omega_1^3 cs^2\omega_5 + 3v_2^2\omega_3\omega_4^2\omega_1^3\omega_5 - 6v_2^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_5 + 2\omega_3\omega_4^2\omega_1^3 cs^4\omega_5 - 6v_2^2\omega_3\omega_4^2\omega_1^2 cs^2\omega_5 - 6v_2^4\omega_3^2\omega_4\omega_1\omega_5 + 8\omega_3^2\omega_4\omega_1^2 cs^4\omega_5 +$

$6v_2^2\omega_4^2\omega_1^2\omega_5 + 8\omega_3\omega_4^2\omega_1^2 cs^2\omega_5 - 3v_2^2\omega_3\omega_4^2\omega_1^3\omega_5 + 6v_3^4\omega_3^2\omega_1^2\omega_5 - 32\omega_3^2\omega_4^2\omega_1 cs^4 + 6v_3^2\omega_4^2\omega_1^2\omega_5 + 8\omega_3\omega_4\omega_1 cs^4\omega_5 + 12v_2^2\omega_3\omega_4^2\omega_1 cs^2\omega_5 -$

$9v_3^2\omega_3^3\omega_1^3 cs^2\omega_5 + 8\omega_3^2\omega_4\omega_1 cs^2\omega_5 - 8\omega_3^2\omega_4^2\omega_1 cs^4\omega_5 + 6v_2^4\omega_3\omega_4^2\omega_1^2\omega_5 + 3v_2^4\omega_3^2\omega_4\omega_1^3\omega_5 + 9v_3^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_5 - 12v_3^2\omega_3^3\omega_4\omega_1 cs^2\omega_5 - 3v_2^2\omega_3^2\omega_4\omega_1^3\omega_5 -$

$6v_2^2\omega_3\omega_4^2\omega_1^2\omega_5 + 16\omega_3^2\omega_4^2 cs^4\omega_5 - 3v_2^2\omega_3^2\omega_4\omega_1^3\omega_5 - 3v_2^4\omega_3^2\omega_1^3\omega_5 + 3v_3^4\omega_3^2\omega_1^2\omega_5 - 2\omega_3\omega_4\omega_1^3 cs^4\omega_5 + 6v_2^2\omega_3^2\omega_4\omega_1^3 cs^2\omega_5 - 2\omega_3\omega_4^2\omega_1^3 cs^2\omega_5 +$

$3v_3^2\omega_3^2\omega_1^3\omega_5 - 8\omega_3^2\omega_4\omega_1^2 cs^2\omega_5 - 9v_2^2\omega_3^2\omega_1^3 cs^2\omega_5 - 8\omega_3\omega_4^2\omega_1^2 cs^4\omega_5 + 6v_2^2\omega_3\omega_4^2\omega_1^2 cs^2\omega_5 + 9v_2^2\omega_4^2\omega_1^3 cs^2\omega_5 + 3v_3^4\omega_3^2\omega_4\omega_1^3\omega_5 + 32\omega_3^2\omega_4^2\omega_1 cs^4 -$

$6v_2^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_5 + 6v_3^4\omega_3\omega_4^2\omega_1^2\omega_5 - 6v_2^2\omega_3^2\omega_1^2\omega_5 - 3v_3^2\omega_3^2\omega_4\omega_1^3\omega_5 - 6v_3^2\omega_3\omega_4^2\omega_1^2\omega_5 - 6v_3^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_5 - 6v_2^4\omega_4^2\omega_1^3\omega_5 + 12v_3^2\omega_3\omega_4^2\omega_1 cs^2\omega_5 -$

$6v_3^2\omega_3^2\omega_1^3\omega_5 - 6v_3^4\omega_4^2\omega_1^3\omega_5 - 18v_3^2\omega_4^2\omega_1^2 cs^2\omega_5 + 3v_3^2\omega_3\omega_4^2\omega_1^3\omega_5 + 3v_2^4\omega_4^3\omega_1^3\omega_5 + 6v_2^2\omega_3^2\omega_4\omega_1^2\omega_5 + 18v_3^2\omega_3^2\omega_1^2 cs^2\omega_5 + 3v_2^2\omega_3^2\omega_1^3\omega_5 -$

$3v_3^4\omega_3\omega_4^2\omega_1^3\omega_5 - 8\omega_3^2\omega_4^2\omega_1 cs^2\omega_5 - 8\omega_3^2\omega_4^2\omega_1^3 cs^4 - 6v_3^2\omega_3^2\omega_4\omega_1^2\omega_5 - 12v_2^2\omega_3^2\omega_4\omega_1 cs^2\omega_5 - 8\omega_3^2\omega_4\omega_1 cs^4\omega_5)\frac{\rho}{8\omega_3^2\omega_4^2\omega_1^3\omega_5}$

coefficient $C^{(1)}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_y^2 \mathrm{D}_z^2 v_2} = (-36v_1 v_3^2\omega + 24v_1 cs^2 + 36v_1^2 v_3\omega + 24v_1 v_3^2 - v_1 v_3^2\omega^3 - 14v_1^2 v_3\omega^2 + v_1^2 v_3\omega^3 + 14v_1 v_3^2\omega^2 - 14v_3 cs^2\omega^2 - v_1 cs^2\omega^3 + v_3 cs^2\omega^3 +$
$14v_1 cs^2\omega^2 - 24v_3 cs^2 - 36v_1 cs^2\omega - 24v_1^2 v_3 + 36v_3 cs^2\omega)\frac{\rho v_2}{2\omega^3}$

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$$C^{(1),\text{MRT1}}_{\text{D}_y^2\text{D}_z^2 v_2} = (\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$$
$$2\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{18}\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 4\omega_{18}\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 3\omega_{18}\omega_{15}v_1\omega_6^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 6\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{18}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 10\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{18}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$$
$$2\omega_{18}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_6^2\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{18}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$4\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2 - \omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$3\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5 -$$
$$4\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1\omega_6\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2 -$$
$$\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 + 2\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{18}\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$6\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$4\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{18}\omega_{15}v_1\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{18}\omega_{15}\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2)\frac{\rho v_2}{2\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}_y^2\text{D}_z^2 v_2} = (\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 8\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 -$$
$$3\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + \omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1cs^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_5 - \omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2 -$$
$$2\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$

$$4\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}\omega_{15}v_1cs^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 - \omega_{18}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_5 +$$
$$2\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + \omega_{18}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$4\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 10\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}v_1cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 3\omega_{18}\omega_{15}v_1cs^2\omega_6^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_1\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 \Big) \frac{\rho v_2}{2\omega_{18}\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_y^2\text{D}_z^2 v_2} =$$

$$(-2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}\omega_6v_3cs^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_{15}v_1^2v_3cs^2\omega_{17}\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_3cs^2\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{17} +$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_5 + 4\omega_{18}\omega_{15}v_3cs^2\omega_{17}\omega_8\omega_5 + \omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1^2v_3\omega_{17}\omega_8\omega_5 - \omega_{18}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20}\omega_{17}\omega_5 +$$
$$2\omega_{18}\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_6v_3cs^2\omega_{20}\omega_8 + 4\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_5 + \omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_8 - 4\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{20} - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17} - 4\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{18}v_1\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_6v_3\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_5 - 4\omega_{18}v_1^2\omega_6v_3\omega_{20}\omega_8 -$$
$$2\omega_{18}v_1\omega_6cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20}\omega_{17} - 2\omega_{15}v_1\omega_6cs^2\omega_{17}\omega_8\omega_5 - \omega_{15}\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{17}\omega_5 - 4\omega_{15}v_3cs^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_{17}\omega_5 - 4\omega_{15}v_1^2v_3\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_3cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_3cs^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_3cs^2\omega_{20}\omega_{17}\omega_5 + 4\omega_{15}v_1cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20} + 2\omega_{15}v_1^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_{17}\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}v_1\omega_6cs^2\omega_{20}\omega_8 + 2\omega_{18}\omega_6v_3cs^2\omega_{20}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20} - \omega_{18}\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{17}\omega_8 + 4\omega_{18}v_1\omega_6v_3^2\omega_{20}\omega_8 -$$
$$4\omega_{18}\omega_{15}v_1^2v_3\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{17} - 4\omega_{18}\omega_{15}v_3cs^2\omega_{17}\omega_5 - 2\omega_{18}v_1\omega_6v_3^2\omega_{20}\omega_8\omega_5 + \omega_{15}v_1\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1v_3^2\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17} - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{17}\omega_8\omega_5 - \omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{17}\omega_5 + 2\omega_{15}v_1^2\omega_6v_3\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20}\omega_5 + \omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{17} + 4\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{20}\omega_{17} - 2\omega_{15}v_1v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}\omega_6v_3cs^2\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17} + 4\omega_{15}v_1v_3^2\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_{17}\omega_5 -$$
$$\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{18}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_8 - 4\omega_{18}\omega_{15}v_1cs^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{18}v_1\omega_6cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1v_3^2\omega_{17}\omega_5 + 2\omega_{18}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20} + 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{17}\omega_8) \frac{\rho v_2}{2\omega_{18}\omega_{15}\omega_6\omega_{20}\omega_{17}\omega_8\omega_5}$$

$$C^{(1),\text{CLBM2}}_{\text{D}_y^2\text{D}_z^2 v_2} =$$

$$(-2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_8 - 2\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{20}\omega_8\omega_5 - 2\omega_{18}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{20}\omega_{17} -$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}v_1cs^2\omega_6\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_5 +$$
$$\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_3\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{17}\omega_5 - \omega_{15}cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{18}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_{17}\omega_5 + 2\omega_{18}cs^2\omega_6v_3\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_{15}cs^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{17} - 4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{20}\omega_5 + 4\omega_{18}\omega_{15}cs^2v_3\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{17}\omega_8 +$$
$$4\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_5 + \omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_{15}cs^2v_3\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17} - 2\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1cs^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_{20}\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17}\omega_5 - 4\omega_{18}v_1^2\omega_6v_3\omega_{20}\omega_8 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{20}\omega_8 + 4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{20} - 2\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}v_1cs^2\omega_6\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20} +$$
$$2\omega_{15}v_1^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_3\omega_{20}\omega_{17}\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_5 +$$
$$2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1cs^2\omega_6\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{20}\omega_{17} - 2\omega_{18}v_1cs^2\omega_6\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{20} + 4\omega_{18}\omega_{15}v_1^2v_3\omega_{17}\omega_5 + 4\omega_{18}v_1\omega_6v_3^2\omega_{20}\omega_8 + 4\omega_{18}\omega_{15}cs^2v_3\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1^2v_3\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{17} + 4\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{20}\omega_5 - 2\omega_{18}v_1\omega_6v_3^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 +$$
$$\omega_{18}v_1cs^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1v_3^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17} - 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_8 + \omega_{18}\omega_{15}cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}cs^2\omega_6v_3\omega_{17}\omega_8\omega_5 - \omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_6v_3\omega_{17}\omega_8\omega_5 - 4\omega_{15}cs^2v_3\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}cs^2v_3\omega_{20}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}v_1cs^2\omega_6\omega_{17}\omega_8 - 2\omega_{15}v_1v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1\omega_6v_3^2\omega_{17} +$$
$$4\omega_{15}v_1v_3^2\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1v_3^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_{17}\omega_5 - \omega_{15}v_1^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{18}cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}cs^2\omega_6v_3\omega_{20}\omega_8 +$$

$$\omega_{18}v_1\omega_6 v_3^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6 v_3^2\omega_{20}\omega_5 + 2\omega_{18}\omega_{15}v_1\omega_6 v_3^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1 v_3^2\omega_{17}\omega_5 - \omega_{18}\omega_{15}v_1 cs^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}cs^2\omega_6 v_3\omega_{20}\omega_8 - 4\omega_{18}\omega_{15}cs^2\omega_6 v_3\omega_{20}\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}cs^2\omega_6 v_3\omega_{17} - 4\omega_{18}\omega_{15}cs^2 v_3\omega_{17}\omega_5 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}\omega_{15}v_1 cs^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6 v_3\omega_{20} + 2\omega_{15}cs^2 v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2\omega_6 v_3\omega_{17}\omega_5 + 4\omega_{15}v_1 cs^2\omega_{17}\omega_8\omega_5)\frac{\rho v_2}{2\omega_{18}\omega_{15}\omega_6\omega_{20}\omega_{17}\omega_8\omega_5}$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_y^2\text{D}_z^2 v_2} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_y^2\text{D}_z^2 v_2} = (v_2^2\omega_1 - v_2^2\omega_2 - \omega_1 + 3\omega_1 cs^2 - 3cs^2\omega_2 + \omega_2)\frac{\rho v_1 v_2}{36\omega_1\omega_2}$$

coefficient $C^{(1)}_{\text{D}_y^2\text{D}_z^2 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2}$:

$$C^{(1),\text{SRT}}_{\text{D}_y^2\text{D}_z^2 v_3} = (-24v_2^2 cs^2 + 36v_1^2 cs^2\omega + 48v_1 v_3 cs^2 + v_1^2 cs^2\omega^3 - 14v_1^2 cs^2\omega^2 + 48v_1 v_2^2 v_3 + 36v_2^2 cs^2\omega - 2v_1 v_3 cs^2\omega^3 - 72v_1 v_2^2 v_3\omega - 24v_1^2 v_2^2 + 36v_1^2 v_2^2\omega + 28v_1 v_3 cs^2\omega^2 - 24v_1^2 cs^2 + v_1^2 v_2^2\omega^3 - 2v_1 v_2^2 v_3\omega^3 - 72v_1 v_3 cs^2\omega + v_2^2 cs^2\omega^3 - 14v_1^2 v_2^2\omega^2 - 14v_2^2 cs^2\omega^2 + 28v_1 v_2^2 v_3\omega^2)\frac{\rho}{4\omega^3}$$

$$C^{(1),\text{MRT1}}_{\text{D}_y^2\text{D}_z^2 v_3} = (-2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 -$$
$$4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 8\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 -$$
$$4\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 - 8\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 - 4\omega_{18}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 + 2\omega_{18}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 - 4\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 6\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 + 8\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 + 6\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5^2 + 2\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 -$$
$$4\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 + 2\omega_{18}\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - \omega_{18}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 - 2\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2 - 4\omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 - 16\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5^2 -$$
$$4\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5 +$$
$$4\omega_{18}\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 + 2\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$2\omega_{18}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 -$$
$$20\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2 -$$
$$8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 + 8\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 +$$
$$2\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 8\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 + \omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5^2 + 2\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$2\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + \omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 + \omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 - 8\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 - 4\omega_{18}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - \omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 -$$
$$2\omega_{18}\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}cs^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5 -$$
$$4\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 - \omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{15}v_1 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 4\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 +$$
$$2\omega_{18}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 + 8\omega_{18}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2 cs^2 + 8\omega_{18}\omega_{15}v_1\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}\omega_{15}v_1 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 + 8\omega_{18}\omega_{15}v_1 v_3\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 -$$
$$2\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 8\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 - 4\omega_{18}\omega_{15}v_1^2 v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5^2 - 8\omega_{18}\omega_{15}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$

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$$4\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$8\omega_{18}\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 +$$
$$4\omega_{18}\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11} cs^2\omega_5 - 8\omega_{18}\omega_{15}v_1\omega_6^2v_3\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 4\omega_{15}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$$
$$2\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2\omega_5 - 2\omega_{18}\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8 cs^2\omega_5^2\big)\dfrac{\rho}{4\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2}$$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(1),\mathrm{MRT2}} = \big(-2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$
$2\omega_{18}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$
$4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$
$4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 + 2\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$
$2\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$
$8\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{18}\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$
$2\omega_{18}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{18}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$
$8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$
$4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$
$4\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 16\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1^2 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 -$
$2\omega_{18}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 -$
$4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$
$4\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$
$4\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_5 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$8\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 4\omega_{18}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$4\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 2\omega_{18}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$\omega_{18}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$20\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - \omega_{18}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$2\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 4\omega_{18}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 -$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 -$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 - 4\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 -$
$\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + \omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$2\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$8\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - \omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - \omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$2\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + \omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_5^2 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 +$
$4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5^2 +$
$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$
$6\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$
$2\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$
$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 -$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$8\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 -$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$
$2\omega_{18}\omega_{15}v_2^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}\omega_{15}v_1 cs^2\omega_6^2v_3\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$4\omega_{18}\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_2^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}\omega_{15}v_1 cs^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$2\omega_{15}v_1^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{15}v_1 cs^2\omega_6v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5\big)\dfrac{\rho}{4\omega_{18}\omega_{15}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(1),\mathrm{CLBM1}} = \big(-4\omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_8 + 2\omega_{15}v_1^2v_2^2\omega_6 cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 - 8\omega_{18}\omega_{15}v_1\omega_6v_3 cs^2\omega_{20}\omega_{17} +$
$2\omega_{15}v_1^2 cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20} - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6v_{17} - 4\omega_{18}\omega_{15}v_1^2\omega_6 cs^2\omega_{20} - 8\omega_{18}\omega_{15}v_1\omega_6v_3 cs^2\omega_{17}\omega_5 -$
$4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_8 - 2\omega_{18}\omega_{15}v_1^2\omega_6 cs^2\omega_{20}\omega_{17}\omega_8 + 8\omega_{15}v_1v_3 cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6v_3 cs^2\omega_{20}\omega_8\omega_5 +$
$2\omega_{18}\omega_{15}v_1^2\omega_6 cs^2\omega_{17}\omega_8 - 4\omega_{15}v_1v_2^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{18}\omega_{15}v_2^2\omega_6 cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 8\omega_{15}v_1v_2^2v_3\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_2^2\omega_6 cs^2\omega_{17}\omega_8 +$
$\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}v_1\omega_6v_3 cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6 cs^2\omega_{20}\omega_{17}\omega_5 + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{20}\omega_{17}\omega_8 +$

$$4\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_{17}\omega_5 - 4\omega_{18}v_1\omega_6v_3cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{17}\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_1^2cs^2\omega_{17}\omega_5 -$$
$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{20}\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{17} + 2\omega_{18}v_2^2\omega_6cs^2\omega_{20}\omega_{17}\omega_8 +$$
$$8\omega_{18}\omega_{15}v_1v_3cs^2\omega_{17}\omega_5 - 4\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17} - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20} +$$
$$8\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{20}\omega_{17} - 4\omega_{15}v_1v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{17} + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17} - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_2^2cs^2\omega_{17}\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_5 - 4\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1^2\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_{17} -$$
$$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_2^2\omega_6cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_2^2cs^2\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{17}\omega_5 - \omega_{18}v_2^2\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}v_2^2\omega_6cs^2\omega_{20}\omega_8 - \omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}v_2^2cs^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_2^2cs^2\omega_{20}\omega_8\omega_5 + 8\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_8\omega_5 - 4\omega_{15}v_1^2v_2^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6cs^2\omega_{20}\omega_{20}\omega_8\omega_5 - \omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_8 -$$
$$4\omega_{18}\omega_{15}v_1v_3cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_8 - 2\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{17}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20} - 2\omega_{18}\omega_{15}v_2^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_5 + 2\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{20}\omega_8 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_8\omega_5 - 4\omega_{15}v_1^2cs^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}v_1^2\omega_6cs^2\omega_{20}\omega_8 + \omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_8\omega_5 -$$
$$8\omega_{18}\omega_{15}v_1v_3cs^2\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2\omega_6cs^2\omega_{20}\omega_5 - 2\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1\omega_6v_3cs^2\omega_{17}\omega_8\omega_5 +$$
$$8\omega_{18}v_1\omega_6v_3cs^2\omega_{20}\omega_8 - 2\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1^2cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_2^2cs^2\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{18}v_2^2\omega_6cs^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{17}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_5 - 2\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_5 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_8\omega_5 - 4\omega_{18}v_1\omega_6v_3cs^2\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_2^2cs^2\omega_{20}\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17} - 8\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{18}\omega_{15}v_1v_3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_5 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2\omega_6cs^2\omega_{20}\omega_5 - 8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{20}\omega_8 +$$
$$8\omega_{18}\omega_{15}v_1v_3cs^2\omega_{20}\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_5 + 8\omega_{18}\omega_{15}v_1\omega_6v_3cs^2\omega_{17}) \frac{\rho}{4\omega_{18}\omega_{15}\omega_6\omega_{20}\omega_{17}\omega_8\omega_5}$$

$C^{(1),\text{CLBM2}}_{D_y^2 D_z^2 v_3} = (-4\omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_8 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}cs^2v_2^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}cs^2v_2^2\omega_6\omega_{17}\omega_8\omega_5 +$
$8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20} + 4\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{17} + 8\omega_{18}v_1cs^2\omega_6v_3\omega_{20}\omega_8 - 4\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20} +$
$4\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8 + 8\omega_{18}\omega_{15}v_1cs^2v_3\omega_{17}\omega_5 + 8\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{17} - 4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8 +$
$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}v_1cs^2v_3\omega_{20}\omega_8\omega_5 - 4\omega_{15}v_1^2v_2^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 8\omega_{15}v_1v_2^2v_3\omega_{17}\omega_8\omega_5 -$
$8\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_8 - 2\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1cs^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 +$
$\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}cs^2v_2^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}cs^2v_2^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_{15}cs^2v_2^2\omega_{20}\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_5 +$
$2\omega_{18}cs^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_{17}\omega_5 + \omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{17}\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8 -$
$4\omega_{18}v_1^2cs^2\omega_6\omega_{20}\omega_8 - 2\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_5 +$
$8\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20} - 4\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_{17} + 8\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17} -$
$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1^2cs^2v_3\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{20}\omega_{17} + 4\omega_{18}v_1cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{17} +$
$4\omega_{18}\omega_{15}cs^2v_2^2\omega_{17}\omega_8\omega_5 + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17} - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 + 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_5 -$
$4\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8\omega_5 - \omega_{18}v_1^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_{17}\omega_5 + 2\omega_{18}v_1^2cs^2\omega_6\omega_{20}\omega_8\omega_5 -$
$\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_5 - 4\omega_{15}v_1cs^2\omega_6v_3\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8 - 8\omega_{18}\omega_{15}v_1cs^2v_3\omega_{17}\omega_8\omega_5 -$
$4\omega_{18}\omega_{15}v_1^2cs^2\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{20}\omega_{17}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_5 + 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_{17}\omega_5 +$
$4\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}cs^2v_2^2\omega_{17}\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 8\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_8 + 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_8\omega_5 -$
$4\omega_{15}v_1^2v_2^2\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{17}\omega_8 + 2\omega_{18}cs^2v_2^2\omega_6\omega_{20}\omega_8\omega_5 - \omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 -$
$\omega_{15}v_1^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_8 + 4\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_8 +$
$8\omega_{18}\omega_{15}v_1cs^2v_3\omega_{20}\omega_5 + 8\omega_{15}v_1cs^2v_3\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_8 + 2\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{17} +$
$4\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_8 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{20}\omega_{17} + 4\omega_{18}\omega_{15}v_1\omega_6v_3\omega_{20}\omega_8\omega_5 -$
$4\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{17}\omega_5 - 4\omega_{18}cs^2v_2^2\omega_6\omega_{20}\omega_8 - 2\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_8\omega_5 +$
$4\omega_{18}\omega_{15}cs^2v_2^2\omega_{20}\omega_{17}\omega_5 - 2\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_8\omega_5 + 2\omega_{18}v_1^2cs^2\omega_6\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{17}\omega_8\omega_5 + 4\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{17}\omega_8\omega_5 -$
$4\omega_{15}v_1^2cs^2\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_5 + \omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{18}\omega_{15}v_1^2cs^2\omega_{20}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{17}\omega_5 -$
$2\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{17}\omega_8\omega_5 - 2\omega_{18}\omega_{15}cs^2v_2^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{17}\omega_5 - 8\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_{17} + 2\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{17}\omega_8 +$
$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_{17}\omega_8\omega_5 + 8\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{20}\omega_5 - 2\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{20}\omega_8\omega_5 +$
$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{20}\omega_{17} - 8\omega_{18}\omega_{15}v_1cs^2v_3\omega_{20}\omega_{17}\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2v_3\omega_{17}\omega_8\omega_5 - 4\omega_{18}\omega_{15}v_1^2cs^2\omega_6\omega_{20} + 4\omega_{18}\omega_{15}cs^2v_2^2\omega_6\omega_{20}\omega_5 -$
$4\omega_{18}v_1v_2^2\omega_6v_3\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_{15}v_1cs^2\omega_6v_3\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{18}v_1cs^2\omega_6v_3\omega_{20}\omega_8\omega_5 - 8\omega_{18}\omega_{15}v_1v_2^2\omega_6v_3\omega_{20}\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$
$4\omega_{18}\omega_{15}v_1^2v_2^2\omega_6\omega_{17}\omega_5 + 2\omega_{15}v_1^2cs^2\omega_6\omega_{17}\omega_8\omega_5) \frac{\rho}{4\omega_{18}\omega_{15}\omega_6\omega_{20}\omega_{17}\omega_8\omega_5}$

$C^{(1),\text{CuLBM1}}_{D_y^2 D_z^2 v_3} = 0$

$C^{(1),\text{CuLBM2}}_{D_y^2 D_z^2 v_3} = (v_3^2\omega_1 - \omega_1 + 3\omega_1 cs^2 - 3cs^2\omega_2 - v_3^2\omega_2 + \omega_2)\frac{\rho v_1 v_3}{36\omega_1\omega_2}$

coefficient $C^{(1)}_{D_x D_z^3 \rho}$ at $\frac{\partial^4\rho}{\partial x_1 \partial x_3^3}$:

$C^{(1),\text{SRT}}_{D_x D_z^3 \rho} = (24 + 3cs^2\omega^3 + 14\omega^2 - 42cs^2\omega^2 - \omega^3 + 108cs^2\omega + 36v_3^2\omega - 72cs^2 + v_3^2\omega^3 - 24v_3^2 - 36\omega - 14v_3^2\omega^2)\frac{v_3 cs^2}{12\omega^3}$

$C^{(1),\text{MRT1}}_{D_x D_z^3 \rho} = (6v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{11}^2 + 54\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} cs^4 + 6\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} +$
$12\omega_{18}^2\omega_6^3\omega_{22}\omega_{11} cs^2 - 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} cs^2 + 48\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 5\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} cs^2 -$

$$5\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 12\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{11}cs^2 + 72\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 36\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{11}cs^2 - 12\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 +$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{11}^2 - 36\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^2 + 24\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}^2\omega_9\omega_6^3\omega_{11}^2cs^4 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 36\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4 - 42\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} +$$
$$6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{11}cs^2 - 36 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 -$$
$$36\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}cs^4 + 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}^2 v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13} + 9\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 3\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4 -$$
$$45\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 24\omega_{18}v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4 +$$
$$36\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_6^3 v_3^2\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^2 - 72\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11} + 36\omega_{18}^2 v_1^2\omega_6\omega_{11}^2cs^2 -$$
$$12\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{11}^2 + 12\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11}^2cs^2 - 36\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{11}cs^4 + 27\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 -$$
$$6\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 9\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11} +$$
$$12\omega_{18}^2 v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 36\omega_{18}^2\omega_6^3\omega_{11}^2cs^2 + 36\omega_{18}^2 v_1^2\omega_9\omega_6\omega_{11}^2cs^2 -$$
$$96\omega_{18}^2\omega_9\omega_{22}\omega_{13}\omega_{11}^2cs^4 - 12\omega_{18}^2 v_1^2\omega_6^3\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{11} + 24\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2cs^4 + 18\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^2 -$$
$$12\omega_{18}^2\omega_9\omega_6^2\omega_{11}^2cs^2 - 12\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} - 3\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{11} -$$
$$6v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^4 - 48\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11}^2cs^2 +$$
$$36\omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^4 + 36\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 108\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 -$$
$$12\omega_{18}^2 v_1^2\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{11}cs^2 - 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4 -$$
$$12\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11} + 6\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2cs^2 + 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 72\omega_{18}^2 v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{11}^2cs^2 -$$
$$24\omega_{18}^2 v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 + 36\omega_{18}\omega_9\omega_6^2\omega_{11}^2cs^4 + 12\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{11} - 12\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 +$$
$$6\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 18\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^2cs^2 - 12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} + 12\omega_{18}^2 v_1^2\omega_9\omega_6^2 v_3^2\omega_{11}^2 - 6\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_6^3\omega_{11}^2cs^2 -$$
$$6\omega_{18}^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2cs^2 + 18\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 36\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{11}^2cs^2 - 12\omega_{18}^2 v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{11} -$$
$$6\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 18\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 18\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 6\omega_9 v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 -$$
$$12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{11}^2cs^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{11}^2cs^2 + 156\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4 - 15\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 72\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2 -$$
$$18\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 36\omega_{18}^2\omega_6^3\omega_{22}\omega_{11}cs^4 - 24\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^2 + 36\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11}cs^2 -$$
$$12v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 24\omega_{18}^2 v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{11}^2cs^2 -$$
$$15\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4 + 144\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{11}^2 - 18\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2 - 60\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^4 +$$
$$36\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 18\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 - \omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 + \omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 +$$
$$18v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 15\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 24\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} +$$
$$12v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^4 + 15\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4 - 12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{11}cs^2 + 12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{11}cs^2 +$$
$$12\omega_{18}\omega_9 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 24\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}^2\big)\dfrac{v_3}{12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2}$$

$C^{(1),\text{MRT2}}_{D_x D_\rho^3} = (6v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{11}^2 - 36\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{11} - 6\omega_{18}^2 cs^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 -$
$12\omega_{18}\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 48\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 5\omega_{18}^2\omega_9 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 27\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} +$
$12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9 cs^2\omega_6^2 v_3^2\omega_{11}^2 - 12\omega_{18}\omega_9 cs^2\omega_6^2\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_9 cs^4\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 72\omega_{18}v_1^2\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 +$
$12\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{11}^2 + 36\omega_{18}\omega_9 cs^4\omega_6^3\omega_{22}\omega_{11} + 24\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9 cs^4\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 18\omega_{18}^2 v_1^2 cs^2\omega_6^3\omega_{13}\omega_{11}^2 -$
$18\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{11} - 18\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} - 18\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^3\omega_{13}\omega_{11}^2 -$
$6\omega_{18}\omega_9 cs^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 + 3\omega_{18}^2\omega_9 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 18\omega_{18}\omega_9 cs^4\omega_6^3\omega_{13}\omega_{11}^2 + 36\omega_{18}v_1^2 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 +$
$6\omega_{18}^2 cs^2\omega_6^3\omega_{13}\omega_{11}^2 - 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 + 54\omega_{18}^2\omega_9 cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} + 18\omega_{18}\omega_9 cs^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 +$
$9\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 24\omega_{18}v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 18v_1^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - \omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 -$
$6\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 + 6\omega_9 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{11}^2 - 60\omega_{18}^2\omega_9 cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_9 cs^2\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 +$
$18\omega_{18}^2\omega_9 cs^4\omega_6^3\omega_{13}\omega_{11}^2 + 5\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 36v_1^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 9\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} -$
$36\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^2\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 15\omega_{18}^2\omega_9 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13} -$
$72\omega_{18}^2 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 108\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2 v_1^2\omega_6^3\omega_{11}^2 + 36\omega_{18}^2 v_1^2 cs^2\omega_6^3\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{11} +$
$24\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2 v_1^2 cs^2\omega_6^3\omega_{22}\omega_{11} + 12\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2 v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} +$
$\omega_{18}^2\omega_9 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{11} - 6v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}^2\omega_9 cs^4\omega_6^2\omega_{11}^2 + 144\omega_{18}v_1^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 -$
$48\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 18\omega_{18}^2 v_1^2 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_9 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 42\omega_{18}\omega_9 cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 -$
$36\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^3\omega_{11}^2 - 12\omega_{18}\omega_9 cs^2\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9 cs^2\omega_6^3\omega_{22}\omega_{11} - 12\omega_{18}^2 v_1^2\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 +$
$12\omega_{18}^2\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}\omega_9 cs^4\omega_6^2\omega_{13}\omega_{11}^2 + 36\omega_{18}v_1^2\omega_9 cs^2\omega_6^2\omega_{13}\omega_{11}^2 +$
$18\omega_{18}v_1^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9 cs^2\omega_6^3\omega_{11}^2 + 36\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13} - 6\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11} + 36\omega_{18}^2 cs^4\omega_6^3\omega_{11}^2 -$
$12\omega_{18}^2\omega_9 cs^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 24\omega_{18}^2 v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}\omega_9 cs^2\omega_6^3\omega_{13}\omega_{11}^2 + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 -$
$6\omega_{18}^2 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9 cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{11} - 36\omega_{18}^2\omega_9 cs^4\omega_6^2\omega_{22}\omega_{11} + 36\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{11} +$
$12\omega_{18}\omega_9 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 12\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{11} - 6\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11} + 12\omega_{18}^2\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 -$
$18\omega_{18}^2 cs^4\omega_6^3\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_9 cs^2\omega_6^2 v_3^2\omega_{11}^2 + 18\omega_{18}^2 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 96\omega_{18}^2\omega_9 cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} -$
$12\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{11} - 6\omega_{18}\omega_9 cs^2\omega_6^3\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9 cs^2\omega_6^2\omega_{11}^2 - 12\omega_{18}\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}^2 v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 +$
$18\omega_{18}^2\omega_9 cs^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 15\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^2\omega_{11}^2 - 24\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}^2\omega_9 cs^4\omega_6^3\omega_{11}^2 -$
$12v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 24\omega_{18}^2 v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9 cs^2\omega_6^2 v_3^2\omega_{22}\omega_{11} + 156\omega_{18}^2\omega_9 cs^4\omega_6\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_9 cs^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 -$
$12\omega_{18}^2\omega_9 cs^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 15\omega_{18}\omega_9 cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^3\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{11}^2 + 12\omega_9 cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 -$
$12\omega_9 cs^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 cs^2\omega_6^3\omega_{11}^2 + 72\omega_{18}^2 v_1^2 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 15\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2 cs^4\omega_6^3\omega_{22}\omega_{11} +$
$24\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 3\omega_{18}\omega_9 cs^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 45\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} -$
$36\omega_{18}v_1^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 3\omega_{18}\omega_9 cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 24\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} +$
$72\omega_{18}^2 v_1^2\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_9 cs^4\omega_6^2\omega_{13}\omega_{11}^2 + 6\omega_{18}^2 v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 cs^2\omega_6^3 v_3^2\omega_{11}^2\big)\dfrac{v_3}{12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2}$

$C^{(1),\text{CLBM1}}_{D_x D_\rho^3} = (-36\omega_{18}^2\omega_9\omega_6\omega_{22}cs^2 + 36\omega_{18}^2\omega_9\omega_{22}\omega_{13}cs^2\omega_{11} + 6\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}^2\omega_9\omega_6 cs^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22} -$
$6\omega_{18}^2\omega_9\omega_6^2\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{11} + 18\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2 - 36\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} - \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9\omega_6\omega_{13}cs^2\omega_{11} +$

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$$12\omega_{18}^2\omega_9 v_3^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{13}\omega_{11} - 12\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9 v_3^2\omega_{22}\omega_{13} +$$
$$12\omega_{18}\omega_9\omega_6 v_3^2\omega_{13}\omega_{11} - 9\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_{18}\omega_9 v_3^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_6\omega_{22} -$$
$$12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9\omega_6\omega_{11} + 6\omega_{18}^2\omega_6^2\omega_{13}\omega_{11} - 3\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} +$$
$$12\omega_{18}\omega_9\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} + 54\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}cs^2 + 54\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} - 18\omega_{18}^2\omega_6^2\omega_{13}cs^2\omega_{11} - 5\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13} +$$
$$36\omega_{18}\omega_9\omega_6\omega_{13}cs^2\omega_{11} + 3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_{22}\omega_{13} + 18\omega_{18}^2\omega_9\omega_6^2\omega_{13}cs^2\omega_{11} - 12\omega_{18}^2\omega_6^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} +$$
$$6\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{13} + 3\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} + 12\omega_{18}^2\omega_6^2\omega_{22} - 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 5\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}^2\omega_6^2 v_3^2\omega_{22} -$$
$$6\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11} + \omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9\omega_{22}\omega_{13}cs^2 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^2\omega_{22} - 36\omega_{18}^2\omega_6^2\omega_{22}cs^2 -$$
$$36\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} + 36\omega_{18}^2\omega_6^2cs^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6^2\omega_{11} - 36\omega_{18}^2\omega_9\omega_6^2cs^2\omega_{11} + 6\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11} + 36\omega_{18}^2\omega_9\omega_6^2\omega_{22}cs^2 +$$
$$12\omega_{18}^2\omega_9\omega_6\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{11} + 12\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_6^2\omega_{22}\omega_{13} + 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22} + 18\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13} -$$
$$18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}\omega_9\omega_6^2\omega_{13}cs^2\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{13}\omega_{11} - 15\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2)\frac{v_3 cs^2}{12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}}$$

$$C_{\mathrm{D}_x\mathrm{D}_z^3\rho}^{(1),\mathrm{CLBM2}} = (18\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}^2\omega_9 cs^2\omega_{22}\omega_{13}\omega_{11} + 6\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}^2 cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22} -$$
$$36\omega_9 cs^2\omega_6^2\omega_{11} - 6\omega_{18}^2\omega_9\omega_6^2\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{11} - \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}^2 cs^2\omega_6^2\omega_{22} + 12\omega_{18}^2\omega_9 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$18\omega_{18}\omega_9 cs^2\omega_6^2\omega_{13}\omega_{11} + 6\omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9 cs^2\omega_{22}\omega_{13} - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{13}\omega_{11} + 54\omega_{18}^2\omega_9 cs^2\omega_6\omega_{22}\omega_{13} - 12\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$12\omega_{18}^2\omega_9 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9\omega_6 v_3^2\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{13}\omega_{11} - 12\omega_{18}\omega_9 v_3^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} +$$
$$18\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_6\omega_{22} - 12\omega_{18}^2\omega_9\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9\omega_6\omega_{11} + 6\omega_{18}^2\omega_6^2\omega_{13}\omega_{11} -$$
$$3\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_9 cs^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2 cs^2\omega_6^2\omega_{22} + 12\omega_{18}\omega_9\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}^2 cs^2\omega_6^2\omega_{11} - 9\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} -$$
$$18\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13} - 5\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13} + 3\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_{22}\omega_{13} - 12\omega_{18}^2\omega_6^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} -$$
$$36\omega_{18}^2 cs^2\omega_6\omega_{13}\omega_{11} + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}^2\omega_6^2\omega_{22} - 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_9 cs^2\omega_{22}\omega_{13}\omega_{11} + 5\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$$
$$12\omega_{18}^2\omega_6^2 v_3^2\omega_{22} - 6\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11} + 3\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + \omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^2\omega_{22} -$$
$$18\omega_{18}^2 cs^2\omega_6^2\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_6^2\omega_{11} + 6\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_6\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{11} + 12\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_6^2\omega_{22}\omega_{13} +$$
$$12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22} + 18\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13} - 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{13}\omega_{11} + 36\omega_{18}\omega_9 cs^2\omega_6\omega_{13}\omega_{11} + 36\omega_{18}^2\omega_9 cs^2\omega_6\omega_{11} +$$
$$54\omega_{18}\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9 cs^2\omega_6\omega_{22} - 15\omega_{18}^2\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13})\frac{cs^2 v_3}{12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}}$$

$$C_{\mathrm{D}_x\mathrm{D}_z^3\rho}^{(1),\mathrm{CuLBM1}} = (12\omega_6\omega_8 - 6\omega_6\omega_2^2 - 9\omega_6 cs^2\omega_8\omega_2^2 + v_3^2\omega_8^2\omega_2^2 + 36 cs^2\omega_8\omega_2 - 12\omega_6 v_3^2\omega_8^2\omega_2 - 6\omega_8^2\omega_2 + 12\omega_8^2 + 12\omega_6\omega_8^2\omega_2 - \omega_6\omega_8^2\omega_2^2 -$$
$$18 cs^2\omega_8\omega_2^2 + \omega_6 v_3^2\omega_8^2\omega_2 - \omega_8^2\omega_2^2 - 12\omega_6\omega_8^2 + 54\omega_6 cs^2\omega_8\omega_2 + 12\omega_6\omega_2 + 6v_3^2\omega_8^2\omega_2 - 3\omega_6 v_3^2\omega_8\omega_2^2 + 3cs^2\omega_8^2\omega_2 + 6\omega_8\omega_2^2 + 6\omega_6 v_3^2\omega_2^2 +$$
$$12v_3^2\omega_8\omega_2 - 36\omega_6 cs^2\omega_8^2\omega_2 - 12\omega_6 v_3^2\omega_8 - 36 cs^2\omega_8^2 - 36\omega_6 cs^2\omega_2 + 36\omega_6 cs^2\omega_8^2 + 3\omega_6\omega_8\omega_2^2 - 18\omega_6\omega_8\omega_2 + 18\omega_6 cs^2\omega_2^2 - 36\omega_6 cs^2\omega_8 - 12v_3^2\omega_8^2 -$$
$$12\omega_6 v_3^2\omega_2 - 6v_3^2\omega_8\omega_2^2 + 12\omega_6 v_3^2\omega_8^2 + 3\omega_6 cs^2\omega_8^2\omega_2^2 + 18\omega_6 v_3^2\omega_8\omega_2 + 18 cs^2\omega_8^2\omega_2 - 12\omega_8\omega_2^2)\frac{v_3 cs^2}{12\omega_6\omega_8^2\omega_2^2}$$

$$C_{\mathrm{D}_x\mathrm{D}_z^3\rho}^{(1),\mathrm{CuLBM2}} = (-288\omega_3^2\omega_4^2 cs^4\omega_2^3 - 136v_3^2\omega_3^3\omega_4^2\omega_1^2\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3 + 48\omega_3\omega_4^2\omega_1^3 cs^4\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 + 36\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^3 + 18v_3^2\omega_4^2\omega_1^3 cs^2\omega_2^3 +$$
$$120v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 448v_3^2\omega_3^3\omega_4^2\omega_1^2 cs^2\omega_2 + 54\omega_3^2\omega_1^3 cs^4\omega_2^3 + 588\omega_3^2\omega_4^2\omega_1 cs^4\omega_2^3 + 18v_3^2\omega_3^3\omega_1^3 cs^2\omega_2^3 + 28\omega_3^2\omega_4^2\omega_1\omega_2^3 + 54\omega_4^2\omega_1^3 cs^4\omega_2^3 -$$
$$104\omega_3^2\omega_4^2\omega_1^3 cs^2 - 168\omega_3\omega_4^2\omega_1 cs^4\omega_2^3 - 92v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 88\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2 - 144\omega_3^2\omega_4^2\omega_1 cs^4\omega_2^2 - 784v_3^2\omega_3^2\omega_4^2 cs^2\omega_2^3 - 276\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2 +$$
$$18v_1^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^2 + 78v_3^4\omega_3^3\omega_4^2\omega_1^3\omega_2 + 36\omega_4^2\omega_1^3 cs^2\omega_2^3 + 48v_3^4\omega_3^3\omega_4^2\omega_1^3 - 72\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^3 - 460v_3^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^2 -$$
$$132v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 108\omega_3^2\omega_4\omega_1^2 cs^4\omega_2^3 - 78v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 27\omega_3\omega_4^2\omega_1^3 cs^4\omega_2^3 + 40v_3^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 + 92v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2^3 + 52\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 +$$
$$152v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 9\omega_3^2\omega_4\omega_1^3 cs^2\omega_2^3 - 96\omega_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 160v_3^2\omega_3^2\omega_4^2\omega_2^3 + 18\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^3 - 9v_3^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^3 - 412v_3^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 -$$
$$40\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^2 + 184\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^3 + 72v_3^2\omega_3\omega_4^2\omega_1^2 cs^2\omega_2^3 + 104v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 108\omega_3\omega_4^2\omega_1^3 cs^4\omega_2 - 24v_3^4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 18\omega_4^2\omega_1^3 cs^2\omega_2^3 +$$
$$1232v_3^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2 + 72\omega_3^2\omega_4^2\omega_1^2 cs^4\omega_2 + 56\omega_3\omega_4^2\omega_1 cs^2\omega_2^3 + 56\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 + 32v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 36v_3^2\omega_3^3\omega_4^2 cs^2\omega_2^3 + 208\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2 +$$
$$16v_3^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_2 - 108\omega_3^2\omega_4^2\omega_1^2 cs^4\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2 - 18v_1^2\omega_3^2\omega_4^2\omega_1^2 cs^2\omega_2^2 + 208\omega_3^2\omega_4^2 cs^2\omega_2^3 - 36v_3^2\omega_3^2\omega_4^2 cs^2\omega_2^2 - 56v_3^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^2 +$$
$$6v_1^2\omega_3^2\omega_4^2\omega_4^2\omega_2^3 - 16\omega_3^2\omega_4\omega_2^3 + 228v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 16\omega_3\omega_4^2\omega_1^3 cs^2\omega_2 - 712v_3^2\omega_3^3\omega_4^2\omega_1^3 cs^2\omega_2 - 108\omega_3^2\omega_1^3 cs^4\omega_2^3 + 320v_3^2\omega_3^2\omega_4^2\omega_1^3 cs^2 + 14\omega_3^2\omega_4^2\omega_1^3\omega_2^2 -$$
$$56v_3^2\omega_3\omega_4^2\omega_1 cs^2\omega_2^2 - 18\omega_3^2\omega_1^3 cs^2\omega_2^3 - 256v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 368\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^3 - 6v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 14\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 9v_3^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^3 -$$
$$20\omega_3^2\omega_4^2\omega_1\omega_2 - 6\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^3 + 6v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 56v_3^2\omega_3^2\omega_4^2\omega_1^3 + 120\omega_3\omega_4^2\omega_1^2 cs^4\omega_2^2 - 342\omega_3^2\omega_4^2\omega_1^3 cs^4\omega_2^3 + 36\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^3 +$$
$$394v_3^2\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^2 - 6v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 36v_3^2\omega_3^2\omega_4\omega_1^2 cs^2\omega_2^3 + 216\omega_3\omega_4^2\omega_1^2 cs^4\omega_2^3 - 36\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 - 118\omega_3^2\omega_4^2\omega_1^3 cs^2\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 -$$
$$144v_3^4\omega_3^3\omega_4^2\omega_2^3 - 36v_3^2\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^2 + 6v_3^2\omega_3^2\omega_4^2\omega_1 cs^2\omega_2^3 + 9\omega_3\omega_4^2\omega_1^3 cs^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3 cs^4 - 27\omega_3^2\omega_4\omega_1^3 cs^4\omega_2^3 + 12\omega_3^2\omega_4^2\omega_1^2 cs^4\omega_2^2)\frac{v_3}{72\omega_3^4\omega_4^2\omega_1^2\omega_2^3}$$

coefficient $C_{\mathrm{D}_x\mathrm{D}_z^3 v_1}^{(1)}$ **at** $\frac{\partial^4 v_1}{\partial x_1 \partial x_3^3}$:

$$C_{\mathrm{D}_x\mathrm{D}_z^3 v_1}^{(1),\mathrm{SRT}} = (2 + 3cs^2\omega + v_3^2\omega - 6cs^2 - 2v_3^2 - \omega)\frac{\rho v_1 v_3}{12\omega}$$

$$C_{\mathrm{D}_x\mathrm{D}_z^3 v_1}^{(1),\mathrm{MRT1}} = (-12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 24\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13}^2\omega_{11}^2 + 12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{13}^2\omega_{11} + 24\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 +$$
$$24\omega_{18}^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2 cs^2 + 24\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{11}^2 cs^2 - 18\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 24\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$24\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{11}^2 cs^2 + 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 24\omega_{18}\omega_9\omega_6^2\omega_{13}^2\omega_{11} -$$
$$18\omega_{18}^2\omega_6^2\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 48\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 24\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 -$$
$$48\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2 cs^2 + 12\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{13}^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$3\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 24\omega_{18}^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 + 36\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2 - 96\omega_{18}^2\omega_9\omega_{22}\omega_{13}^2\omega_{11}^2 cs^2 - 12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13} -$$
$$18\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{11}^2 cs^2 + 12\omega_{18}^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} cs^2 + 90\omega_{18}\omega_6^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} cs^2 - 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} +$$
$$24\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2 cs^2 - 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} - 132\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} -$$
$$24\omega_{18}^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 cs^2 - 36\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2 cs^2 - 24\omega_{18}^2\omega_9\omega_6^2 v_3^2\omega_{13}^2\omega_{11} + 72\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} +$$
$$12\omega_{18}^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} cs^2 - 12\omega_{18}^2\omega_9\omega_6^3 v_3^2\omega_{13}^2\omega_{11} + 36\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^2 - 42\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} cs^2 +$$

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$$24\omega_{18}^2\omega_9^2\omega_6^2v_3^2\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2 + \omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}^2 - 12\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2 - 24\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 -$$
$$12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2 + 60\omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2 + 66\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11}^2 - 66\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 -$$
$$12\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2\omega_{11}^2cs^2 - 36\omega_{18}^2\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}^2 + 24\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 -$$
$$4\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 156\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 12\omega_{18}^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}^2cs^2 + 12\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 18\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2 -$$
$$12\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2 - 12\omega_{18}^2\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11} - 24\omega_{18}^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{11}^2cs^2 - 6\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} -$$
$$12\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2\omega_{11}^2cs^2 + 18\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 72\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 - \omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 66\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$24\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11} + 24\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 - 84\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 +$$
$$24\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2cs^2 - 24\omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 + 4\omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$24\omega_{18}^2\omega_9^2\omega_6^2\omega_{13}\omega_{11}^2 - 24\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11}^2 + 6\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13} + 84\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^2cs^2)\frac{\rho v_1 v_3}{12\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2}$$

$$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-12\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 24\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2\omega_{11} + 6\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} +$$
$$12\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2\omega_{11}^2 + 12\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{13}^2\omega_{11} + 90\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$24\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{13}^2\omega_{11} - 24\omega_{18}\omega_9\omega_6^2\omega_6^2\omega_{13}^2\omega_{11} -$$
$$18\omega_{18}^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 72\omega_{18}^2\omega_9cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 132\omega_{18}^2\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} +$$
$$12\omega_{18}^2\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13} + 12\omega_{18}^2\omega_9cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} + 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$12\omega_{18}^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} + 12\omega_{18}^2\omega_9cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 84\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}^2\omega_9\omega_6^3\omega_6^3\omega_{13}^2\omega_{11} + 36\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{13}^2\omega_{11} -$$
$$12\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13} - 18\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 156\omega_{18}\omega_9^2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 18\omega_9^2\omega_6^3cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} + 48\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$24\omega_{18}^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13} + 60\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$12\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13}\omega_{11} - 24\omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{13}^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{11}^2 + 12\omega_{18}^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$12\omega_{18}\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 48\omega_9^2cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{13}^2\omega_{11} - 24\omega_{18}\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} -$$
$$24\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 36\omega_{18}\omega_9^2cs^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + \omega_{18}^2\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$12\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2\omega_{11} + 66\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 42\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$36\omega_{18}\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{13}^2\omega_{11} - 12\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 72\omega_{18}^2\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 84\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 3\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} -$$
$$12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}^2\omega_9cs^2\omega_6^3v_3^2\omega_{13}^2\omega_{11} + 24\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{13}^2\omega_{11} + 18\omega_{18}^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$12\omega_{18}^2\omega_9^2cs^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{11}^2 - 66\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - \omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 -$$
$$66\omega_{18}^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}\omega_9\omega_6\omega_{13}^2\omega_{11} + 24\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 96\omega_{18}^2\omega_9cs^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$24\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{11}^2 + 24\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 24\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}^2\omega_9^3\omega_6^3v_3^2\omega_{13}\omega_{11} + 4\omega_{18}^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 24\omega_{18}^2\omega_9cs^2\omega_6\omega_{13}^2\omega_{11} -$$
$$24\omega_{18}^2\omega_9^2\omega_6^2\omega_{13}\omega_{11}^2 - 24\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 36\omega_{18}^2\omega_9^3cs^2\omega_6^2\omega_{22}\omega_{13} + 6\omega_{18}^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2)\frac{\rho v_1 v_3}{12\omega_{18}^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^2}$$

$$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-\omega_{18} + \omega_{18}v_3^2\omega_{11} + 3\omega_{18}cs^2\omega_{11} + \omega_{18}v_3^2 - 3v_3^2\omega_{11} - \omega_{18}\omega_{11} - 9cs^2\omega_{11} + 3\omega_{18}cs^2 + 3\omega_{11})\frac{\rho v_1 v_3}{12\omega_{18}\omega_{11}}$$

$$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-\omega_{18} + \omega_{18}v_3^2\omega_{11} + \omega_{18}v_3^2 - 3v_3^2\omega_{11} - \omega_{18}\omega_{11} + 3\omega_{18}cs^2 + 3\omega_{18}cs^2\omega_{11} + 3\omega_{11} - 9cs^2\omega_{11})\frac{\rho v_1 v_3}{12\omega_{18}\omega_{11}}$$

$$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-\omega_6\omega_8 + 3\omega_6 - 9\omega_6cs^2 - 3\omega_6v_3^2 + \omega_6v_3^2\omega_8 + v_3^2\omega_8 - \omega_8 + 3\omega_6cs^2\omega_8 + 3cs^2\omega_8)\frac{\rho v_1 v_3}{12\omega_6\omega_8}$$

$$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-27\omega_3\omega_1cs^2\omega_2 + 9\omega_3\omega_1\omega_2 + 4v_3^2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 27\omega_4\omega_1cs^2\omega_2 + 18\omega_3\omega_4\omega_1cs^2\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 18v_1^2\omega_3\omega_4\omega_2 -$$
$$8\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 + 6\omega_3\omega_4cs^2\omega_2 + 6v_3^2\omega_3\omega_4\omega_1\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 + 12\omega_3\omega_4\omega_1cs^2 - 9v_3^2\omega_3\omega_1\omega_2 + 18v_1^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_1 v_3}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(1)}_{\mathrm{D}_x\mathrm{D}_z^3 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1\partial x_3^3}$ **:**

$$C^{(1),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_z^3 v_3} = (-12 - cs^2\omega^3 - 6\omega^2 + 2cs^2\omega^2 - 54v_3^2\omega + 36v_3^2 + 18\omega + 18v_3^2\omega^2)\frac{\rho cs^2}{12\omega^3}$$

$$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_z^3 v_3} = (18v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{11}^2 + 18\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4 + 6\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}^2\omega_6^3\omega_{22}\omega_{11}cs^2 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 144\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 5\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 -$$
$$15\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 36\omega_{18}^2\omega_6^3v_3^2\omega_{22}\omega_{11}cs^2 + 24\omega_{18}^2v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 12\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{11}cs^2 + 24\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 +$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{11}^2 - 12\omega_{18}^2v_1^2\omega_9\omega_6\omega_{13}^2\omega_{11}^2cs^2 + 24\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_9\omega_6^3\omega_{11}^2cs^4 -$$
$$12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{11}cs^4 - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4 + 12\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} +$$
$$6\omega_{18}^2v_1^2\omega_6^3\omega_{13}^2\omega_{11} - 36\omega_{18}^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{11}cs^2 - 12v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2 -$$
$$12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}cs^4 + 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^2 - 18\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 27\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - \omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4 -$$
$$15\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 60\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 72\omega_{18}v_1^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4 + 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} +$$
$$36\omega_{18}^2\omega_9v_3^2\omega_{11}^2cs^2 + 12\omega_{18}\omega_9\omega_6\omega_{13}^2\omega_{11}^2cs^2 - 24\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 18\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{13}\omega_{11} + 12\omega_{18}^2v_1^2\omega_6^3\omega_{11}^2cs^2 - 12\omega_{18}^2v_1^2\omega_9\omega_6\omega_6^2\omega_{11}^2 +$$
$$36\omega_{18}\omega_9\omega_6^2v_3^2\omega_{13}\omega_{11}^2cs^2 - 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{11}cs^4 + 9\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - 48\omega_{18}^2\omega_9v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 9\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} +$$
$$18\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^2 + 36\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{13}\omega_{11}^2 + 36\omega_{18}^2v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^2 -$$
$$15\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_6^3\omega_{11}^2cs^4 + 12\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{11}^2cs^2 - 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4 - 12\omega_{18}^2v_1^2\omega_9^3\omega_{11}^2 - 36\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{11} +$$
$$72\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2cs^4 + 6\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^2 - 12\omega_{18}^2\omega_9\omega_6^2\omega_{11}^2cs^2 - 36\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} +$$
$$12\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 30\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{11} - 6v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^4 -$$
$$48\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}\omega_9\omega_6^2v_3^2\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 +$$
$$6\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 36\omega_{18}^2v_1^2\omega_9\omega_6^2v_3^2\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{11}cs^2 - 18\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2cs^2 -$$

$$6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11} + 6\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2cs^2 + 18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}^2v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 +$$
$$36\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{11}^2cs^2 - 24\omega_{18}^2v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_9\omega_6^2\omega_{11}^2cs^4 + 36\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{11} +$$
$$60\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 12\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}^2v_1^2\omega_6^3\omega_{13}\omega_{11}^2cs^2 - 12\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} + 36\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{11}^2 -$$
$$18\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_6^3\omega_{11}^2cs^2 - 18\omega_{18}^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 + 54\omega_{18}^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 12\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11}cs^2 -$$
$$6\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^2 - 36\omega_{18}^2v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{11} + 18\omega_{18}^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 6\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - 102\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 -$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 - 36\omega_{18}^2\omega_9\omega_6v_3^2\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_9\omega_6^3\omega_{11}^2cs^2 + 18\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^4 -$$
$$45\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 24\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 18\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 12\omega_{18}^2\omega_6^3\omega_{22}\omega_{11}cs^4 - 72\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11}cs^2 - 36v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 +$$
$$72\omega_{18}^2v_1^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{11}^2cs^2 - 5\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4 + 48\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 36\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{11}^2 -$$
$$6\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2 - 5\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11}^2cs^4 + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2cs^2 +$$
$$6v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 15\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 24\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 108\omega_{18}^2v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} +$$
$$12v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 12\omega_{18}^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2cs^4 + 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^4 - 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{11}cs^2 + 36\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{11}cs^2 +$$
$$12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2cs^2 - 24\omega_{18}^2v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2)\frac{\rho}{12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2}$$

$$C_{\mathrm{D}_x\mathrm{D}_2^3v_3}^{(1),\mathrm{MRT2}} = (18v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{11}^2 - 12\omega_{18}^2v_1^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{11} - 18\omega_{18}^2cs^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 +$$
$$60\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13} + 144\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 15\omega_{18}^2\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + 9\omega_{18}^2v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} +$$
$$36\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9cs^2\omega_6^3v_3^2\omega_{11}^2 - 12\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_9cs^4\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 24\omega_{18}v_1^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$12\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{11}^2 + 12\omega_{18}^2\omega_9cs^4\omega_6^3\omega_{22}\omega_{11} + 24\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2 - 6\omega_{18}^2v_1^2cs^2\omega_6^3\omega_{13}\omega_{11}^2 -$$
$$18\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{11} - 6\omega_{18}^2v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} - 6\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{13}\omega_{11}^2 -$$
$$18\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 - \omega_{18}^2\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 6\omega_{18}\omega_9cs^4\omega_6^3\omega_{13}\omega_{11}^2 + 12\omega_{18}v_1^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$6\omega_{18}^2cs^2\omega_6^3\omega_{13}\omega_{11}^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2 + 18\omega_{18}^2\omega_9cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} - 102\omega_{18}\omega_9cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$27\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 72\omega_{18}v_1^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 6v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 18\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 -$$
$$12\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2v_1^2\omega_9\omega_6\omega_{11}^2 - 5\omega_{18}^2\omega_9cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}\omega_9cs^2\omega_6^2v_3^2\omega_{13}\omega_{11}^2 + 6\omega_{18}^2\omega_9cs^4\omega_6^3\omega_{13}\omega_{11}^2 +$$
$$5\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{11} + \omega_{18}^2\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 9\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 -$$
$$36\omega_{18}^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{11} - 5\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{13}\omega_{11}^2 + 36\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} - 24\omega_{18}v_1^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$12\omega_{18}^2cs^2\omega_6^3\omega_{22}\omega_{11} - 36\omega_{18}^2v_1^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2v_1^2\omega_6^3\omega_{11}^2 + 12\omega_{18}^2v_1^2cs^2\omega_6^3\omega_{11}^2 - 36\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{11} - 48\omega_{18}^2\omega_9cs^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$72\omega_{18}^2v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2v_1^2cs^2\omega_6^3\omega_{22}\omega_{11} + 12\omega_{18}\omega_9cs^2\omega_6^2\omega_{13}\omega_{11}^2 - 36\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2v_1^2\omega_9\omega_6\omega_{13}\omega_{11}^2 +$$
$$12\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{11} - 6v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_9cs^4\omega_6^2\omega_{11}^2 + 48\omega_{18}v_1^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 48\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 -$$
$$12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}^2v_1^2cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}\omega_9cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2v_1^2\omega_9cs^2\omega_6^3\omega_{11}^2 - 36\omega_{18}^2\omega_9cs^2\omega_6^2v_3^2\omega_{13}\omega_{11}^2 +$$
$$6\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{11} - 36\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2 + 60\omega_{18}^2\omega_9cs^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} +$$
$$18\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_9cs^4\omega_6^2\omega_{13}\omega_{11}^2 + 12\omega_{18}v_1^2\omega_9cs^2\omega_6^2\omega_{13}\omega_{11}^2 + 6\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{11}^2 +$$
$$12\omega_{18}^2v_1^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13} - 12\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11} + 12\omega_{18}^2cs^4\omega_6^3\omega_{11}^2 - 15\omega_{18}^2\omega_9cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$24\omega_{18}^2v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11}^2 - 6\omega_{18}^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_9cs^4\omega_6\omega_{22}\omega_{13}\omega_{11}^2 +$$
$$36\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{11} - 12\omega_{18}^2\omega_9cs^4\omega_6^2\omega_{22}\omega_{11} + 12\omega_{18}^2v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{11} + 36\omega_{18}^2\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{11} - 12\omega_{18}^2v_1^2\omega_9\omega_6\omega_{22}\omega_{11} +$$
$$36\omega_{18}^2v_1^2\omega_9\omega_6^2v_3^2\omega_{11}^2 - 18\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}^2cs^4\omega_6^3\omega_{13}\omega_{11}^2 + 36\omega_{18}^2\omega_9cs^2\omega_6^2v_3^2\omega_{11}^2 +$$
$$6\omega_{18}^2cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_9cs^4\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}^2cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}^2v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{11} - 6\omega_{18}\omega_9cs^2\omega_6^3\omega_{13}\omega_{11}^2 -$$
$$12\omega_{18}^2\omega_9cs^2\omega_6^2\omega_{11}^2 - 6\omega_{18}^2v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11}^2 + 54\omega_{18}^2\omega_9cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 45\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2v_1^2\omega_9cs^2\omega_6^2\omega_{11}^2 -$$
$$72\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_9cs^4\omega_6^3\omega_{11}^2 - 36v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 72\omega_{18}^2v_1^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}^2\omega_9cs^2\omega_6^2v_3^2\omega_{22}\omega_{11} +$$
$$18\omega_{18}^2\omega_9cs^4\omega_6\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}^2\omega_9cs^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 - 36\omega_{18}^2\omega_9cs^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}\omega_9cs^4\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2v_1^2\omega_9cs^2\omega_6^3\omega_{13}\omega_{11}^2 +$$
$$36\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{11}^2 + 24\omega_9cs^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2cs^2\omega_6^3\omega_{11}^2 + 24\omega_{18}^2v_1^2cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 15\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2cs^4\omega_6^3\omega_{22}\omega_{11} +$$
$$24\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 108\omega_{18}^2v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} + 30\omega_{18}\omega_9cs^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 15\omega_{18}v_1^2\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 -$$
$$12\omega_{18}v_1^2\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}v_1^2\omega_6^2\omega_{13}\omega_{11}^2 - 24\omega_{18}^2v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}^2v_1^2\omega_9cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} -$$
$$12\omega_{18}^2\omega_9cs^4\omega_6^3\omega_{13}\omega_{11}^2 + 18\omega_{18}^2v_1^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11}^2 + 36\omega_{18}^2cs^2\omega_6^3v_3^2\omega_{11}^2)\frac{\rho}{12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2}$$

$$C_{\mathrm{D}_x\mathrm{D}_2^3v_3}^{(1),\mathrm{CLBM1}} = (-54\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_6^3\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_6^3\omega_{22} + 12\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} +$$
$$54\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} - 6\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6^2\omega_{11} + 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9\omega_6^2\omega_{22} - 18\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} +$$
$$12\omega_{18}\omega_9\omega_6\omega_{13}\omega_{11} - 6\omega_{18}\omega_9\omega_6^3\omega_{13}cs^2\omega_{11} - 12\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} - 5\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_{18}\omega_9\omega_6^3cs^2\omega_{11} +$$
$$6\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_9\omega_6^3\omega_{22}cs^2 + 6\omega_{18}\omega_6^3\omega_{13}\omega_{11} + 18\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_9\omega_6v_3^2\omega_{11} + 36\omega_{18}\omega_9\omega_6v_3^2\omega_{22} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} -$$
$$3\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} - 18\omega_{18}\omega_6^3v_3^2\omega_{13}\omega_{11} - 15\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_{18}\omega_9\omega_6^3\omega_{22} +$$
$$12\omega_{18}\omega_9\omega_6^3\omega_{11} + \omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}\omega_6^3v_3^2\omega_{11} - 36\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13} + 6\omega_9\omega_6^3\omega_{13}\omega_{11} - 36\omega_{18}\omega_6^3v_3^2\omega_{22} + 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2 +$$
$$6\omega_{18}\omega_9\omega_6^3\omega_{13}cs^2\omega_{11} - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 36\omega_9\omega_6^2v_3^2\omega_{13}\omega_{11} + 12\omega_{18}\omega_6^3cs^2\omega_{11} - 12\omega_{18}\omega_6^3\omega_{22}cs^2 - \omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} -$$
$$6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11} - 36\omega_{18}\omega_9\omega_6^2v_3^2\omega_{13}\omega_{11} - 6\omega_9\omega_6^3\omega_{13}cs^2\omega_{11} + 18\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11} + 18\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13} -$$
$$12\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} + 12\omega_9\omega_6^2\omega_{13}cs^2\omega_{11} - 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2 - 12\omega_{18}\omega_9\omega_6^2\omega_{13}cs^2\omega_{11} + 36\omega_{18}\omega_9\omega_6^2v_3^2\omega_{11} - 36\omega_{18}\omega_9\omega_6v_3^2\omega_{22} +$$
$$12\omega_{18}\omega_9\omega_6^2cs^2\omega_{11} + 6\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2\omega_{22}cs^2 - 18\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11})\frac{\rho cs^2}{12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}}$$

$$C_{\mathrm{D}_x\mathrm{D}_2^3v_3}^{(1),\mathrm{CLBM2}} = (-\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 18\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 54\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_6^3\omega_{11} + 12\omega_9cs^2\omega_6^2\omega_{13}\omega_{11} +$$
$$12\omega_{18}\omega_6^3\omega_{22} + 54\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9cs^2\omega_6^2\omega_{13}\omega_{11} - 6\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6^2\omega_{11} + 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13} + 12\omega_{18}\omega_9cs^2\omega_6^2\omega_{11} +$$
$$12\omega_{18}\omega_9\omega_6^2\omega_{22} + 12\omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11} - 5\omega_{18}\omega_9cs^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9cs^2\omega_6^2\omega_{22} - 12\omega_9\omega_6^2\omega_{13}\omega_{11} - 6\omega_{18}cs^2\omega_6^3\omega_{13}\omega_{11} +$$
$$36\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}\omega_6^3\omega_{13}\omega_{11} + 18\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_9\omega_6^3v_3^2\omega_{11} - 12\omega_{18}\omega_9cs^2\omega_6\omega_{22}\omega_{13} + 36\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22} +$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13} - 3\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9cs^2\omega_{22}\omega_{13}\omega_{11} + 6\omega_9cs^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 5\omega_{18}\omega_9cs^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} -$$
$$18\omega_{18}\omega_6^3v_3^2\omega_{13}\omega_{11} - 15\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^3\omega_{22} + 12\omega_{18}\omega_9cs^2\omega_6^3\omega_{22} + 12\omega_{18}\omega_9\omega_6^3\omega_{11} + \omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9cs^2\omega_6^3\omega_{11} +$$

$$36\omega_{18}\omega_6^3 v_3^2\omega_{11} - 36\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13} + 6\omega_9\omega_6^3\omega_{13}\omega_{11} + 6\omega_{18}cs^2\omega_6^3\omega_{22}\omega_{13} - 36\omega_{18}\omega_6^3 v_3^2\omega_{22} - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13} + 36\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11} +$$
$$6\omega_{18}\omega_9 cs^2\omega_6^3\omega_{13}\omega_{11} + 18\omega_{18}\omega_9 cs^2\omega_6^2\omega_{22}\omega_{13} - 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11} + 12\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} - 6\omega_9 cs^2\omega_6^3\omega_{13}\omega_{11} - 12\omega_{18}cs^2\omega_6^3\omega_{22} -$$
$$36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{13}\omega_{11} + 12\omega_{18}cs^2\omega_6^3\omega_{11} + 18\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11} + 18\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} +$$
$$36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{11} - 36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22} + 18\omega_{18}\omega_9 cs^2\omega_6\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 18\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}) \frac{\rho cs^2}{12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}}$$

$C_{\mathrm{D}_x \mathrm{D}_2^3 v_3}^{(1),\mathrm{CuLBM1}} = (18\omega_6\omega_2^2 - 5\omega_6 cs^2\omega_8\omega_2^2 - 12cs^2\omega_8\omega_2 - \omega_6 cs^2\omega_8\omega_2^3 - 6\omega_6\omega_2^3 + cs^2\omega_8\omega_2^3 - 12\omega_2^2 + 6cs^2\omega_8\omega_2^2 + 18\omega_6 cs^2\omega_8\omega_2 - 12\omega_6\omega_2 +$
$6\omega_2^3 - 3\omega_6 v_3^2\omega_8\omega_2^2 - 18v_3^2\omega_2^3 - 6\omega_8\omega_2^2 - 54\omega_6 v_3^2\omega_2^2 - 36v_3^2\omega_8\omega_2 + 36v_3^2\omega_2^3 - \omega_8\omega_2^3 + 12\omega_6 cs^2\omega_2 + 18\omega_6 v_3^2\omega_2^3 + \omega_6\omega_8\omega_2^2 + 3v_3^2\omega_8\omega_2^3 - 6cs^2\omega_2^3 -$
$18\omega_6 cs^2\omega_2^2 - 12\omega_6 cs^2\omega_8 + 12cs^2\omega_2^2 + 36\omega_6 v_3^2\omega_2 + 18v_3^2\omega_8\omega_2^2 + 12\omega_8\omega_2 + 6\omega_6 cs^2\omega_2^3) \frac{\rho cs^2}{12\omega_6\omega_8\omega_2^3}$

$C_{\mathrm{D}_x \mathrm{D}_2^3 v_3}^{(1),\mathrm{CuLBM2}} = (-288v_3^2\omega_3\omega_4\omega_1^3 cs^2\omega_2 - 18\omega_4\omega_1^3 cs^4\omega_2^3 - 3v_1^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 138v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 60v_3^2\omega_3\omega_4\omega_1 cs^2\omega_2^2 + 81v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 -$
$108v_3^2\omega_3\omega_1^2 cs^2\omega_2^3 - 9\omega_4\omega_1^3 cs^2\omega_2^3 + 60v_3^2\omega_4\omega_1^2 cs^2\omega_2^2 - 54\omega_3\omega_4\omega_1 cs^2\omega_2^3 - 138v_3^4\omega_3\omega_4\omega_1^2\omega_2^3 - 240v_3^4\omega_3\omega_4\omega_1^3\omega_2 + 432v_3^2\omega_3\omega_4\omega_1 cs^2\omega_2^3 -$
$9\omega_3\omega_1^3 cs^2\omega_2^3 + 84v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 + 8\omega_3\omega_4\omega_1^2 cs^4\omega_2 + 20\omega_4\omega_1^2 cs^4\omega_2^2 + 4\omega_3\omega_4\omega_1^3 + 42\omega_3\omega_4\omega_1^3 cs^2\omega_2 - 168v_3^4\omega_3\omega_4\omega_1^2\omega_2 - 36\omega_3\omega_1^2 cs^4\omega_2^3 +$
$32\omega_3\omega_4\omega_1 cs^2\omega_2^2 - 54v_3^2\omega_4\omega_1^2 cs^2\omega_2^3 + 18\omega_4\omega_1^3 cs^2\omega_2^2 - 24\omega_3\omega_4\omega_1^3 cs^2\omega_2^3 + 192v_3^4\omega_3\omega_4\omega_1^2\omega_2 - 8\omega_4\omega_1^3 cs^2\omega_2 + 144v_3^2\omega_3\omega_4\omega_2^3 - 96v_3^2\omega_3\omega_4\omega_1^2\omega_2 -$
$68\omega_3\omega_4 cs^4\omega_2^3 + 10\omega_3\omega_4\omega_1^2 cs^4\omega_2 - 36\omega_3\omega_1 cs^2\omega_2^2 - 4\omega_3\omega_4\omega_1\omega_2^2 - 8\omega_4\omega_1 cs^2\omega_2^3 + 96v_3^4\omega_3\omega_4\omega_1^3 - 312v_3^2\omega_3\omega_4 cs^2\omega_2^3 + 138v_3^4\omega_3\omega_4\omega_1^3\omega_2^2 +$
$14\omega_3\omega_4\omega_1\omega_2^3 + 153v_3^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 - 29\omega_3\omega_4\omega_1^2 cs^4\omega_2^3 - 81v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 - 20\omega_3\omega_4\omega_1^2 cs^2 + 9\omega_3\omega_1^3 cs^4\omega_2^3 - 8\omega_3\omega_4\omega_2^3 - 16\omega_3\omega_4\omega_1^2 cs^2\omega_2 -$
$20\omega_4\omega_1^2 cs^2\omega_2^2 + 27v_3^2\omega_4\omega_1^3 cs^2\omega_2^3 - v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 - 32\omega_3\omega_4\omega_1^3 cs^4\omega_2 + 3v_1^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 - 10\omega_3\omega_4\omega_1^3\omega_2 + 36\omega_3\omega_1^2 cs^2\omega_2^3 - 7\omega_3\omega_4\omega_1^2\omega_2^3 -$
$28\omega_3\omega_4\omega_1 cs^4\omega_2^3 - 18\omega_4\omega_1^3 cs^4\omega_2 + v_1^4\omega_3\omega_4\omega_1^3\omega_2^3 - 54v_3^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 18\omega_4\omega_1^2 cs^2\omega_2^3 + 16\omega_3\omega_4\omega_1 cs^4 + 9\omega_4\omega_1^3 cs^4\omega_2^3 + 120v_3^2\omega_3\omega_4\omega_1^2 cs^2\omega_2 +$
$94\omega_3\omega_4\omega_1 cs^4\omega_2^3 - 4\omega_3\omega_4\omega_1^2\omega_2^2 + 27v_3^2\omega_3\omega_1^3 cs^2\omega_2^3 - 90v_3^2\omega_3\omega_4\omega_1^3 cs^2\omega_2^2 + 108v_3^2\omega_3\omega_1 cs^2\omega_2^3 + 12v_3^2\omega_3\omega_4\omega_1\omega_2^3 - 264v_3^4\omega_3\omega_4\omega_2^3 + 8\omega_3\omega_4\omega_1^2\omega_2 +$
$8\omega_4\omega_1 cs^4\omega_2^3 - 3\omega_3\omega_4\omega_1 cs^4\omega_2^3 - 24v_3^4\omega_3\omega_4\omega_1\omega_2^2 + 24v_3^2\omega_4\omega_1^3 cs^2\omega_2 + 24\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 - 60v_3^2\omega_3\omega_4\omega_1^3 + 17\omega_3\omega_4\omega_1^3 cs^4\omega_2 + 7\omega_3\omega_4\omega_1^3\omega_2^2 +$
$144v_3^2\omega_3\omega_4\omega_1^3 cs^2 - 222v_3^2\omega_3\omega_4\omega_1\omega_2^3 - v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 - 153v_3^2\omega_3\omega_4\omega_1^2 cs^2\omega_2^3 + 8\omega_4\omega_1^3 cs^4\omega_2 + 24v_3^2\omega_3\omega_4\omega_1 cs^2\omega_2^3 + 40\omega_3\omega_4 cs^2\omega_2^2 -$
$6\omega_3\omega_4\omega_1^2 cs^2\omega_2^2 + 36\omega_3\omega_1 cs^4\omega_2^3 + v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 + 408v_3^4\omega_3\omega_4\omega_1\omega_2^3) \frac{\rho}{36\omega_3\omega_4\omega_1^3\omega_2^3}$

coefficient $C_{\mathrm{D}_y \mathrm{D}_2^3 \rho}^{(1)}$ at $\frac{\partial^4 \rho}{\partial x_2 \partial x_3^3}$:

$C_{\mathrm{D}_y \mathrm{D}_2^3 \rho}^{(1),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_y \mathrm{D}_2^3 \rho}^{(1),\mathrm{MRT1}} = (-9\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 24\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 -$
$12\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 cs^2\omega_5 + 8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$
$4\omega_{18}^2\omega_6^2 v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 +$
$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 +$
$9\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 - 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 - 4\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 -$
$6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 + 6\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + 4\omega_{18}\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 +$
$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 +$
$12\omega_{18}^2\omega_6\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}\omega_8 cs^2 + 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 -$
$6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 - 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8 + 4\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2 +$
$4\omega_{18}^2\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 3\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2 cs^2\omega_5 + 6\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 +$
$4\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6^2 v_3^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2 -$
$6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5 - 4\omega_{18}^2\omega_6 v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 cs^2 - 2\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8 +$
$4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_6^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 -$
$6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2 -$
$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 12\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 12\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 + 8\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 +$
$6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 - 4\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} -$
$24\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 -$
$4\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 + 12\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 4\omega_{18} v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 -$
$4\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2\omega_5 + 12\omega_{18}^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}\omega_8 +$
$4\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}^2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$
$3\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + 12\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 - 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$
$8\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11} + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 -$
$4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8) \frac{v_1 v_2 v_3}{4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5}$

$C_{\mathrm{D}_y \mathrm{D}_2^3 \rho}^{(1),\mathrm{MRT2}} = (4\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2 cs^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_5 +$
$12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 6\omega_{18}^2 cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$
$4\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2 v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 +$
$12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$
$2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 4\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 +$
$2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 9\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 +$
$4\omega_{18}^2\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2 cs^2\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 -$
$4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}^2\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 +$
$3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8 - 6\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2 +$

$$4\omega_{18}^2\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 3\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 -$$
$$12\omega_{18}^2cs^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 4\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6^2v_3^2\omega_{20}\omega_{11}^2\omega_8 -$$
$$4\omega_{18}^2\omega_6v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$12\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}^2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8 +$$
$$4\omega_{18}^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 6\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 -$$
$$4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 8\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2cs^2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 12cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2cs^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} -$$
$$2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$6\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 9\omega_{18}^2cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 -$$
$$6\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 12\omega_{18}cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} -$$
$$2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 3\omega_{18}^2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2cs^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8 - 24\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$$
$$8\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_6v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$4\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11} + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8)\frac{v_1v_2v_3}{4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5}$$

$C^{(1),\text{CLBM1}}_{\text{D}_y\text{D}_z^3\rho} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_y\text{D}_z^3\rho} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_y\text{D}_z^3\rho} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_y\text{D}_z^3\rho} = (v_2^2\omega_1 - v_2^2\omega_2 - \omega_1 + 3\omega_1cs^2 - 3cs^2\omega_2 + \omega_2)\frac{v_1v_2v_3}{12\omega_1\omega_2}$

coefficient $C^{(1)}_{\text{D}_y\text{D}_z^3v_1}$ at $\frac{\partial^4 v_1}{\partial x_2 \partial x_3^3}$:

$C^{(1),\text{SRT}}_{\text{D}_y\text{D}_z^3v_1} = 0$

$$C^{(1),\text{MRT1}}_{\text{D}_y\text{D}_z^3v_1} = (13\omega_{18}^2\omega_6\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{18}\omega_6^2\omega_8^2cs^2\omega_5^2 + 2\omega_6^2\omega_{20}\omega_8^2\omega_5^2 + \omega_6^3v_3^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_6^3v_3^2\omega_8\omega_5 - \omega_{18}\omega_6^3\omega_{20}\omega_8^2\omega_5 -$$
$$4\omega_{18}\omega_6^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_6^2v_3^2\omega_8\omega_5 - \omega_{18}\omega_6^3\omega_8^2\omega_5^2 - 2\omega_{18}\omega_6^3\omega_{20}cs^2\omega_5^2 + \omega_{18}^2\omega_6^2\omega_{20}\omega_8^2\omega_5 + 5\omega_{18}^2\omega_6^3\omega_{20}\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_6^2\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$\omega_{18}^2\omega_6^3\omega_8^2cs^2\omega_5 - 5\omega_{18}^2\omega_6^2\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}^2\omega_6^2\omega_8^2cs^2\omega_5^2 - 2\omega_{18}\omega_6\omega_8^2\omega_5^2 - \omega_{18}\omega_6^3v_3^2\omega_{20}\omega_8^2\omega_5^2 + 7\omega_{18}^2\omega_6^2\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{18}\omega_6^2\omega_8\omega_5^2 +$$
$$\omega_{18}\omega_6^3v_3^2\omega_{20}\omega_8\omega_5 - \omega_{18}^2\omega_6^2\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}\omega_6^2\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}^2\omega_6^2\omega_{20}\omega_8^2cs^2 - 7\omega_{18}^2\omega_6^2\omega_{20}\omega_8cs^2\omega_5 + \omega_{18}^2\omega_6^3\omega_8^2cs^2\omega_5^2 + 2\omega_{18}\omega_6^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_6^2\omega_{20}\omega_8^2cs^2\omega_5^2 - \omega_6^3\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_6\omega_{20}\omega_8^2cs^2\omega_5^2 + \omega_{18}^2\omega_6^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 - \omega_{18}\omega_6^3\omega_8^2cs^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{20}cs^2\omega_5 -$$
$$6\omega_{18}^2\omega_6\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{20}cs^2\omega_5^2 - 2\omega_{18}^3\omega_6^3v_3^2\omega_8\omega_5^2 + \omega_{18}\omega_6^3\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2\omega_6\omega_8\omega_5 - \omega_{18}^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}\omega_6\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2\omega_6^2\omega_{20}\omega_8cs^2\omega_5 + \omega_{18}\omega_6^3\omega_8^2\omega_5^2 - \omega_{18}\omega_6^3\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{18}^2\omega_6^3\omega_8cs^2\omega_5^2 - 2\omega_{18}\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 + \omega_{18}^2\omega_6^3v_3^2\omega_8\omega_5^2 + 2\omega_{18}^2\omega_6^2\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2\omega_6^3\omega_{20}\omega_8\omega_5^2 - \omega_{18}\omega_6^3v_3^2\omega_8^2\omega_5^2 - 8\omega_{18}\omega_6\omega_{20}\omega_8^2cs^2\omega_5^2 + \omega_{18}^2\omega_6v_3^2\omega_{20}\omega_8\omega_5^2 - \omega_{18}^2\omega_6\omega_{20}\omega_8^2\omega_5^2 + \omega_6^3\omega_{20}\omega_8^2cs^2\omega_5^2 + \omega_{18}^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}\omega_6^2v_3^2\omega_8^2\omega_5^2 + \omega_{18}^2\omega_6^2\omega_{20}\omega_8\omega_5^2 + 6\omega_{18}^2\omega_6\omega_{20}\omega_8cs^2\omega_5^2 - \omega_{18}^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5 - 2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 - 2\omega_{18}\omega_6v_3^2\omega_{20}\omega_8\omega_5^2 + \omega_{18}^2\omega_6^3\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{18}^2\omega_6^3\omega_{20}\omega_8cs^2 + 4\omega_{18}\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}^2\omega_6^3\omega_8cs^2\omega_5 - \omega_{18}^2\omega_6^3v_3^2\omega_8^2\omega_5 + \omega_{18}^2\omega_6v_3^2\omega_{20}\omega_8\omega_5 - 2\omega_{18}\omega_6^2v_3^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6\omega_8\omega_5^2 +$$
$$2\omega_{18}^2\omega_6^2\omega_8cs^2\omega_5^2 + \omega_{18}\omega_6^3\omega_{20}\omega_8^2cs^2\omega_5 - 11\omega_{18}^2\omega_6^2\omega_{20}\omega_8cs^2\omega_5^2)\frac{\rho v_2v_3}{2\omega_{18}^2\omega_6^3\omega_{20}\omega_8^2\omega_5^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}_y\text{D}_z^3v_1} = (-\omega_{18}cs^2\omega_6^3\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}cs^2\omega_6^2\omega_8^2\omega_5^2 + 2\omega_6^2\omega_{20}\omega_8^2\omega_5^2 - 5\omega_{18}^2cs^2\omega_6^2\omega_{20}\omega_8^2\omega_5^2 + \omega_6^3v_3^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_6^3v_3^2\omega_8\omega_5 -$$
$$\omega_{18}\omega_6^3\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}^2cs^2\omega_6^3\omega_{20}\omega_8 - 4\omega_{18}\omega_6^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2\omega_6^2v_3^2\omega_8\omega_5^2 + 2\omega_{18}^2cs^2\omega_6^3\omega_8\omega_5 - \omega_{18}^2\omega_6^3\omega_8^2\omega_5^2 - 2\omega_{18}cs^2\omega_6^2\omega_{20}\omega_8^2\omega_5 +$$
$$\omega_{18}^2\omega_6^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2cs^2\omega_6^3\omega_{20}\omega_8^2 + cs^2\omega_6^3\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2cs^2\omega_6^2\omega_8^2\omega_5^2 - 2\omega_{18}\omega_6\omega_8^2\omega_5^2 - \omega_{18}\omega_6^3v_3^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2\omega_6\omega_8\omega_5^2 +$$
$$\omega_{18}\omega_6^3v_3^2\omega_{20}\omega_8\omega_5 - \omega_{18}^2\omega_6^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}^2cs^2\omega_6^3\omega_{20}\omega_5 - 2cs^2\omega_6^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_6^2\omega_{20}\omega_8^2\omega_5 - \omega_6^3\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2cs^2\omega_6^3\omega_8\omega_5^2 +$$
$$\omega_{18}^2\omega_6^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 + 4\omega_{18}cs^2\omega_6^2\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}cs^2\omega_6^3\omega_{20}\omega_8^2\omega_5^2 + 6\omega_{18}^2cs^2\omega_6\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{18}^2\omega_6^3v_3^2\omega_8\omega_5^2 + 7\omega_{18}^2cs^2\omega_6^2\omega_{20}\omega_8^2\omega_5 -$$
$$8\omega_{18}^2cs^2\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}\omega_6^3\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}^2cs^2\omega_6^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_8\omega_5 + 5\omega_{18}^2cs^2\omega_6^3\omega_{20}\omega_8^2\omega_5^2 - \omega_{18}^2\omega_6v_3^2\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_6\omega_{20}\omega_8^2\omega_5^2 +$$
$$\omega_{18}\omega_6^3\omega_8^2\omega_5^2 + 13\omega_{18}^2cs^2\omega_6\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{18}^2cs^2\omega_6^2\omega_{20}\omega_5^2 - 2\omega_{18}\omega_6v_3^2\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}^2\omega_6^3v_3^2\omega_8^2\omega_5^2 + 4\omega_{18}^2cs^2\omega_6^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_8^2\omega_5^2 -$$
$$\omega_{18}^2\omega_6^3\omega_{20}\omega_8\omega_5^2 - \omega_{18}\omega_6^3v_3^2\omega_8^2\omega_5^2 - \omega_{18}cs^2\omega_6^3\omega_8^2\omega_5^2 + \omega_{18}\omega_6v_3^2\omega_{20}\omega_8^2\omega_5^2 - \omega_{18}\omega_6\omega_{20}\omega_8^2\omega_5^2 + \omega_{18}^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_6^2v_3^2\omega_8^2\omega_5^2 +$$
$$\omega_{18}^2\omega_6^2\omega_{20}\omega_8\omega_5^2 - 2\omega_{18}^2cs^2\omega_6^3\omega_{20}\omega_8 - \omega_{18}^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5 - 2\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{18}^2cs^2\omega_6^3\omega_8\omega_5^2 - 2\omega_{18}\omega_6v_3^2\omega_{20}\omega_8\omega_5^2 + \omega_{18}^2\omega_6^3\omega_{20}\omega_8\omega_5 -$$
$$6\omega_{18}^2cs^2\omega_6\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}\omega_6^2v_3^2\omega_{20}\omega_8\omega_5^2 - 11\omega_{18}^2cs^2\omega_6^2\omega_{20}\omega_8\omega_5^2 - \omega_{18}^2\omega_6^3v_3^2\omega_8^2\omega_5 - 7\omega_{18}^2cs^2\omega_6\omega_{20}\omega_8\omega_5 + \omega_{18}^2\omega_6^3v_3^2\omega_{20}\omega_8\omega_5 -$$
$$\omega_{18}^2cs^2\omega_6^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^2v_3^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_8\omega_5^2 - 2\omega_{18}cs^2\omega_6\omega_{20}\omega_8^2\omega_5^2)\frac{\rho v_2v_3}{2\omega_{18}^2\omega_6^3\omega_{20}\omega_8^2\omega_5^2}$$

$C^{(1),\text{CLBM1}}_{\text{D}_y\text{D}_z^3v_1} = 0$

$C^{(1),\text{CLBM2}}_{\text{D}_y\text{D}_z^3v_1} = 0$

$C^{(1),\text{CuLBM1}}_{\text{D}_y\text{D}_z^3v_1} = 0$

$C^{(1),\text{CuLBM2}}_{\text{D}_y\text{D}_z^3v_1} = (-12\omega_3\omega_4 - 6\omega_3\omega_4^2\omega_1cs^2 + 2v_2^2\omega_3^2\omega_4\omega_1 + 3v_2^2\omega_4^2\omega_1 + 36\omega_3\omega_4cs^2 - 6v_2^2\omega_3^2\omega_4 - 6v_2^2\omega_4^2 - 2v_2^2\omega_3\omega_4^2\omega_1 - 3v_2^2\omega_3^2\omega_1 +$

$6\omega_3^2\omega_4\omega_1 cs^2 - 6v_3^2\omega_4^2 + 12v_3^2\omega_3\omega_4 + 6\omega_3\omega_4\omega_1 - 6\omega_3\omega_4^2 - 36\omega_4^2 cs^2 + 2\omega_3\omega_4^2\omega_1 + 12\omega_4^2 + 6v_2^2\omega_3^2 + 6v_2^2\omega_3\omega_4^2 + 3v_3^2\omega_4^2\omega_1 + 18\omega_4^2\omega_1 cs^2 - 6v_3^2\omega_3\omega_4\omega_1 - 2\omega_3^2\omega_4\omega_1 - 18\omega_3\omega_4\omega_1 cs^2 - 6v_3^2\omega_3^2 - 6\omega_4^2\omega_1 + 18\omega_3\omega_4^2 cs^2 + 3v_3^2\omega_3^2\omega_1 + 6\omega_3^2\omega_4 - 18\omega_3^2\omega_4 cs^2)\frac{\rho v_2 v_3}{8\omega_3^2\omega_4^2\omega_1}$

coefficient $C^{(1)}_{D_y D_2^3 v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3}$:

$C^{(1),\text{SRT}}_{D_y D_2^3 v_2} = (2 + 3cs^2\omega + v_3^2\omega - 6cs^2 - 2v_3^2 - \omega)\frac{\rho v_1 v_3}{12\omega}$

$C^{(1),\text{MRT1}}_{D_y D_2^3 v_2} = (36\omega_{18}^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 18\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 36\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + \omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 36\omega_{18}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}^2\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5^2 + 6\omega_{18}\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5^2 - 12\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 cs^2\omega_5 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5^2 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}^2\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 54\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 36\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 24\omega_{18}\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 + 6\omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 9\omega_{18}\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2 - 6\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5 - 18\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 18\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 24\omega_{18}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 9\omega_{18}\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 cs^2\omega_5 - 54\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 6\omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18} v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 36\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5^2 + 42\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 - 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5^2 + 6\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 12\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 cs^2\omega_5^2 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 54\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}^2\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + 30\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 6\omega_{18}^2\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 - 6\omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}^2\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 24\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}^2\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 18\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 12\omega_{18}^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 + 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5^2 - 42\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 + 9\omega_{18}^2\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 54\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 6\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 - 9\omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2 cs^2\omega_5^2 - 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5^2 + 18\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5^2 + 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2\omega_5^2 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 18\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 - 6\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}^2\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2)\frac{\rho v_1 v_3}{12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2}$

$C^{(1),\text{MRT2}}_{D_y D_2^3 v_2} = (12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2 cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 18\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + \omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 36 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 42\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 36\omega_{18}^2 cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2 cs^2\omega_6\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 + 24\omega_{18}^2 cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}^2 cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 36\omega_{18} cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 18\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 18\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 3\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 54\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 9\omega_{18}\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_5 - 36\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 24\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18} v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 9\omega_{18}^2 cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 9\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 54\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 24\omega_{18} cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 36\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 24\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 3\omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}^2\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 + 54\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 18\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 30\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 54\omega_{18} cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2 cs^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_7^2\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 42\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 9\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 +

$18cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 24\omega_{18}^2 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 24\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5^2 - 18\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 12\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5^2 + 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 24\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2) \frac{\rho v_1 v_3}{12\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2}$

$C^{(1),\mathrm{CLBM1}}_{\mathrm{D}_y\mathrm{D}_2^3 v_2} = (-\omega_{19}\omega_{11} - 3v_3^2\omega_{11} - \omega_{19} - 9cs^2\omega_{11} + v_3^2\omega_{19}\omega_{11} + v_3^2\omega_{19} + 3\omega_{19}cs^2\omega_{11} + 3\omega_{11} + 3\omega_{19}cs^2)\frac{\rho v_1 v_3}{12\omega_{19}\omega_{11}}$

$C^{(1),\mathrm{CLBM2}}_{\mathrm{D}_y\mathrm{D}_2^3 v_2} = (-\omega_{19}\omega_{11} + 3cs^2\omega_{19} - 3v_3^2\omega_{11} - \omega_{19} + 3cs^2\omega_{19}\omega_{11} + v_3^2\omega_{19}\omega_{11} + v_3^2\omega_{19} + 3\omega_{11} - 9cs^2\omega_{11})\frac{\rho v_1 v_3}{12\omega_{19}\omega_{11}}$

$C^{(1),\mathrm{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_2^3 v_2} = (3\omega_6\omega_{10}cs^2 + 3\omega_6 - 9\omega_6 cs^2 + 3\omega_{10}cs^2 - \omega_6\omega_{10} - \omega_{10} - 3\omega_6 v_3^2 + \omega_6 v_3^2\omega_{10} + v_3^2\omega_{10})\frac{\rho v_1 v_3}{12\omega_6\omega_{10}}$

$C^{(1),\mathrm{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_2^3 v_2} = (-27\omega_3\omega_1 cs^2\omega_2 + 9\omega_3\omega_1\omega_2 + 4v_3^2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 - 27\omega_4\omega_1 cs^2\omega_2 + 18\omega_3\omega_4\omega_1 cs^2\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 8\omega_3\omega_4\omega_1 - 18v_2^2\omega_3\omega_4\omega_2 + 9\omega_4\omega_1\omega_2 + 6\omega_3\omega_4 cs^2\omega_2 + 6v_3^2\omega_3\omega_4\omega_1\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 + 12\omega_3\omega_4\omega_1 cs^2 - 9v_3^2\omega_3\omega_1\omega_2 + 18v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_1 v_3}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(1)}_{\mathrm{D}_y\mathrm{D}_2^3 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2\partial x_3^3}$:

$C^{(1),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_2^3 v_3} = 0$

$C^{(1),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_2^3 v_3} = (-3\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 cs^2\omega_5 + 24\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}cs^2\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 - 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + 12\omega_{18}^2\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8 cs^2 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 9\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 - 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8 + 12\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11} + 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_5 + 12\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2\omega_6 v_3^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5 - 12\omega_{18}\omega_6 v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2 cs^2 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 + 8\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 - 12\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} - 8\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11} cs^2\omega_5 - 12\omega_{18} v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 - 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 9\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 - 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 24\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11} + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8)\frac{\rho v_1 v_2}{4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5}$

$C^{(1),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_2^3 v_3} =$
$(12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 cs^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}^2 cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 8\omega_{18} cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 24\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 + 4\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 + 4\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 3\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}^2\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2 cs^2\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11} - 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 9\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}\omega_8 - 2\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11} + 4\omega_{18}\omega_6\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 3\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2 cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8 - 4\omega_{18}^2 cs^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_5 + 12\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2\omega_6 v_3^2\omega_{20}\omega_{11}^2\omega_8 - 12\omega_{18}\omega_6 v_3^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18} cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2 cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 2\omega_{18} cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 cs^2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 4cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 cs^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 -$

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$$4\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8 - 12\omega_{18}v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 12\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 -$$
$$4\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 3\omega_{18}^2cs^2\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{11}^2 - 2\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 - 2\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18}cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 -$$
$$4\omega_{18}^2cs^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11} - 2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 9\omega_{18}^2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2cs^2\omega_6^2\omega_{20}\omega_{11}^2\omega_8 - 8\omega_{18}^2cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 24\omega_{18}^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6v_3^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 -$$
$$12\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11} + 4\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8)\frac{\rho v_1 v_2}{4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_y\text{D}_z^3 v_3} = 0$$

$$C^{(1),\text{CLBM2}}_{\text{D}_y\text{D}_z^3 v_3} = 0$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_y\text{D}_z^3 v_3} = 0$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_y\text{D}_z^3 v_3} = (v_2^2\omega_1 - v_2^2\omega_2 - \omega_1 + 3\omega_1 cs^2 - 3cs^2\omega_2 + \omega_2)\frac{\rho v_1 v_2}{36\omega_1\omega_2}$$

coefficient $C^{(1)}_{\text{D}_z^4\rho}$ at $\frac{\partial^4\rho}{\partial x_3^4}$:

$$C^{(1),\text{SRT}}_{\text{D}_z^4\rho} = (6v_3^4 - 3v_3^4\omega - 12v_3^2cs^2\omega + cs^2\omega + 24v_3^2cs^2 + 2cs^4 + 3v_3^2\omega - 2cs^2 - 6v_3^2 - cs^4\omega)\frac{v_1}{24\omega}$$

$$C^{(1),\text{MRT1}}_{\text{D}_z^4\rho} = (\omega_{18}^2\omega_6^2\omega_{11}^2cs^2 + 24\omega_{18}^2\omega_6cs^4 + 24\omega_6v_3^2\omega_{11}^2 - 216\omega_{18}v_3^2\omega_{11}^2cs^2 - 24\omega_6\omega_{11}^2cs^4 + 36\omega_{18}^2\omega_6^2v_3^4\omega_{11} - 12\omega_6^2\omega_{11}^2cs^2 -$$
$$144\omega_{18}^2\omega_6^2v_3^2cs^2 - 144\omega_{18}\omega_6v_3^2\omega_{11}cs^2 - 72\omega_{18}^2\omega_6v_3^2 + 48\omega_{18}^2\omega_6\omega_{11}cs^2 + 96\omega_{18}\omega_6v_3^4\omega_{11} - 36\omega_{18}^2\omega_6^2v_3^2 - 432\omega_{18}^2\omega_6v_3^2\omega_{11}cs^2 + 12\omega_{18}^2\omega_6^2cs^2 -$$
$$24\omega_{18}\omega_6^2v_3^2\omega_{11} + 14\omega_{18}^2\omega_6^2\omega_{11}cs^4 + 30\omega_{18}\omega_6^2v_3^2\omega_{11}^2 - 12\omega_{18}\omega_6^2\omega_{11}^2cs^4 + 24\omega_{18}^2\omega_{11}cs^4 - 12\omega_{18}^2\omega_6^2v_3^2\omega_{11}^2cs^2 - 48\omega_{18}\omega_6\omega_{11}^2cs^2 -$$
$$48\omega_{18}\omega_6v_3^4\omega_{11} - 126\omega_{18}\omega_6^2v_3^2\omega_{11}^2cs^2 + 96\omega_{18}^2\omega_6v_3^2\omega_{11} + 48\omega_{18}^2v_3^4\omega_{11} + 12\omega_6^2v_3^4\omega_{11}^2 + 48\omega_{18}v_3^2\omega_{11}^2 + 216\omega_{18}^2v_3^2\omega_{11}cs^2 + 72\omega_6^2v_3^2\omega_{11}^2cs^2 -$$
$$24\omega_{18}\omega_{11}^2cs^4 - 3\omega_{18}^2\omega_6^2v_3^4\omega_{11} - 24\omega_{18}^2\omega_{11}cs^2 + 72\omega_{18}\omega_6^2v_3^2\omega_{11}cs^2 + 48\omega_{18}\omega_6\omega_{11}^2cs^4 - 96\omega_{18}\omega_6v_3^2\omega_{11}^2 + 24\omega_{18}\omega_6v_3^4\omega_{11} + 12\omega_{18}\omega_6^2\omega_{11}^2cs^2 -$$
$$24\omega_6v_3^4\omega_{11}^2 + 24\omega_{18}^2\omega_{11}^2cs^2 - 36\omega_{18}^2\omega_6^2v_3^2\omega_{11} + 150\omega_{18}^2\omega_6^2v_3^2\omega_{11}cs^2 - 96\omega_{18}\omega_6v_3^4\omega_{11} + 12\omega_6^2\omega_{11}^2cs^4 - 12\omega_6^2v_3^2\omega_{11}^2 - 48\omega_{18}^2v_3^2\omega_{11} +$$
$$72\omega_{18}^2\omega_6v_3^2 - \omega_{18}^2\omega_6^2\omega_{11}^2cs^4 + 288\omega_{18}^2\omega_6v_3^2cs^2 - 24\omega_{18}^2\omega_6cs^2 - 48\omega_{18}^2v_3^4\omega_{11}^2 + 24\omega_6\omega_{11}^2cs^2 + 3\omega_{18}^2\omega_6^2v_3^2\omega_{11}^2 - 144\omega_6v_3^2\omega_{11}^2cs^2 - 12\omega_{18}^2\omega_6^2cs^4 -$$
$$30\omega_{18}\omega_6^2v_3^2\omega_{11} - 14\omega_{18}^2\omega_6^2\omega_{11}cs^2 + 432\omega_{18}\omega_6v_3^2\omega_{11}^2cs^2 - 48\omega_{18}^2\omega_6\omega_{11}cs^4 + 48\omega_{18}\omega_6v_3^2\omega_{11} + 36\omega_{18}^2\omega_6^2v_3^2)\frac{v_1}{24\omega_{18}^2\omega_6^2\omega_{11}^2}$$

$$C^{(1),\text{MRT2}}_{\text{D}_z^4\rho} = (24\omega_6v_3^2\omega_{11}^2 + 72\omega_{18}cs^2\omega_6^2v_3^2\omega_{11} - 24cs^4\omega_6\omega_{11}^2 + 36\omega_{18}^2\omega_6^2v_3^4\omega_{11} + 24\omega_{18}^2cs^4\omega_6 - 72\omega_{18}^2\omega_6v_3^2 + 12\omega_{18}cs^2\omega_6^2\omega_{11}^2 +$$
$$96\omega_{18}\omega_6v_3^4\omega_{11} + 48\omega_{18}^2cs^2\omega_6\omega_{11} - 36\omega_{18}^2\omega_6^2v_3^4 + 24\omega_{18}cs^2\omega_{11}^2 + 24\omega_{18}^2cs^4\omega_{11} - 24\omega_{18}\omega_6^2v_3^2\omega_{11} + 150\omega_{18}^2cs^2\omega_6^2v_3^2\omega_{11} + 30\omega_{18}\omega_6^2v_3^2\omega_{11}^2 -$$
$$12\omega_{18}^2cs^2\omega_6^2v_3^2\omega_{11} + 24cs^2\omega_6v_3^2\omega_{11}^2 + 288\omega_{18}^2cs^2\omega_6v_3^2 - 48\omega_{18}\omega_6v_3^4\omega_{11} + 72cs^2\omega_6^2v_3^2\omega_{11}^2 - 12\omega_{18}cs^4\omega_6^2\omega_{11} + 96\omega_{18}^2\omega_6v_3^2\omega_{11} -$$
$$216\omega_{18}^2cs^2v_3^2\omega_{11} - 12\omega_{18}^2cs^4\omega_6^2 + 48\omega_{18}^2v_3^4\omega_{11} + 12\omega_6^2v_3^4\omega_{11}^2 - 48\omega_{18}^2cs^4\omega_6\omega_{11} + 48\omega_{18}v_3^2\omega_{11}^2 - 126\omega_{18}cs^2\omega_6^2v_3^2\omega_{11} - 3\omega_{18}^2\omega_6^2v_3^4\omega_{11} +$$
$$216\omega_{18}^2cs^2v_3^2\omega_{11} + 48\omega_{18}cs^4\omega_6\omega_{11}^2 + 14\omega_{18}^2cs^4\omega_6\omega_{11} - 96\omega_{18}\omega_6v_3^2\omega_{11}^2 - 24\omega_{18}cs^4\omega_{11} - 24\omega_{18}^2cs^2\omega_{11} + 24\omega_{18}\omega_6v_3^4\omega_{11} - 24\omega_6v_3^4\omega_{11}^2 -$$
$$12cs^2\omega_6^2\omega_{11}^2 - 144cs^2\omega_6v_3^2\omega_{11}^2 - 36\omega_{18}^2\omega_6^2v_3^2\omega_{11} - 144\omega_{18}^2cs^2\omega_6^2v_3^2 + 432\omega_{18}cs^2\omega_6v_3^2\omega_{11}^2 - 24\omega_{18}^2cs^2\omega_6 + \omega_{18}^2cs^2\omega_6^2\omega_{11}^2 - 96\omega_{18}^2\omega_6v_3^4\omega_{11} -$$
$$48\omega_{18}cs^2\omega_6\omega_{11}^2 - 144\omega_{18}cs^2\omega_6v_3^2\omega_{11} - 12\omega_6^2v_3^2\omega_{11}^2 - 48\omega_{18}^2v_3^2\omega_{11} + 12\omega_{18}^2cs^2\omega_6^2 - 14\omega_{18}^2cs^2\omega_6^2\omega_{11} + 72\omega_{18}^2\omega_6v_3^4 - 48\omega_{18}v_3^4\omega_{11}^2 +$$
$$3\omega_{18}^2\omega_6^2v_3^2\omega_{11}^2 - 30\omega_{18}\omega_6^2v_3^4\omega_{11} + 12cs^4\omega_6^2\omega_{11}^2 - 432\omega_{18}^2cs^2\omega_6v_3^2\omega_{11} + 48\omega_{18}\omega_6v_3^2\omega_{11} + 36\omega_{18}^2\omega_6^2v_3^2 - \omega_{18}^2cs^4\omega_6^2\omega_{11}^2)\frac{v_1}{24\omega_{18}^2\omega_6^2\omega_{11}^2}$$

$$C^{(1),\text{CLBM1}}_{\text{D}_z^4\rho} = (6v_3^4 - 12v_3^2cs^2\omega_{11} + 3v_3^2\omega_{11} - 2cs^2 + cs^2\omega_{11} + 2cs^4 + 24v_3^2cs^2 - 6v_3^2 - 3v_3^4\omega_{11} - cs^4\omega_{11})\frac{v_1}{24\omega_{11}}$$

$$C^{(1),\text{CLBM2}}_{\text{D}_z^4\rho} = (6v_3^4 - 12cs^2v_3^2\omega_{11} + 3v_3^2\omega_{11} + 2cs^4 - cs^4\omega_{11} - 2cs^2 + 24cs^2v_3^2 + cs^2\omega_{11} - 6v_3^2 - 3v_3^4\omega_{11})\frac{v_1}{24\omega_{11}}$$

$$C^{(1),\text{CuLBM1}}_{\text{D}_z^4\rho} = (6v_3^4 + \omega_6cs^2 - 3\omega_6v_3^4 - 2cs^2 + 3\omega_6v_3^2 + 24v_3^2cs^2 - 12\omega_6v_3^2cs^2 + 2cs^4 - 6v_3^2 - \omega_6cs^4)\frac{v_1}{24\omega_6}$$

$$C^{(1),\text{CuLBM2}}_{\text{D}_z^4\rho} = (-3\omega_1cs^4\omega_2 + 9v_3^2\omega_1\omega_2 + 2\omega_1cs^4 + 12v_3^4\omega_2 + 4cs^4\omega_2 - 36v_3^2\omega_1cs^2\omega_2 - 9v_3^4\omega_1\omega_2 - 6v_3^2\omega_1 + 48v_3^2cs^2\omega_2 + 3\omega_1cs^2\omega_2 -$$
$$2\omega_1cs^2 - 4cs^2\omega_2 - 12v_3^2\omega_2 + 6v_3^4\omega_1 + 24v_3^2\omega_1cs^2)\frac{v_1}{72\omega_1\omega_2}$$

coefficient $C^{(1)}_{\text{D}_z^4 v_1}$ at $\frac{\partial^4 v_1}{\partial x_3^4}$:

$$C^{(1),\text{SRT}}_{\text{D}_z^4 v_1} = (cs^2\omega^3 - 72v_3^4 - 14cs^2\omega^2 + 108v_3^4\omega + 216v_3^2cs^2\omega - 42v_3^4\omega^2 - 84v_3^2cs^2\omega^2 + 36cs^2\omega - 144v_3^2cs^2 + 6v_3^2cs^2\omega^3 + 3v_3^4\omega^3 + 48cs^4 +$$
$$30cs^4\omega^2 - 108v_3^2\omega - 24cs^2 - 3cs^4\omega^3 - 3v_3^2\omega^3 + 72v_3^2 + 42v_3^2\omega^2 - 72cs^4\omega)\frac{\rho}{24\omega^3}$$

$$C^{(1),\text{MRT1}}_{\text{D}_z^4 v_1} = (-48\omega_{18}\omega_6v_3^4 - 48\omega_{18}^2\omega_6cs^4 - 24\omega_6^2v_3^2cs^2 - 72\omega_{18}^2\omega_6^2v_3^2cs^2 - 24\omega_{18}^2\omega_6v_3^2 - 24\omega_{18}\omega_6cs^2 - 24\omega_{18}\omega_6^2cs^4 - 12\omega_6^3v_3^2 - 24\omega_{18}^2\omega_6^2v_3^4 -$$
$$12\omega_{18}\omega_6^3v_3^2cs^2 - 8\omega_{18}^2\omega_6^2cs^2 - 72\omega_{18}\omega_6v_3^2 - 24\omega_{18}\omega_6v_3^2cs^2 + 18\omega_{18}\omega_6^3v_3^2 + \omega_{18}^2\omega_6^3cs^2 + 3\omega_{18}^2\omega_6^3v_3^4 + 24\omega_6^2v_3^2 + 6\omega_{18}\omega_6^3cs^4 - 96\omega_{18}^2v_3^2cs^2 +$$
$$48\omega_{18}\omega_6^2v_3^2cs^2 - 24\omega_6^2v_3^4 - 3\omega_{18}^2\omega_6^3v_3^2 - 6\omega_{18}\omega_6^3cs^2 + 6\omega_{18}^2\omega_6^3v_3^2cs^2 - 18\omega_{18}\omega_6^3v_3^4 - 3\omega_{18}^2\omega_6^3cs^4 + 12\omega_6^3v_3^2cs^2 + 24\omega_{18}^2\omega_6v_3^4 + 24\omega_{18}\omega_6cs^4 +$$
$$48\omega_{18}\omega_6v_3^2 + 156\omega_{18}^2\omega_6v_3^2cs^2 + 12\omega_{18}^2\omega_6cs^2 + 24\omega_{18}^2cs^4 + 24\omega_{18}^2\omega_6^2cs^4 + 72\omega_{18}\omega_6^2v_3^4 + 24\omega_{18}\omega_6^2cs^2 + 24\omega_{18}^2\omega_6^2v_3^4 + 12\omega_6^3v_3^4)\frac{\rho}{24\omega_{18}^2\omega_6^3}$$

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$$C_{\mathrm{D}_z^4 v_1}^{(1),\mathrm{MRT2}} = (-48\omega_{18}\omega_6 v_3^4 + 24\omega_{18}cs^2\omega_6^2 - 48\omega_{18}^2 cs^4\omega_6 - 24\omega_{18}^2\omega_6 v_3^2 + 48\omega_{18}cs^2\omega_6^2 v_3 - 6\omega_{18}cs^2\omega_6^3 - 12\omega_6^3 v_3^3 - 24\omega_{18}^2\omega_6 v_3^4 + 24\omega_{18}^2 cs^4 -$$
$$72\omega_{18}\omega_6^2 v_3^3 - 3\omega_{18}^2 cs^4\omega_6^3 + 156\omega_{18}^2 cs^2\omega_6 v_3^3 + 24\omega_{18}^2 cs^4\omega_6^2 + 18\omega_{18}\omega_6^3 v_3^3 + 3\omega_{18}^2\omega_6^3 v_3^4 + 24\omega_6^2 v_3^3 - 12\omega_{18}cs^2\omega_6^3 v_3^3 - 24\omega_{18}cs^2\omega_6 + 6\omega_{18}cs^4\omega_6^3 -$$
$$24\omega_6^2 v_3^4 - 3\omega_{18}^2\omega_6^3 v_3^2 - 24cs^2\omega_6^2 v_3^3 - 24\omega_{18}cs^4\omega_6^2 - 72\omega_{18}^2 cs^2\omega_6^2 v_3^3 + 12\omega_{18}^2 cs^2\omega_6 - 18\omega_{18}\omega_6^3 v_3^4 - 8\omega_{18}^2 cs^2\omega_6^2 + 24\omega_{18}^2\omega_6 v_3^3 - 24\omega_{18}cs^2\omega_6 v_3^3 +$$
$$48\omega_{18}\omega_6 v_3^3 + 24\omega_{18}cs^4\omega_6 + \omega_{18}^2 cs^2\omega_6^3 + 72\omega_{18}\omega_6^2 v_3^3 + 6\omega_{18}^2 cs^2\omega_6^3 v_3^2 - 96\omega_{18}^2 cs^2 v_3^3 + 24\omega_{18}^2\omega_6^2 v_3^3 + 12\omega_6^3 v_3^4 + 12cs^2\omega_6^3 v_3^2)\frac{\rho}{24\omega_{18}^2\omega_6^3}$$

$$C_{\mathrm{D}_z^4 v_1}^{(1),\mathrm{CLBM1}} = (72\omega_{18}\omega_6 v_3^2 cs^2 + \omega_{18}^2\omega_6^3 cs^2 - 36\omega_6^3 v_3^2 - 12\omega_{18}^2\omega_6^2 v_3^4 - 72\omega_{18}\omega_6^2 v_3^2 + 6\omega_{18}\omega_6^3 cs^4 - 48\omega_{18}^2\omega_6 cs^4 - 216\omega_6^2 v_3^2 cs^2 -$$
$$12\omega_{18}^2\omega_6^2 v_3^2 cs^2 - 24\omega_{18}\omega_6 cs^2 - 24\omega_{18}\omega_6^2 cs^4 + 30\omega_{18}\omega_6^3 v_3^2 + 3\omega_{18}^2\omega_6^3 v_3^4 + 72\omega_6^2 v_3^2 - 8\omega_{18}^2\omega_6^2 cs^2 - 72\omega_{18}\omega_6^3 v_3^2 cs^2 + 24\omega_{18}\omega_6 cs^4 + 24\omega_{18}^2 cs^4 -$$
$$36\omega_{18}^2\omega_6 v_3^2 cs^2 + 12\omega_{18}^2\omega_6 cs^2 + 24\omega_{18}^2\omega_6^2 cs^4 - 72\omega_6^2 v_3^4 - 3\omega_{18}^2\omega_6^3 v_3^2 - 30\omega_{18}\omega_6^3 v_3^4 + 24\omega_{18}\omega_6^2 cs^2 + 144\omega_{18}\omega_6^2 v_3^2 cs^2 - 6\omega_{18}\omega_6^3 cs^2 +$$
$$72\omega_{18}\omega_6^2 v_3^4 + 6\omega_{18}^2\omega_6^3 v_3^2 cs^2 + 12\omega_{18}^2\omega_6^2 v_3^2 + 36\omega_6^3 v_3^4 + 108\omega_6^3 v_3^2 cs^2 - 3\omega_{18}^2\omega_6^3 cs^4)\frac{\rho}{24\omega_{18}^2\omega_6^3}$$

$$C_{\mathrm{D}_z^4 v_1}^{(1),\mathrm{CLBM2}} = (-216cs^2\omega_6^2 v_3^2 + 24\omega_{18}cs^4\omega_6 - 12\omega_{18}^2 cs^2\omega_6^2 v_3^2 - 8\omega_{18}^2 cs^2\omega_6^2 - 36\omega_6^3 v_3^2 - 12\omega_{18}^2\omega_6^2 v_3^4 - 72\omega_{18}\omega_6^2 v_3^2 + \omega_{18}^2 cs^2\omega_6^3 +$$
$$6\omega_{18}^2 cs^2\omega_6^3 v_3^2 + 6\omega_{18}cs^4\omega_6^3 + 24\omega_{18}^2 cs^4 + 108cs^2\omega_6^3 v_3^2 + 12\omega_{18}^2 cs^2\omega_6 + 30\omega_{18}\omega_6^3 v_3^2 + 72\omega_{18}cs^2\omega_6 v_3^2 + 3\omega_{18}^2\omega_6^3 v_3^4 + 72\omega_6^2 v_3^2 - 24\omega_{18}cs^4\omega_6^2 +$$
$$144\omega_{18}cs^2\omega_6^2 v_3^2 - 3\omega_{18}^2 cs^4\omega_6^3 - 72\omega_6^2 v_3^4 - 3\omega_{18}^2\omega_6^3 v_3^2 - 24\omega_{18}cs^2\omega_6 + 24\omega_{18}^2 cs^4\omega_6^2 - 30\omega_{18}\omega_6^3 v_3^4 - 48\omega_{18}^2 cs^4\omega_6 - 72\omega_{18}cs^2\omega_6^3 v_3^2 +$$
$$24\omega_{18}cs^2\omega_6^2 + 72\omega_{18}\omega_6^2 v_3^4 - 36\omega_{18}^2 cs^2\omega_6 v_3^2 - 6\omega_{18}cs^2\omega_6^3 + 12\omega_{18}^2\omega_6^2 v_3^2 + 36\omega_6^3 v_3^4)\frac{\rho}{24\omega_{18}^2\omega_6^3}$$

$$C_{\mathrm{D}_z^4 v_1}^{(1),\mathrm{CuLBM1}} = (-72v_3^4\omega_2^2 + 6cs^4\omega_8\omega_2^3 + 12v_3^2\omega_8^2\omega_2^2 - 24cs^2\omega_8\omega_2 - 3v_3^2\omega_8^2\omega_2^3 - 24cs^4\omega_8\omega_2^2 + 36v_3^4\omega_2^3 - 36v_3^2 cs^2\omega_8\omega_2 + 24cs^4\omega_8^2 -$$
$$12v_3^2 cs^2\omega_8\omega_2^2 - 12v_3^4\omega_8\omega_2^2 - 6cs^2\omega_8\omega_2^3 + 24cs^4\omega_8\omega_2 + 24cs^2\omega_8\omega_2 + 6v_3^2 cs^2\omega_8\omega_2^3 + 3v_3^4\omega_8^2\omega_2^3 - 30v_3^4\omega_8\omega_2^3 - 216v_3^2 cs^2\omega_2^2 - 72v_3^2 cs^2\omega_8\omega_2^3 -$$
$$8cs^2\omega_8^2\omega_2^2 - 36v_3^2\omega_2^3 + 72v_3^2\omega_2^2 + cs^2\omega_8^3\omega_2^3 + 72v_3^4\omega_8\omega_2^2 + 144v_3^2 cs^2\omega_8\omega_2^2 + 108v_3^2 cs^2\omega_2^2 - 48cs^4\omega_8^2\omega_2 + 24cs^4\omega_8^2\omega_2^2 + 30v_3^2\omega_8\omega_2^2 +$$
$$72v_3^2 cs^2\omega_8\omega_2 - 72v_3^2\omega_8\omega_2^2 - 3cs^4\omega_8^2\omega_2^3 + 12cs^2\omega_8^2\omega_2)\frac{\rho}{24\omega_8^2\omega_2^3}$$

$$C_{\mathrm{D}_z^4 v_1}^{(1),\mathrm{CuLBM2}} = (-54v_3^2\omega_3^2\omega_1^2 cs^2 - 36v_3^2\omega_3^2\omega_4\omega_1^2 + 15v_3^2\omega_3\omega_4^2\omega_1^3 - 12v_3^2\omega_4^2\omega_1 cs^2 - 36v_3^2\omega_3^2\omega_4^2\omega_1 cs^2 + 72v_3^2\omega_3^2\omega_4\omega_1^2 cs^2 + \omega_3^2\omega_4^2\omega_1^3 cs^2 -$$
$$36v_3^2\omega_3\omega_4^2\omega_1^3 cs^2 - 36v_3^2\omega_3\omega_4^2\omega_1^2 + 15v_3^2\omega_3\omega_4\omega_1^3 + 3\omega_3\omega_4^2\omega_1^3 cs^4 - 12\omega_3\omega_4^2\omega_1^2 cs^4 + 3v_3^4\omega_3^2\omega_4^2\omega_1^3 - 48\omega_3^2\omega_4^2\omega_1 cs^4 - 36v_3^4\omega_3\omega_4\omega_1^2 -$$
$$12\omega_3^2\omega_4\omega_1 cs^2 + 27v_3^2\omega_3^3\omega_1^2 cs^2 + 3\omega_3\omega_4^2\omega_1^3 cs^4 + 18v_3^4\omega_3\omega_4\omega_1^3 - 12v_3^4\omega_3^2\omega_4^2\omega_1^2 - 12\omega_3^2\omega_4\omega_1 cs^4 + 72v_3^2\omega_3\omega_4^2\omega_1^2 cs^2 - 8\omega_3^2\omega_4^2\omega_1^2 cs^2 -$$
$$36v_3^2\omega_3^2\omega_4\omega_1^3 cs^2 + 12\omega_3^2\omega_4\omega_1 cs^4 + 36v_3^4\omega_3^2\omega_4\omega_1 - 15v_3^4\omega_3\omega_4^2\omega_1^3 + 18v_3^2\omega_3^2\omega_1^2 + 12\omega_3^2\omega_4^2\omega_1 cs^2 + 36v_3^2\omega_3\omega_4^2\omega_1 cs^2 - 54v_3^2\omega_3^2\omega_4^2\omega_1^2 cs^2 - 18v_3^4\omega_3^2\omega_1^2 +$$
$$36v_3^4\omega_3\omega_4^2\omega_1^2 + 24\omega_3^2\omega_4^2\omega_1^2 cs^4 - 15v_3^4\omega_3\omega_4\omega_1^3 - 3\omega_3\omega_4^2\omega_1^3 cs^2 + 6v_3^2\omega_3^2\omega_4^2\omega_1^3 cs^2 + 9v_3^4\omega_3^2\omega_1^3 - 108v_3^2\omega_3\omega_4\omega_1^2 cs^2 - 9v_3^2\omega_3^3\omega_1^3 + 12v_3^2\omega_3\omega_4\omega_1^2 cs^2 +$$
$$27v_3^2\omega_3\omega_4^2\omega_1^3 cs^2 + 36v_3^2\omega_3^2\omega_4\omega_1 cs^2 - 3v_3^2\omega_3^2\omega_4^2\omega_1^3 + 24\omega_3^2\omega_4^2 cs^4 + 36v_3^2\omega_3\omega_4\omega_1^2 - 18v_3^4\omega_3^2\omega_1^2 + 12\omega_3\omega_4^2\omega_1 cs^4 + 18v_3^2\omega_3^2\omega_1^2 - 18v_3^2\omega_3\omega_4\omega_1^3 -$$
$$3\omega_3^2\omega_4\omega_1^3 cs^2 + 12v_3^2\omega_3^2\omega_4^2\omega_1^2 + 54v_3^2\omega_3\omega_4\omega_1^3 cs^2 - 12v_3^2\omega_3^2\omega_4^2\omega_1^2 cs^2 + 12\omega_3\omega_4^2\omega_1^2 cs^2 - 9v_3^2\omega_4^2\omega_1^3 - 3\omega_3\omega_4^2\omega_1^3 cs^4 + 9v_3^4\omega_3^2\omega_1^3)\frac{\rho}{24\omega_3^2\omega_4^2\omega_1^3}$$

coefficient $C_{\mathrm{D}_z^4 v_3}^{(1)}$ at $\frac{\partial^4 v_3}{\partial x_3^4}$:

$$C_{\mathrm{D}_z^4 v_3}^{(1),\mathrm{SRT}} = (-4 - 3cs^2\omega - 5v_3^2\omega + 6cs^2 + 10v_3^2 + 2\omega)\frac{\rho v_1 v_3}{12\omega}$$

$$C_{\mathrm{D}_z^4 v_3}^{(1),\mathrm{MRT1}} = (-3\omega_{18}^2\omega_6^2\omega_{11}^2 cs^2 - 48\omega_6 v_3^2\omega_{11}^2 + 24\omega_6^2\omega_{11}^2 cs^2 + 120\omega_{18}^2\omega_6 v_3^2 + 36\omega_{18}\omega_{11}^2 - 120\omega_{18}^2\omega_6\omega_{11}cs^2 - 36\omega_{18}^2\omega_6^2 cs^2 + 36\omega_{18}\omega_6^2 v_3^2\omega_{11} +$$
$$21\omega_{18}^2\omega_6^2\omega_{11}^2 - 51\omega_{18}\omega_6^2 v_3^2\omega_{11}^2 - 12\omega_{18}\omega_6^2\omega_{11} + 120\omega_{18}\omega_6\omega_{11}^2 cs^2 + 72\omega_{18}^2\omega_6\omega_{11} - 168\omega_{18}^2\omega_6 v_3^2\omega_{11} - 84\omega_{18}v_3^2\omega_{11}^2 - 12\omega_6^2\omega_{11}^2 +$$
$$12\omega_{18}\omega_6^2\omega_{11}cs^2 + 60\omega_{18}^2\omega_{11}cs^2 - 25\omega_{18}^2\omega_6^2\omega_{11} + 168\omega_{18}\omega_6 v_3^2\omega_{11} + 24\omega_6^2\omega_{11} - 33\omega_{18}\omega_6^2\omega_{11}^2 cs^2 - 48\omega_{18}^2\omega_6 - 60\omega_{18}\omega_{11}^2 cs^2 + 24\omega_{18}\omega_6\omega_{11} +$$
$$61\omega_{18}^2\omega_6^2 v_3^2\omega_{11} - 24\omega_{18}\omega_6\omega_{11}cs^2 - 36\omega_{18}^2\omega_{11} + 24\omega_6^2 v_3^2\omega_{11}^2 + 84\omega_{18}^2 v_3^2\omega_{11} + 72\omega_{18}^2\omega_6 cs^2 - 48\omega_6\omega_{11}^2 cs^2 - 5\omega_{18}^2\omega_6^2 v_3^2\omega_{11}^2 - 72\omega_{18}\omega_6\omega_{11}^2 +$$
$$39\omega_{18}^2\omega_6\omega_{11}cs^2 + 24\omega_{18}^2\omega_6^2 + 2\omega_{18}^2\omega_6^2\omega_{11}^2 - 72\omega_{18}\omega_6 v_3^2\omega_{11} - 60\omega_{18}^2\omega_6^2 v_3^2)\frac{\rho v_1 v_3}{12\omega_{18}^2\omega_6^2\omega_{11}^2}$$

$$C_{\mathrm{D}_z^4 v_3}^{(1),\mathrm{MRT2}} = (-48\omega_6 v_3^2\omega_{11}^2 + 120\omega_{18}\omega_6 v_3^2 + 36\omega_{18}\omega_{11}^2 - 33\omega_{18}cs^2\omega_6^2\omega_{11}^2 - 120\omega_{18}^2 cs^2\omega_6\omega_{11} - 60\omega_{18}cs^2\omega_{11}^2 + 36\omega_{18}\omega_6^2 v_3^2\omega_{11} +$$
$$21\omega_{18}^2\omega_6^2\omega_{11}^2 - 51\omega_{18}\omega_6^2 v_3^2\omega_{11} - 12\omega_{18}\omega_6^2\omega_{11} - 48cs^2\omega_6\omega_{11}^2 + 12\omega_{18}cs^2\omega_6^2\omega_{11} + 72\omega_{18}^2\omega_6\omega_{11} - 168\omega_{18}^2\omega_6 v_3^2\omega_{11} - 84\omega_{18}v_3^2\omega_{11}^2 - 12\omega_6^2\omega_{11}^2 -$$
$$25\omega_{18}^2\omega_6^2\omega_{11} + 168\omega_{18}\omega_6 v_3^2\omega_{11} + 60\omega_{18}cs^2\omega_{11} + 24\omega_6^2\omega_{11} - 48\omega_{18}^2\omega_6 + 24cs^2\omega_6^2\omega_{11} + 24\omega_{18}\omega_6\omega_{11} + 61\omega_{18}^2\omega_6^2 v_3^2\omega_{11} - 24\omega_{18}cs^2\omega_6\omega_{11} -$$
$$36\omega_{18}^2\omega_{11} + 72\omega_{18}^2 cs^2\omega_6 - 3\omega_{18}^2 cs^2\omega_6^2\omega_{11} + 120\omega_{18}cs^2\omega_6\omega_{11} + 24\omega_6^2 v_3^2\omega_{11} + 84\omega_{18}^2 v_3^2\omega_{11} - 36\omega_{18}^2 cs^2\omega_6 + 39\omega_{18}^2 cs^2\omega_6\omega_{11} - 5\omega_{18}^2\omega_6^2 v_3^2\omega_{11} -$$
$$72\omega_{18}\omega_6\omega_{11}^2 + 24\omega_{18}^2\omega_6^2 + 2\omega_{18}^2\omega_6^2\omega_{11}^2 - 72\omega_{18}\omega_6 v_3^2\omega_{11} - 60\omega_{18}^2\omega_6^2 v_3^2)\frac{\rho v_1 v_3}{12\omega_{18}^2\omega_6^2\omega_{11}^2}$$

$$C_{\mathrm{D}_z^4 v_3}^{(1),\mathrm{CLBM1}} = (-4 - 5v_3^2\omega_{11} + 6cs^2 - 3cs^2\omega_{11} + 2\omega_{11} + 10v_3^2)\frac{\rho v_1 v_3}{12\omega_{11}}$$

$$C_{\mathrm{D}_z^4 v_3}^{(1),\mathrm{CLBM2}} = (-4 - 5v_3^2\omega_{11} + 6cs^2 + 2\omega_{11} - 3cs^2\omega_{11} + 10v_3^2)\frac{\rho v_1 v_3}{12\omega_{11}}$$

$$C_{\mathrm{D}_z^4 v_3}^{(1),\mathrm{CuLBM1}} = (-4 + 2\omega_6 - 3\omega_6 cs^2 + 6cs^2 - 5\omega_6 v_3^2 + 10v_3^2)\frac{\rho v_1 v_3}{12\omega_6}$$

$$C_{\mathrm{D}_z^4 v_3}^{(1),\mathrm{CuLBM2}} = (-15v_3^2\omega_1\omega_2 + 6\omega_1\omega_2 + 10v_3^2\omega_1 - 4\omega_1 - 9\omega_1 cs^2\omega_2 + 6\omega_1 cs^2 + 12cs^2\omega_2 + 20v_3^2\omega_2 - 8\omega_2)\frac{\rho v_1 v_3}{36\omega_1\omega_2}$$

3.3 Conservation of momentum: ρv_2

$$v_2\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_2}{\partial t} + v_1v_2\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \rho v_2\frac{\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \rho v_1\frac{\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_1} + C^{(2)}_{D_y\rho}\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + 2\rho v_2\frac{\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + v_2v_3\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} + \rho v_3\frac{\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_3} +$$

$$\rho v_2\frac{\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + C^{(2)}_{D_x\rho,D_x v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_1} + C^{(2)}_{D_x\rho,D_y v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_2} + C^{(2)}_{D_x v_1,D_y v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial v_1}{\partial x_1}\frac{\partial v_1}{\partial x_2} + C^{(2)}_{D_y\rho,D_x v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_1}{\partial x_1} +$$

$$C^{(2)}_{D_y\rho,D_y v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_2} + C^{(2)}_{D_y v_2,D_y v_2}\frac{\delta_l^2}{\delta_t}\left(\frac{\partial v_2}{\partial x_2}\right)^2 + C^{(2)}_{D_y\rho,D_z v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_3} + C^{(2)}_{D_y v_3,D_z v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial v_3}{\partial x_2}\frac{\partial v_3}{\partial x_3} +$$

$$C^{(2)}_{D_z\rho,D_y v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_2} + C^{(2)}_{D_z\rho,D_z v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_2}{\partial x_3} + C^{(2)}_{D_x^2 v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_2}{\partial x_1^2} + C^{(2)}_{D_x D_y\rho}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_2} + C^{(2)}_{D_x D_y v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_1}{\partial x_1\partial x_2} +$$

$$C^{(2)}_{D_y^2\rho}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_2^2} + C^{(2)}_{D_y^2 v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_2}{\partial x_2^2} + C^{(2)}_{D_y D_z\rho}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_2\partial x_3} + C^{(2)}_{D_y D_z v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_3}{\partial x_2\partial x_3} + C^{(2)}_{D_z^2 v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_2}{\partial x_3^2} + C^{(2)}_{D_x^3\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^3} +$$

$$C^{(2)}_{D_x^3 v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C^{(2)}_{D_x^3 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1^3} + C^{(2)}_{D_x^2 D_y\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_2} + C^{(2)}_{D_x^2 D_y v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_2} + C^{(2)}_{D_x^2 D_y v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} +$$

$$C^{(2)}_{D_x D_y^2\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2^2} + C^{(2)}_{D_x D_y^2 v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C^{(2)}_{D_x D_y^2 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2^2} + C^{(2)}_{D_y^3\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2^3} + C^{(2)}_{D_y^3 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} +$$

$$C^{(2)}_{D_x^2 D_z v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_3} + C^{(2)}_{D_x^2 D_z v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} + C^{(2)}_{D_x D_y D_z\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2\partial x_3} + C^{(2)}_{D_x D_y D_z v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2\partial x_3} +$$

$$C^{(2)}_{D_x D_y D_z v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_2\partial x_3} + C^{(2)}_{D_y^2 D_z\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2^2\partial x_3} + C^{(2)}_{D_y^2 D_z v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2^2\partial x_3} + C^{(2)}_{D_y^2 D_z v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C^{(2)}_{D_x D_z^2 v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} +$$

$$C^{(2)}_{D_x D_z^2 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_3^2} + C^{(2)}_{D_y D_z^2\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2\partial x_3^2} + C^{(2)}_{D_y D_z^2 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C^{(2)}_{D_y D_z^2 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_2\partial x_3^2} + C^{(2)}_{D_z^3\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_3^3} +$$

$$C^{(2)}_{D_z^3 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_3^3} + C^{(2)}_{D_z^3 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} + C^{(2)}_{D_x^4\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^4} + C^{(2)}_{D_x^4 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C^{(2)}_{D_x^4 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^4} + C^{(2)}_{D_x^3 D_y\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} +$$

$$C^{(2)}_{D_x^3 D_y v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} + C^{(2)}_{D_x^3 D_y v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C^{(2)}_{D_x^2 D_y^2\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} + C^{(2)}_{D_x^2 D_y^2 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} + C^{(2)}_{D_x^2 D_y^2 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} +$$

$$C^{(2)}_{D_x D_y^3\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + C^{(2)}_{D_x D_y^3 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} + C^{(2)}_{D_x D_y^3 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} + C^{(2)}_{D_y^4\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_2^4} + C^{(2)}_{D_y^4 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_2^4} + C^{(2)}_{D_x^3 D_z\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_3} +$$

$$+ C^{(2)}_{D_x^3 D_z v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_3} + C^{(2)}_{D_x^3 D_z v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_3} + C^{(2)}_{D_x^3 D_z v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_3} + C^{(2)}_{D_x^2 D_y D_z\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3} +$$

$$C^{(2)}_{D_x^2 D_y D_z v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3} + C^{(2)}_{D_x^2 D_y D_z v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3} + C^{(2)}_{D_x^2 D_y D_z v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2\partial x_3} + C^{(2)}_{D_x D_y^2 D_z\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3} +$$

$$C^{(2)}_{D_x D_y^2 D_z v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^2\partial x_3} + C^{(2)}_{D_x D_y^2 D_z v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3} + C^{(2)}_{D_x D_y^2 D_z v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2^2\partial x_3} + C^{(2)}_{D_y^3 D_z\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_2^3\partial x_3} +$$

$$C^{(2)}_{D_y^3 D_z v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_2^3\partial x_3} + C^{(2)}_{D_y^3 D_z v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_2^3\partial x_3} + C^{(2)}_{D_x^2 D_z^2\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2} + C^{(2)}_{D_x^2 D_z^2 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2} + C^{(2)}_{D_x^2 D_z^2 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_3^2} +$$

$$C^{(2)}_{D_x^2 D_z^2 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_3^2} + C^{(2)}_{D_x D_y D_z^2\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2} + C^{(2)}_{D_x D_y D_z^2 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2} + C^{(2)}_{D_x D_y D_z^2 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2\partial x_3^2} +$$

$$C^{(2)}_{D_x D_y D_z^2 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2\partial x_3^2} + C^{(2)}_{D_y^2 D_z^2\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2} + C^{(2)}_{D_y^2 D_z^2 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2} + C^{(2)}_{D_y^2 D_z^2 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_2^2\partial x_3^2} + C^{(2)}_{D_x D_z^3\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_3^3} +$$

$$C^{(2)}_{D_x D_z^3 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_3^3} + C^{(2)}_{D_x D_z^3 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_3^3} + C^{(2)}_{D_x D_z^3 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_3^3} + C^{(2)}_{D_y D_z^3\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_2\partial x_3^3} + C^{(2)}_{D_y D_z^3 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_2\partial x_3^3} +$$

$$C^{(2)}_{D_y D_z^3 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_2\partial x_3^3} + C^{(2)}_{D_z^4\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_3^4} + C^{(2)}_{D_z^4 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_3^4} + C^{(2)}_{D_z^4 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

coefficient $C^{(2)}_{D_y\rho}$ **at** $\frac{\partial\rho}{\partial x_2}$:

$$C^{(2),\text{SRT}}_{D_y\rho} = (cs^2 + v_2^2)$$

$$C^{(2),\text{MRT1}}_{D_y\rho} = (cs^2 + v_2^2)$$

$$C^{(2),\text{MRT2}}_{D_y\rho} = (v_2^2 + cs^2)$$

$$C^{(2),\text{CLBM1}}_{D_y\rho} = (cs^2 + v_2^2)$$

$$C^{(2),\text{CLBM2}}_{D_y\rho} = (cs^2 + v_2^2)$$

$$C^{(2),\text{CuLBM1}}_{D_y\rho} = (cs^2 + v_2^2)$$

$$C^{(2),\text{CuLBM2}}_{D_y\rho} = (cs^2 + v_2^2)$$

coefficient $C^{(2)}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2}$ **at** $\frac{\partial\rho}{\partial x_1}\frac{\partial v_2}{\partial x_1}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2} = (-2+\omega)\frac{cs^2}{2\omega}$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2} = (-2+\omega_1)\frac{cs^2}{2\omega_1}$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\rho,\mathrm{D}_x v_2} = (-2+\omega_1)\frac{cs^2}{2\omega_1}$$

coefficient $C^{(2)}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1}$ **at** $\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_2}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1} = (-2+\omega)\frac{cs^2}{2\omega}$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1} = (-2+\omega_5)\frac{cs^2}{2\omega_5}$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1} = (-2+\omega_1)\frac{cs^2}{2\omega_1}$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\rho,\mathrm{D}_y v_1} = (6cs^2\omega_1 - 6v_1^2\omega_2 - 12cs^2\omega_2 - 2\omega_1 + 3cs^2\omega_1\omega_2 + 6v_1^2\omega_1 + 2\omega_2)\frac{1}{6\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1}$ **at** $\frac{\partial v_1}{\partial x_1}\frac{\partial v_1}{\partial x_2}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1} = 0$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1} = 0$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1} = 0$$

$$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1} = 0$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1} = 0$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1} = 0$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x v_1,\mathrm{D}_y v_1} = (\omega_1 - \omega_2)\frac{2\rho v_1}{\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_y\rho,\mathrm{D}_x v_1}$ **at** $\frac{\partial\rho}{\partial x_2}\frac{\partial v_1}{\partial x_1}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y\rho,\mathrm{D}_x v_1} = 0$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y\rho,\mathrm{D}_x v_1} = 0$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y\rho,\mathrm{D}_x v_1} = 0$$

$C^{(2),\text{CLBM1}}_{\text{D}_y\rho,\text{D}_x v_1} = 0$

$C^{(2),\text{CLBM2}}_{\text{D}_y\rho,\text{D}_x v_1} = 0$

$C^{(2),\text{CuLBM1}}_{\text{D}_y\rho,\text{D}_x v_1} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}_y\rho,\text{D}_x v_1} = (cs^2\omega_1 - 3v_1^2\omega_2 - cs^2\omega_2 - \omega_1 + 3v_1^2\omega_1 + \omega_2)\frac{1}{3\omega_1\omega_2}$

coefficient $C^{(2)}_{\text{D}_y\rho,\text{D}_y v_2}$ **at** $\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_2}$:

$C^{(2),\text{SRT}}_{\text{D}_y\rho,\text{D}_y v_2} = (-2 - 2cs^2\omega + 4cs^2 - 3v_2^2\omega + \omega + 6v_2^2)\frac{1}{\omega}$

$C^{(2),\text{MRT1}}_{\text{D}_y\rho,\text{D}_y v_2} = (-2 + 4cs^2 - 2\omega_{10}cs^2 + \omega_{10} - 3v_2^2\omega_{10} + 6v_2^2)\frac{1}{\omega_{10}}$

$C^{(2),\text{MRT2}}_{\text{D}_y\rho,\text{D}_y v_2} = (-2 + \omega_{10} - 2cs^2\omega_{10} - 3v_2^2\omega_{10} + 6v_2^2 + 4cs^2)\frac{1}{\omega_{10}}$

$C^{(2),\text{CLBM1}}_{\text{D}_y\rho,\text{D}_y v_2} = (-2 - 2\omega_{10}cs^2 + 4cs^2 + \omega_{10} - 3v_2^2\omega_{10} + 6v_2^2)\frac{1}{\omega_{10}}$

$C^{(2),\text{CLBM2}}_{\text{D}_y\rho,\text{D}_y v_2} = (-2 + 4cs^2 - 2\omega_{10}cs^2 + \omega_{10} - 3v_2^2\omega_{10} + 6v_2^2)\frac{1}{\omega_{10}}$

$C^{(2),\text{CuLBM1}}_{\text{D}_y\rho,\text{D}_y v_2} = (-2 - 2cs^2\omega_5 + 4cs^2 - 3v_2^2\omega_5 + 6v_2^2 + \omega_5)\frac{1}{\omega_5}$

$C^{(2),\text{CuLBM2}}_{\text{D}_y\rho,\text{D}_y v_2} = (4cs^2\omega_1 + 6v_2^2\omega_1 + 3\omega_1\omega_2 - 9v_2^2\omega_1\omega_2 + 12v_2^2\omega_2 + 8cs^2\omega_2 - 2\omega_1 - 6cs^2\omega_1\omega_2 - 4\omega_2)\frac{1}{3\omega_1\omega_2}$

coefficient $C^{(2)}_{\text{D}_y v_2,\text{D}_y v_2}$ **at** $\left(\frac{\partial v_2}{\partial x_2}\right)^2$:

$C^{(2),\text{SRT}}_{\text{D}_y v_2,\text{D}_y v_2} = (2 - \omega)\frac{3\rho v_2}{\omega}$

$C^{(2),\text{MRT1}}_{\text{D}_y v_2,\text{D}_y v_2} = (2 - \omega_{10})\frac{3\rho v_2}{\omega_{10}}$

$C^{(2),\text{MRT2}}_{\text{D}_y v_2,\text{D}_y v_2} = C^{(2),\text{MRT1}}_{\text{D}_y v_2,\text{D}_y v_2}$

$C^{(2),\text{CLBM1}}_{\text{D}_y v_2,\text{D}_y v_2} = C^{(2),\text{MRT1}}_{\text{D}_y v_2,\text{D}_y v_2}$

$C^{(2),\text{CLBM2}}_{\text{D}_y v_2,\text{D}_y v_2} = C^{(2),\text{MRT1}}_{\text{D}_y v_2,\text{D}_y v_2}$

$C^{(2),\text{CuLBM1}}_{\text{D}_y v_2,\text{D}_y v_2} = (2 - \omega_5)\frac{3\rho v_2}{\omega_5}$

$C^{(2),\text{CuLBM2}}_{\text{D}_y v_2,\text{D}_y v_2} = (-3\omega_1\omega_2 + 2\omega_1 + 4\omega_2)\frac{\rho v_2}{\omega_1\omega_2}$

coefficient $C^{(2)}_{\text{D}_y\rho,\text{D}_z v_3}$ **at** $\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_3}$:

$C^{(2),\text{SRT}}_{\text{D}_y\rho,\text{D}_z v_3} = 0$

$C^{(2),\text{MRT1}}_{\text{D}_y\rho,\text{D}_z v_3} = 0$

$C^{(2),\text{MRT2}}_{\text{D}_y\rho,\text{D}_z v_3} = 0$

$C^{(2),\text{CLBM1}}_{\text{D}_y\rho,\text{D}_z v_3} = 0$

$C^{(2),\text{CLBM2}}_{\text{D}_y\rho,\text{D}_z v_3} = 0$

$C^{(2),\text{CuLBM1}}_{\text{D}_y\rho,\text{D}_z v_3} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}_y\rho,\text{D}_z v_3} = (cs^2\omega_1 + 3v_3^2\omega_1 - cs^2\omega_2 - \omega_1 - 3v_3^2\omega_2 + \omega_2)\frac{1}{3\omega_1\omega_2}$

coefficient $C^{(2)}_{\text{D}_y v_3,\text{D}_z v_3}$ **at** $\frac{\partial v_3}{\partial x_2}\frac{\partial v_3}{\partial x_3}$:

$$C^{(2),\text{SRT}}_{\mathrm{D}_y v_3, \mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_y v_3, \mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_y v_3, \mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_y v_3, \mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_y v_3, \mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{CuLBM1}}_{\mathrm{D}_y v_3, \mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{CuLBM2}}_{\mathrm{D}_y v_3, \mathrm{D}_z v_3} = (\omega_1 - \omega_2)\frac{2\rho v_3}{\omega_1 \omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3}$ at $\frac{\partial \rho}{\partial x_3}\frac{\partial v_3}{\partial x_2}$:

$$C^{(2),\text{SRT}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3} = (-2 + \omega)\frac{cs^2}{2\omega}$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{CuLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3} = (-2 + \omega_3)\frac{cs^2}{2\omega_3}$$

$$C^{(2),\text{CuLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_3} = (6cs^2\omega_1 + 6v_3^2\omega_1 - 12cs^2\omega_2 - 2\omega_1 - 6v_3^2\omega_2 + 3cs^2\omega_1\omega_2 + 2\omega_2)\frac{1}{6\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2}$ at $\frac{\partial \rho}{\partial x_3}\frac{\partial v_2}{\partial x_3}$:

$$C^{(2),\text{SRT}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2} = (-2 + \omega)\frac{cs^2}{2\omega}$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$$

$$C^{(2),\text{CuLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2} = (-2 + \omega_3)\frac{cs^2}{2\omega_3}$$

$$C^{(2),\text{CuLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_2} = (-2 + \omega_1)\frac{cs^2}{2\omega_1}$$

coefficient $C^{(2)}_{\mathrm{D}_x^2 v_2}$ at $\frac{\partial^2 v_2}{\partial x_1^2}$:

$$C^{(2),\text{SRT}}_{\mathrm{D}_x^2 v_2} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_x^2 v_2} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_x^2 v_2} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_x^2 v_2} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

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$$C_{\mathrm{D}_x^2 v_2}^{(2),\mathrm{CLBM2}} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

$$C_{\mathrm{D}_x^2 v_2}^{(2),\mathrm{CuLBM1}} = (-2 + \omega_1)\frac{\rho cs^2}{2\omega_1}$$

$$C_{\mathrm{D}_x^2 v_2}^{(2),\mathrm{CuLBM2}} = (-2 + \omega_1)\frac{\rho cs^2}{2\omega_1}$$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2)}$ at $\frac{\partial^2 \rho}{\partial x_1 \partial x_2}$:

$$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2),\mathrm{SRT}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2),\mathrm{MRT1}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2),\mathrm{MRT2}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2),\mathrm{CLBM1}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2),\mathrm{CLBM2}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2),\mathrm{CuLBM1}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y \rho}^{(2),\mathrm{CuLBM2}} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{v_1}{3\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2)}$ at $\frac{\partial^2 v_1}{\partial x_1 \partial x_2}$:

$$C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2),\mathrm{SRT}} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$$

$$C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2),\mathrm{MRT1}} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

$$C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2),\mathrm{MRT2}} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

$$C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2),\mathrm{CLBM1}} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

$$C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2),\mathrm{CLBM2}} = (-2 + \omega_5)\frac{\rho cs^2}{2\omega_5}$$

$$C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2),\mathrm{CuLBM1}} = (-2 + \omega_1)\frac{\rho cs^2}{2\omega_1}$$

$$C_{\mathrm{D}_x \mathrm{D}_y v_1}^{(2),\mathrm{CuLBM2}} = (2cs^2\omega_1 - 6v_1^2\omega_2 - 8cs^2\omega_2 - 2\omega_1 + 3cs^2\omega_1\omega_2 + 6v_1^2\omega_1 + 2\omega_2)\frac{\rho}{6\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_y^2 \rho}^{(2)}$ at $\frac{\partial^2 \rho}{\partial x_2^2}$:

$$C_{\mathrm{D}_y^2 \rho}^{(2),\mathrm{SRT}} = (-2 - 3cs^2\omega + 6cs^2 - v_2^2\omega + \omega + 2v_2^2)\frac{v_2}{2\omega}$$

$$C_{\mathrm{D}_y^2 \rho}^{(2),\mathrm{MRT1}} = (-2 + 6cs^2 - 3\omega_{10}cs^2 + \omega_{10} - v_2^2\omega_{10} + 2v_2^2)\frac{v_2}{2\omega_{10}}$$

$$C_{\mathrm{D}_y^2 \rho}^{(2),\mathrm{MRT2}} = (-2 + \omega_{10} - 3cs^2\omega_{10} - v_2^2\omega_{10} + 2v_2^2 + 6cs^2)\frac{v_2}{2\omega_{10}}$$

$$C_{\mathrm{D}_y^2 \rho}^{(2),\mathrm{CLBM1}} = (-2 - 3\omega_{10}cs^2 + 6cs^2 + \omega_{10} - v_2^2\omega_{10} + 2v_2^2)\frac{v_2}{2\omega_{10}}$$

$$C_{\mathrm{D}_y^2 \rho}^{(2),\mathrm{CLBM2}} = (-2 + 6cs^2 - 3\omega_{10}cs^2 + \omega_{10} - v_2^2\omega_{10} + 2v_2^2)\frac{v_2}{2\omega_{10}}$$

$$C_{\mathrm{D}_y^2 \rho}^{(2),\mathrm{CuLBM1}} = (-2 - 3cs^2\omega_5 + 6cs^2 - v_2^2\omega_5 + 2v_2^2 + \omega_5)\frac{v_2}{2\omega_5}$$

$$C_{\mathrm{D}_y^2 \rho}^{(2),\mathrm{CuLBM2}} = (6cs^2\omega_1 + 2v_2^2\omega_1 + 3\omega_1\omega_2 - 3v_2^2\omega_1\omega_2 + 4v_2^2\omega_2 + 12cs^2\omega_2 - 2\omega_1 - 9cs^2\omega_1\omega_2 - 4\omega_2)\frac{v_2}{6\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_y^2 v_2}$ **at** $\frac{\partial^2 v_2}{\partial x_2^2}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y^2 v_2} = (-2 - cs^2\omega + 2cs^2 - 3v_2^2\omega + \omega + 6v_2^2)\frac{\rho}{2\omega}$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y^2 v_2} = (-2 + 2cs^2 - \omega_{10}cs^2 + \omega_{10} - 3v_2^2\omega_{10} + 6v_2^2)\frac{\rho}{2\omega_{10}}$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y^2 v_2} = (-2 + \omega_{10} - cs^2\omega_{10} - 3v_2^2\omega_{10} + 6v_2^2 + 2cs^2)\frac{\rho}{2\omega_{10}}$$

$$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y^2 v_2} = (-2 - \omega_{10}cs^2 + 2cs^2 + \omega_{10} - 3v_2^2\omega_{10} + 6v_2^2)\frac{\rho}{2\omega_{10}}$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y^2 v_2} = (-2 + 2cs^2 - \omega_{10}cs^2 + \omega_{10} - 3v_2^2\omega_{10} + 6v_2^2)\frac{\rho}{2\omega_{10}}$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y^2 v_2} = (-2 - cs^2\omega_5 + 2cs^2 - 3v_2^2\omega_5 + 6v_2^2 + \omega_5)\frac{\rho}{2\omega_5}$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y^2 v_2} = (2cs^2\omega_1 + 6v_2^2\omega_1 + 3\omega_1\omega_2 - 9v_2^2\omega_1\omega_2 + 12v_2^2\omega_2 + 4cs^2\omega_2 - 2\omega_1 - 3cs^2\omega_1\omega_2 - 4\omega_2)\frac{\rho}{6\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_y\mathrm{D}_z\rho}$ **at** $\frac{\partial^2\rho}{\partial x_2\partial x_3}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_z\rho} = 0$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_z\rho} = 0$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_z\rho} = 0$$

$$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z\rho} = 0$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z\rho} = 0$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z\rho} = 0$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z\rho} = (3cs^2\omega_1 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{v_3}{3\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_y\mathrm{D}_z v_3}$ **at** $\frac{\partial^2 v_3}{\partial x_2\partial x_3}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_z v_3} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_z v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_z v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z v_3} = (-2 + \omega_3)\frac{\rho cs^2}{2\omega_3}$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z v_3} = (2cs^2\omega_1 + 6v_3^2\omega_1 - 8cs^2\omega_2 - 2\omega_1 - 6v_3^2\omega_2 + 3cs^2\omega_1\omega_2 + 2\omega_2)\frac{\rho}{6\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_z^2 v_2}$ **at** $\frac{\partial^2 v_2}{\partial x_3^2}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_z^2 v_2} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_z^2 v_2} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\text{MRT2}}_{\text{D}^2_z v_2} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\text{CLBM1}}_{\text{D}^2_z v_2} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\text{CLBM2}}_{\text{D}^2_z v_2} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}^2_z v_2} = (-2 + \omega_3)\frac{\rho cs^2}{2\omega_3}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}^2_z v_2} = (-2 + \omega_1)\frac{\rho cs^2}{2\omega_1}$$

coefficient $C^{(2)}_{\text{D}^3_x \rho}$ at $\frac{\partial^3 \rho}{\partial x_1^3}$:

$$C^{(2),\text{SRT}}_{\text{D}^3_x \rho} = (-1 + v_1^2 + 3cs^2)\frac{v_1 v_2}{12}$$

$$C^{(2),\text{MRT1}}_{\text{D}^3_x \rho} = (12\omega_9 - 6v_1^2\omega_{12}\omega_5 - 12\omega_{12} - 18\omega_{12}cs^2\omega_5 + 36\omega_{12}cs^2 + v_1^2\omega_9\omega_{12}\omega_5 + 3\omega_9\omega_{12}cs^2\omega_5 + 6\omega_{12}\omega_5 - 36\omega_9 cs^2 - 12v_1^2\omega_9 - 6\omega_9\omega_5 + 6v_1^2\omega_9\omega_5 - \omega_9\omega_{12}\omega_5 + 12v_1^2\omega_{12} + 18\omega_9 cs^2\omega_5)\frac{v_1 v_2}{12\omega_9\omega_{12}\omega_5}$$

$$C^{(2),\text{MRT2}}_{\text{D}^3_x \rho} = (12\omega_9 + 36cs^2\omega_{12} - 6v_1^2\omega_{12}\omega_5 - 12\omega_{12} + 18\omega_9 cs^2\omega_5 + v_1^2\omega_9\omega_{12}\omega_5 - 36\omega_9 cs^2 + 6\omega_{12}\omega_5 - 12v_1^2\omega_9 + 3\omega_9 cs^2\omega_{12}\omega_5 - 6\omega_9\omega_5 + 6v_1^2\omega_9\omega_5 - 18cs^2\omega_{12}\omega_5 - \omega_9\omega_{12}\omega_5 + 12v_1^2\omega_{12})\frac{v_1 v_2}{12\omega_9\omega_{12}\omega_5}$$

$$C^{(2),\text{CLBM1}}_{\text{D}^3_x \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1 v_2}{12}$$

$$C^{(2),\text{CLBM2}}_{\text{D}^3_x \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1 v_2}{12}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}^3_x \rho} = (-1 + v_1^2 + 3cs^2)\frac{v_1 v_2}{12}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}^3_x \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1 v_2}{12}$$

coefficient $C^{(2)}_{\text{D}^3_x v_1}$ at $\frac{\partial^3 v_1}{\partial x_1^3}$:

$$C^{(2),\text{SRT}}_{\text{D}^3_x v_1} = (-1 + 3v_1^2 + cs^2)\frac{\rho v_2}{12}$$

$$C^{(2),\text{MRT1}}_{\text{D}^3_x v_1} = (12\omega_9 - 18v_1^2\omega_{12}\omega_5 - 12\omega_{12} - 6\omega_{12}cs^2\omega_5 + 12\omega_{12}cs^2 + 3v_1^2\omega_9\omega_{12}\omega_5 + \omega_9\omega_{12}cs^2\omega_5 + 6\omega_{12}\omega_5 - 12\omega_9 cs^2 - 36v_1^2\omega_9 - 6\omega_9\omega_5 + 18v_1^2\omega_9\omega_5 - \omega_9\omega_{12}\omega_5 + 36v_1^2\omega_{12} + 6\omega_9 cs^2\omega_5)\frac{\rho v_2}{12\omega_9\omega_{12}\omega_5}$$

$$C^{(2),\text{MRT2}}_{\text{D}^3_x v_1} = (12\omega_9 + 12cs^2\omega_{12} - 18v_1^2\omega_{12}\omega_5 - 12\omega_{12} + 6\omega_9 cs^2\omega_5 + 3v_1^2\omega_9\omega_{12}\omega_5 - 12\omega_9 cs^2 + 6\omega_{12}\omega_5 - 36v_1^2\omega_9 + \omega_9 cs^2\omega_{12}\omega_5 - 6\omega_9\omega_5 + 18v_1^2\omega_9\omega_5 - 6cs^2\omega_{12}\omega_5 - \omega_9\omega_{12}\omega_5 + 36v_1^2\omega_{12})\frac{\rho v_2}{12\omega_9\omega_{12}\omega_5}$$

$$C^{(2),\text{CLBM1}}_{\text{D}^3_x v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho v_2}{12}$$

$$C^{(2),\text{CLBM2}}_{\text{D}^3_x v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho v_2}{12}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}^3_x v_1} = (-1 + 3v_1^2 + cs^2)\frac{\rho v_2}{12}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}^3_x v_1} = (-1 + cs^2 + 3v_1^2)\frac{\rho v_2}{12}$$

coefficient $C^{(2)}_{\text{D}^3_x v_2}$ at $\frac{\partial^3 v_2}{\partial x_1^3}$:

$$C^{(2),\text{SRT}}_{\text{D}^3_x v_2} = (6 - 3cs^2\omega^2 + 6v_1^2\omega + \omega^2 + 18cs^2\omega - v_1^2\omega^2 - 6v_1^2 - 18cs^2 - 6\omega)\frac{\rho v_1}{6\omega^2}$$

$$C^{(2),\text{MRT1}}_{\text{D}^3_x v_2} =$$
$$(\omega_{12}\omega_5^2 + 3v_1^2\omega_5^2 + 3v_1^2\omega_{12}\omega_5 + 15\omega_{12}cs^2\omega_5 + 3cs^2\omega_5^2 - v_1^2\omega_{12}\omega_5^2 - 3\omega_{12}cs^2\omega_5^2 - 6cs^2\omega_5 - 12\omega_{12}cs^2 - 6v_1^2\omega_5 - 3\omega_5^2 - 3\omega_{12}\omega_5 + 6\omega_5)\frac{\rho v_1}{6\omega_{12}\omega_5^2}$$

$C^{(2),\text{MRT2}}_{\text{D}^3_x v_2} =$
$(\omega_{12}\omega_5^2 + 3v_1^2\omega_5^2 - 12cs^2\omega_{12} + 3v_1^2\omega_{12}\omega_5 - v_1^2\omega_{12}\omega_5^2 - 6v_1^2\omega_5 - 3\omega_5^2 - 3\omega_{12}\omega_5 - 6cs^2\omega_5 - 3cs^2\omega_{12}\omega_5^2 + 15cs^2\omega_{12}\omega_5 + 6\omega_5 + 3cs^2\omega_5^2)\frac{\rho v_1}{6\omega_{12}\omega_5^2}$

$C^{(2),\text{CLBM1}}_{\text{D}^3_x v_2} = (6 + 9\omega_{12}cs^2 - v_1^2\omega_{12}\omega_5 - 3\omega_{12} - 18cs^2 + 3v_1^2\omega_5 + \omega_{12}\omega_5 - 6v_1^2 - 3\omega_{12}cs^2\omega_5 + 9cs^2\omega_5 - 3\omega_5 + 3v_1^2\omega_{12})\frac{\rho v_1}{6\omega_{12}\omega_5}$

$C^{(2),\text{CLBM2}}_{\text{D}^3_x v_2} = (6 + 9cs^2\omega_5 - v_1^2\omega_{12}\omega_5 - 3\omega_{12} - 18cs^2 + 9\omega_{12}cs^2 + 3v_1^2\omega_5 - 3\omega_{12}cs^2\omega_5 + \omega_{12}\omega_5 - 6v_1^2 - 3\omega_5 + 3v_1^2\omega_{12})\frac{\rho v_1}{6\omega_{12}\omega_5}$

$C^{(2),\text{CuLBM1}}_{\text{D}^3_x v_2} = (6 - 3cs^2\omega_9\omega_1 - 3\omega_9 + \omega_9\omega_1 - v_1^2\omega_9\omega_1 - 6v_1^2 + 3v_1^2\omega_9 - 18cs^2 - 3\omega_1 + 9cs^2\omega_9 + 9cs^2\omega_1 + 3v_1^2\omega_1)\frac{\rho v_1}{6\omega_9\omega_1}$

$C^{(2),\text{CuLBM2}}_{\text{D}^3_x v_2} = (-6\omega_3\omega_4 - 6\omega_3cs^2\omega_4\omega_1 - 3\omega_4\omega_1 - 6v_1^2\omega_3 + 3v_1^2\omega_3\omega_1 + 18\omega_3cs^2\omega_4 + 6\omega_3 + 6v_1^2\omega_3\omega_4 + 9\omega_3cs^2\omega_1 - 3\omega_3\omega_1 - 18cs^2\omega_4 + 2\omega_3\omega_4\omega_1 + 3v_1^2\omega_4\omega_1 - 6v_1^2\omega_4 + 6\omega_4 - 18\omega_3cs^2 + 9cs^2\omega_4\omega_1 - 2v_1^2\omega_3\omega_4\omega_1)\frac{\rho v_1}{12\omega_3\omega_4\omega_1}$

coefficient $C^{(2)}_{\text{D}^2_x \text{D}_y \rho}$ at $\frac{\partial^3 \rho}{\partial x_1^2 \partial x_2}$:

$C^{(2),\text{SRT}}_{\text{D}^2_x \text{D}_y \rho} = (-12 - \omega^2 + 12\omega)\frac{cs^4}{6\omega^2}$

$C^{(2),\text{MRT1}}_{\text{D}^2_x \text{D}_y \rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(2),\text{MRT2}}_{\text{D}^2_x \text{D}_y \rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(2),\text{CLBM1}}_{\text{D}^2_x \text{D}_y \rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(2),\text{CLBM2}}_{\text{D}^2_x \text{D}_y \rho} = (-12 - \omega_5^2 + 12\omega_5)\frac{cs^4}{6\omega_5^2}$

$C^{(2),\text{CuLBM1}}_{\text{D}^2_x \text{D}_y \rho} = (-12 + 12\omega_1 - \omega_1^2)\frac{cs^4}{6\omega_1^2}$

$C^{(2),\text{CuLBM2}}_{\text{D}^2_x \text{D}_y \rho} =$
$(-cs^4\omega_1^2\omega_2^2 - 2v_1^2\omega_1\omega_2 + 15v_1^2cs^2\omega_1\omega_2^2 + 12v_1^2cs^2\omega_1^2 + 2v_1^4\omega_1^2 + 2cs^2\omega_1^2\omega_2 + 3v_1^4\omega_1\omega_2^2 + 4v_1^2\omega_2^2 + 2v_1^4\omega_1\omega_2 + 6v_1^2cs^2\omega_1\omega_2 - 14cs^4\omega_2^2 - 2cs^2\omega_1^2 - 3v_1^2\omega_1\omega_2^2 - 2cs^4\omega_1^2\omega_2 - 15v_1^2cs^2\omega_1^2\omega_2 - 18v_1^2cs^2\omega_2^2 - 2v_1^2\omega_1^2 - 4v_1^4\omega_2^2 - 3v_1^4\omega_1^2\omega_2 - 2cs^2\omega_1\omega_2^2 + 2cs^2\omega_2^2 + 2cs^4\omega_1^2 + 14cs^4\omega_1\omega_2^2 + 3v_1^2\omega_1^2\omega_2)\frac{1}{6\omega_1^2\omega_2^2}$

coefficient $C^{(2)}_{\text{D}^2_x \text{D}_y v_1}$ at $\frac{\partial^3 v_1}{\partial x_1^2 \partial x_2}$:

$C^{(2),\text{SRT}}_{\text{D}^2_x \text{D}_y v_1} = 0$

$C^{(2),\text{MRT1}}_{\text{D}^2_x \text{D}_y v_1} = (-2\omega_{12} - \omega_5^2 + \omega_{12}\omega_5 + 2\omega_5)\frac{\rho v_1 cs^2}{\omega_{12}\omega_5^2}$

$C^{(2),\text{MRT2}}_{\text{D}^2_x \text{D}_y v_1} = (-2\omega_{12} - \omega_5^2 + \omega_{12}\omega_5 + 2\omega_5)\frac{\rho v_1 cs^2}{\omega_{12}\omega_5^2}$

$C^{(2),\text{CLBM1}}_{\text{D}^2_x \text{D}_y v_1} = 0$

$C^{(2),\text{CLBM2}}_{\text{D}^2_x \text{D}_y v_1} = 0$

$C^{(2),\text{CuLBM1}}_{\text{D}^2_x \text{D}_y v_1} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}^2_x \text{D}_y v_1} = (6v_1^2\omega_1\omega_2 - 5\omega_1\omega_2^2 - 9cs^2\omega_1^2\omega_2 - 14v_1^2\omega_2^2 + 6\omega_2^2 - 2\omega_1\omega_2 + 8cs^2\omega_1^2 + 11v_1^2\omega_1\omega_2^2 + 8v_1^2\omega_1^2 + 9cs^2\omega_1\omega_2^2 + 5\omega_1^2\omega_2 - 10cs^2\omega_2^2 + 2cs^2\omega_1\omega_2 - 11v_1^2\omega_1^2\omega_2 - 4\omega_1^2)\frac{\rho v_1}{6\omega_1^2\omega_2^2}$

coefficient $C^{(2)}_{\text{D}^2_x \text{D}_y v_2}$ at $\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2}$:

$C^{(2),\text{SRT}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho v_2 cs^2}{6}$

$$C^{(2),\text{MRT1}}_{\text{D}^2_x\text{D}_y v_2} = (-12\omega_{10}\omega_5^2 + 12\omega_{10}\omega_5 + 12\omega_5^2 - 12\omega_{15}\omega_{10} - 12\omega_{15}\omega_5 + 12\omega_{15}\omega_{10}\omega_5 - \omega_{15}\omega_{10}\omega_5^2)\frac{\rho v_2 cs^2}{6\omega_{15}\omega_{10}\omega_5^2}$$

$$C^{(2),\text{MRT2}}_{\text{D}^2_x\text{D}_y v_2} = (-12\omega_{10}\omega_5^2 + 12\omega_{10}\omega_5 + 12\omega_5^2 - 12\omega_{15}\omega_{10} - 12\omega_{15}\omega_5 + 12\omega_{15}\omega_{10}\omega_5 - \omega_{15}\omega_{10}\omega_5^2)\frac{\rho cs^2 v_2}{6\omega_{15}\omega_{10}\omega_5^2}$$

$$C^{(2),\text{CLBM1}}_{\text{D}^2_x\text{D}_y v_2} = \frac{-\rho v_2 cs^2}{6}$$

$$C^{(2),\text{CLBM2}}_{\text{D}^2_x\text{D}_y v_2} = \frac{-\rho v_2 cs^2}{6}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}^2_x\text{D}_y v_2} = \frac{-\rho cs^2 v_2}{6}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}^2_x\text{D}_y v_2} = \frac{-\rho v_2 cs^2}{6}$$

coefficient $C^{(2)}_{\text{D}_x\text{D}^2_y\rho}$ at $\frac{\partial^3\rho}{\partial x_1\partial x_2^2}$:

$$C^{(2),\text{SRT}}_{\text{D}_x\text{D}^2_y\rho} = 0$$

$$C^{(2),\text{MRT1}}_{\text{D}_x\text{D}^2_y\rho} = (\omega_{15}v_2^2\omega_5 + \omega_{10}\omega_5 - \omega_{15}v_2^2\omega_{10}\omega_5 + \omega_{15}v_2^2\omega_{10} + v_2^2\omega_{10}^2\omega_5 + \omega_{10}^2 - 3\omega_{10}cs^2\omega_5 - v_2^2\omega_{10}\omega_5 + 3\omega_{15}\omega_{10}cs^2 - 3\omega_{15}\omega_{10}cs^2\omega_5 - 3\omega_{10}^2cs^2 - \omega_{15}\omega_{10} - \omega_{15}\omega_5 - \omega_{10}^2\omega_5 + 3\omega_{15}cs^2\omega_5 + 3\omega_{10}^2cs^2\omega_5 + \omega_{15}\omega_{10}\omega_5 - v_2^2\omega_{10}^2)\frac{v_1 v_2}{\omega_{15}\omega_{10}^2\omega_5}$$

$$C^{(2),\text{MRT2}}_{\text{D}_x\text{D}^2_y\rho} = (3cs^2\omega_{10}^2\omega_5 - 3\omega_{15}cs^2\omega_{10}\omega_5 + \omega_{15}v_2^2\omega_5 + \omega_{10}\omega_5 - \omega_{15}v_2^2\omega_{10}\omega_5 + \omega_{15}v_2^2\omega_{10} + v_2^2\omega_{10}^2\omega_5 + 3\omega_{15}cs^2\omega_{10} + \omega_{10}^2 + 3\omega_{15}cs^2\omega_5 - v_2^2\omega_{10}\omega_5 - \omega_{15}\omega_{10} - \omega_{15}\omega_5 - \omega_{10}^2\omega_5 + \omega_{15}\omega_{10}\omega_5 - v_2^2\omega_{10}^2 - 3cs^2\omega_{10}^2 - 3cs^2\omega_{10}\omega_5)\frac{v_1 v_2}{\omega_{15}\omega_{10}^2\omega_5}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_x\text{D}^2_y\rho} = 0$$

$$C^{(2),\text{CLBM2}}_{\text{D}_x\text{D}^2_y\rho} = 0$$

$$C^{(2),\text{CuLBM1}}_{\text{D}_x\text{D}^2_y\rho} = 0$$

$$C^{(2),\text{CuLBM2}}_{\text{D}_x\text{D}^2_y\rho} = (2v_1^2\omega_1\omega_2 - 3\omega_1\omega_2^2 - 9cs^2\omega_1^2\omega_2 - 4v_1^2\omega_2^2 + 2\omega_2^2 + 2\omega_1\omega_2 + 2v_2^2\omega_1^2 + 12cs^2\omega_1^2 + 3v_1^2\omega_1\omega_2^2 - 4v_2^2\omega_1\omega_2 + 2v_1^2\omega_1^2 + 9cs^2\omega_1\omega_2^2 + 3\omega_1^2\omega_2 - 6cs^2\omega_2^2 - 6cs^2\omega_1\omega_2 - 3v_1^2\omega_1^2\omega_2 + 2v_2^2\omega_2^2 - 4\omega_1^2)\frac{v_1 v_2}{6\omega_1^2\omega_2^2}$$

coefficient $C^{(2)}_{\text{D}_x\text{D}^2_y v_1}$ at $\frac{\partial^3 v_1}{\partial x_1\partial x_2^2}$:

$$C^{(2),\text{SRT}}_{\text{D}_x\text{D}^2_y v_1} = (12 - 11cs^2\omega^2 + 3\omega^2 + 36cs^2\omega - 3v_2^2\omega^2 - 36cs^2 + 12v_2^2\omega - 12\omega - 12v_2^2)\frac{\rho v_2}{12\omega^2}$$

$$C^{(2),\text{MRT1}}_{\text{D}_x\text{D}^2_y v_1} = (-12\omega_{10}cs^2\omega_5^2 + 12v_2^2\omega_{10}^2\omega_5^2 - 11\omega_{15}\omega_{10}^2cs^2\omega_5^2 + 12\omega_{10}\omega_5^2 - 6\omega_{15}v_2^2\omega_{10}\omega_5^2 + 3\omega_{15}\omega_{10}^2\omega_5^2 + 12\omega_{15}v_2^2\omega_5^2 - 24\omega_{15}\omega_{10}^2cs^2 - 6\omega_{15}\omega_{10}^2\omega_5 - 12v_2^2\omega_{10}^2\omega_5 + 42\omega_{15}\omega_{10}^2cs^2\omega_5 - 24\omega_{15}\omega_{10}cs^2\omega_5 + 6\omega_{15}v_2^2\omega_{10}^2\omega_5 + 12\omega_{10}^2\omega_5 - 12\omega_{10}^2cs^2\omega_5 - 3\omega_{15}v_2^2\omega_{10}^2\omega_5^2 - 12\omega_{15}\omega_5^2 - 12\omega_{10}^2\omega_5^2 + 36\omega_{15}cs^2\omega_5^2 + 6\omega_{15}\omega_{10}\omega_5^2 + 12\omega_{10}^2cs^2\omega_5^2 - 18\omega_{15}\omega_{10}cs^2\omega_5^2 - 12v_2^2\omega_{10}\omega_5^2)\frac{\rho v_2}{12\omega_{15}\omega_{10}^2\omega_5^2}$$

$$C^{(2),\text{MRT2}}_{\text{D}_x\text{D}^2_y v_1} = (36\omega_{15}cs^2\omega_5^2 - 24\omega_{15}cs^2\omega_{10}^2 + 12v_2^2\omega_{10}^2\omega_5^2 - 12cs^2\omega_{10}^2\omega_5 + 12\omega_{10}\omega_5^2 - 6\omega_{15}v_2^2\omega_{10}\omega_5^2 + 3\omega_{15}\omega_{10}^2\omega_5^2 - 24\omega_{15}cs^2\omega_{10}\omega_5 + 12\omega_{15}v_2^2\omega_5^2 - 18\omega_{15}cs^2\omega_{10}\omega_5^2 - 6\omega_{15}\omega_{10}^2\omega_5 - 12v_2^2\omega_{10}^2\omega_5 + 12cs^2\omega_{10}^2\omega_5^2 - 12cs^2\omega_{10}\omega_5^2 + 6\omega_{15}v_2^2\omega_{10}^2\omega_5 + 12\omega_{10}^2\omega_5 - 11\omega_{15}cs^2\omega_{10}^2\omega_5^2 - 3\omega_{15}v_2^2\omega_{10}^2\omega_5^2 - 12\omega_{15}\omega_5^2 - 12\omega_{10}^2\omega_5^2 + 6\omega_{15}\omega_{10}\omega_5^2 + 42\omega_{15}cs^2\omega_{10}^2\omega_5 - 12v_2^2\omega_{10}\omega_5^2)\frac{\rho v_2}{12\omega_{15}\omega_{10}^2\omega_5^2}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_x\text{D}^2_y v_1} = (18\omega_{15}\omega_{10}^2cs^2 - 18\omega_{15}\omega_{10}cs^2\omega_5 + 6\omega_{15}v_2^2\omega_{10}^2 + 36\omega_{10}^2cs^2\omega_5 + 36\omega_{15}cs^2\omega_5 + 12\omega_{15}v_2^2\omega_5 + 12\omega_{10}\omega_5 - 6\omega_{15}v_2^2\omega_{10}\omega_5 + 3\omega_{15}\omega_{10}^2\omega_5 + 12v_2^2\omega_{10}^2\omega_5 + 12\omega_{10}^2 - 12v_2^2\omega_{10}\omega_5 - 3\omega_{15}v_2^2\omega_{10}^2\omega_5 - 12\omega_{15}\omega_5 - 12\omega_{10}^2\omega_5 + 6\omega_{15}\omega_{10}\omega_5 - 12v_2^2\omega_{10}^2 - 6\omega_{15}\omega_{10}^2 - 11\omega_{15}\omega_{10}^2cs^2\omega_5 - 36\omega_{10}^2cs^2 - 36\omega_{10}cs^2\omega_5)\frac{\rho v_2}{12\omega_{15}\omega_{10}^2\omega_5}$$

$$C^{(2),\text{CLBM2}}_{\text{D}_x\text{D}^2_y v_1} = (-36\omega_{10}cs^2\omega_5 + 6\omega_{15}v_2^2\omega_{10}^2 - 11\omega_{15}\omega_{10}^2cs^2\omega_5 + 12\omega_{15}v_2^2\omega_5 + 12\omega_{10}\omega_5 - 6\omega_{15}v_2^2\omega_{10}\omega_5 + 3\omega_{15}\omega_{10}^2\omega_5 + 12v_2^2\omega_{10}^2\omega_5 + 18\omega_{15}\omega_{10}^2cs^2 + 12\omega_{10}^2 - 36\omega_{10}^2cs^2 - 12v_2^2\omega_{10}\omega_5 - 3\omega_{15}v_2^2\omega_{10}^2\omega_5 - 12\omega_{15}\omega_5 - 12\omega_{10}^2\omega_5 + 6\omega_{15}\omega_{10}\omega_5 - 12v_2^2\omega_{10}^2 - 6\omega_{15}\omega_{10}^2 + 36\omega_{15}cs^2\omega_5 + 36\omega_{10}^2cs^2\omega_5 - 18\omega_{15}\omega_{10}cs^2\omega_5)\frac{\rho v_2}{12\omega_{15}\omega_{10}^2\omega_5}$$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_1}^{(2),\mathrm{CuLBM1}} = (-12\omega_1\omega_5^2 + 36cs^2\omega_1\omega_5^2 - 3v_2^2\omega_7\omega_1\omega_5^2 - 36cs^2\omega_5^2 + 12v_2^2\omega_7\omega_1 - 36cs^2\omega_1\omega_5 - 6v_2^2\omega_7\omega_1\omega_5 - 6\omega_7\omega_5^2 + 12\omega_1\omega_5 + 12\omega_5^2 + 18cs^2\omega_7\omega_5^2 + 36cs^2\omega_7\omega_1 - 12\omega_7\omega_1 - 11cs^2\omega_7\omega_1\omega_5^2 - 12v_2^2\omega_1\omega_5 + 3\omega_7\omega_1\omega_5^2 + 6v_2^2\omega_7\omega_5^2 + 6\omega_7\omega_1\omega_5 + 12v_2^2\omega_1\omega_5^2 - 12v_2^2\omega_5^2 - 18cs^2\omega_7\omega_1\omega_5)\frac{\rho v_2}{12\omega_7\omega_1\omega_5^2}$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_1}^{(2),\mathrm{CuLBM2}} = (-8\omega_3\omega_4\omega_1^2 + 8v_2^2\omega_3\omega_4\omega_2^2 - 6\omega_4\omega_1^2\omega_2^2 + 2v_2^2\omega_3\omega_4\omega_1\omega_2^2 + 18cs^2\omega_4\omega_1^2\omega_2^2 - 36\omega_3cs^2\omega_1\omega_2^2 - 24v_1^2\omega_3\omega_4\omega_2^2 - 12\omega_3cs^2\omega_4\omega_1^2\omega_2 - 4\omega_3\omega_4\omega_1\omega_2 + 18v_1^2\omega_3\omega_4\omega_1^2 + 6v_2^2\omega_3\omega_1^2\omega_2^2 + 12v_1^2\omega_3\omega_4\omega_1\omega_2 - 8v_2^2\omega_4\omega_1\omega_2^2 - 8\omega_3\omega_4\omega_1\omega_2^2 - 12cs^2\omega_4\omega_1^2\omega_2 + 16\omega_3cs^2\omega_4\omega_1^2 - 11\omega_3cs^2\omega_4\omega_1^2\omega_2^2 + 4\omega_4\omega_1^2\omega_2 + 12\omega_3\omega_1\omega_2^2 + 12\omega_3cs^2\omega_4\omega_1\omega_2 - 2v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 6\omega_3\omega_1^2\omega_2^2 - 18v_1^2\omega_3\omega_4\omega_1^2\omega_2 + 4v_2^2\omega_3\omega_4\omega_1^2 + 6v_2^2\omega_4\omega_1^2\omega_2^2 + 12v_1^2\omega_3\omega_4\omega_1^2 + 3\omega_3\omega_4\omega_1^2\omega_2^2 + 16\omega_3cs^2\omega_4\omega_2^2 + 8\omega_3\omega_4\omega_1^2\omega_2 - 12v_2^2\omega_3\omega_1\omega_2^2 - 4v_2^2\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1\omega_2^2 - 3v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 + 18\omega_3cs^2\omega_1^2\omega_2^2 - 24cs^2\omega_4\omega_1\omega_2^2 + 4\omega_3cs^2\omega_4\omega_1\omega_2)\frac{\rho v_2}{12\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2)}$ at $\frac{\partial^3 v_2}{\partial x_1 \partial x_2^2}$:

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2),\mathrm{MRT1}} = (3\omega_{15}v_2^2\omega_5 + \omega_{10}\omega_5 - 3\omega_{15}v_2^2\omega_{10}\omega_5 + 3\omega_{15}v_2^2\omega_{10} + 3v_2^2\omega_{10}^2\omega_5 + \omega_{10}^2 - \omega_{10}cs^2\omega_5 - 3v_2^2\omega_{10}\omega_5 + \omega_{15}\omega_{10}cs^2 - \omega_{15}\omega_{10}cs^2\omega_5 - \omega_{10}^2cs^2 - \omega_{15}\omega_{10} - \omega_{15}\omega_5 - \omega_{10}^2\omega_5 + \omega_{15}cs^2\omega_5 + \omega_{10}^2cs^2\omega_5 + \omega_{15}\omega_{10}\omega_5 - 3v_2^2\omega_{10}^2)\frac{\rho v_1}{\omega_{15}\omega_{10}^2\omega_5}$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2),\mathrm{MRT2}} = (cs^2\omega_{10}^2\omega_5 - \omega_{15}cs^2\omega_{10}\omega_5 + 3\omega_{15}v_2^2\omega_5 + \omega_{10}\omega_5 - 3\omega_{15}v_2^2\omega_{10}\omega_5 + 3\omega_{15}v_2^2\omega_{10} + 3v_2^2\omega_{10}^2\omega_5 + \omega_{15}cs^2\omega_{10} + \omega_{10}^2 + \omega_{15}cs^2\omega_5 - 3v_2^2\omega_{10}\omega_5 - \omega_{15}\omega_{10} - \omega_{15}\omega_5 - \omega_{10}^2\omega_5 + \omega_{15}\omega_{10}\omega_5 - 3v_2^2\omega_{10}^2 - cs^2\omega_{10}^2 - cs^2\omega_{10}\omega_5)\frac{\rho v_1}{\omega_{15}\omega_{10}^2\omega_5}$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y^2 v_2}^{(2),\mathrm{CuLBM2}} = (4\omega_3\omega_1\omega_2 + 3\omega_3cs^2\omega_1\omega_2^2 - 4\omega_3\omega_1^2 - 2\omega_1\omega_2^2 + 8\omega_3cs^2\omega_1^2 - 6cs^2\omega_1^2\omega_2 + 2v_1^2\omega_3\omega_1^2 - v_1^2\omega_3\omega_1^2\omega_2 - 4\omega_3cs^2\omega_1\omega_2 + 6v_2^2\omega_3\omega_2^2 - \omega_3\omega_1\omega_2^2 + 2v_1^2\omega_1\omega_2^2 - 3\omega_3cs^2\omega_1^2\omega_2 - 4\omega_3cs^2\omega_2^2 - 12v_2^2\omega_3\omega_1\omega_2 + 6cs^2\omega_1\omega_2^2 + 2\omega_1^2\omega_2 + 6v_2^2\omega_3\omega_1^2 + v_1^2\omega_3\omega_1\omega_2^2 - 2v_1^2\omega_3\omega_2^2 - 2v_1^2\omega_1^2\omega_2 + \omega_3\omega_1^2\omega_2)\frac{\rho v_1}{6\omega_3\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_y^3 \rho}^{(2)}$ at $\frac{\partial^3 \rho}{\partial x_2^3}$:

$C_{\mathrm{D}_y^3 \rho}^{(2),\mathrm{SRT}} =$
$(-cs^2\omega^2 + 144v_2^2cs^2 + 7v_2^4\omega^2 + 36v_2^4 + 12cs^4 - 36v_2^4\omega + 12cs^2\omega + cs^4\omega^2 - 144v_2^2cs^2\omega - 7v_2^2\omega^2 - 12cs^2 + 36v_2^2\omega - 12cs^4\omega + 24v_2^2cs^2\omega^2 - 36v_2^2)\frac{1}{12\omega^2}$

$C_{\mathrm{D}_y^3 \rho}^{(2),\mathrm{MRT1}} = (-36v_2^4\omega_{10} - 12cs^2 + 36v_2^4 + 12\omega_{10}cs^2 + 7v_2^4\omega_{10}^2 + \omega_{10}^2cs^4 + 24v_2^2\omega_{10}^2cs^2 - 144v_2^2\omega_{10}cs^2 - 12\omega_{10}cs^4 - \omega_{10}^2cs^2 + 144v_2^2cs^2 + 36v_2^2\omega_{10} - 7v_2^2\omega_{10}^2 + 12cs^4 - 36v_2^2)\frac{1}{12\omega_{10}^2}$

$C_{\mathrm{D}_y^3 \rho}^{(2),\mathrm{MRT2}} = (-36v_2^4\omega_{10} - 144cs^2v_2^2\omega_{10} - 12cs^4\omega_{10} + 12cs^4 + 36v_2^4 + cs^4\omega_{10}^2 + 7v_2^4\omega_{10}^2 + 24cs^2v_2^2\omega_{10}^2 + 144cs^2v_2^2 + 12cs^2\omega_{10} + 36v_2^2\omega_{10} - 7v_2^2\omega_{10}^2 - 36v_2^2 - cs^2\omega_{10}^2 - 12cs^2)\frac{1}{12\omega_{10}^2}$

$C_{\mathrm{D}_y^3 \rho}^{(2),\mathrm{CLBM1}} = (12\omega_{10}cs^2 - 36v_2^4\omega_{10} + 36v_2^4 + 24v_2^2\omega_{10}^2cs^2 + \omega_{10}^2cs^4 - 12cs^2 + 7v_2^4\omega_{10}^2 + 12cs^4 + 36v_2^2\omega_{10} - 7v_2^2\omega_{10}^2 - 12\omega_{10}cs^4 - 144v_2^2\omega_{10}cs^2 - 36v_2^2 - \omega_{10}^2cs^2 + 144v_2^2cs^2)\frac{1}{12\omega_{10}^2}$

$C_{\mathrm{D}_y^3 \rho}^{(2),\mathrm{CLBM2}} = (-36v_2^4\omega_{10} + 36v_2^4 - 12cs^2 + \omega_{10}^2cs^4 + 24v_2^2\omega_{10}^2cs^2 + 7v_2^4\omega_{10}^2 + 12\omega_{10}cs^2 - \omega_{10}^2cs^2 + 144v_2^2cs^2 - 144v_2^2\omega_{10}cs^2 + 36v_2^2\omega_{10} - 12\omega_{10}cs^4 - 7v_2^2\omega_{10}^2 - 36v_2^2 + 12cs^4)\frac{1}{12\omega_{10}^2}$

$C_{\mathrm{D}_y^3 \rho}^{(2),\mathrm{CuLBM1}} = (-36v_2^4\omega_5 + 36v_2^4 - cs^2\omega_5^2 + 12cs^4 + 12cs^2\omega_5 + 7v_2^4\omega_5^2 - 12cs^2 + cs^4\omega_5^2 + 144cs^2v_2^2 + 36v_2^2\omega_5 - 144cs^2v_2^2\omega_5 + 24cs^2v_2^2\omega_5^2 - 7v_2^2\omega_5^2 - 36v_2^2 - 12cs^4\omega_5)\frac{1}{12\omega_5^2}$

$C_{\mathrm{D}_y^3 \rho}^{(2),\mathrm{CuLBM2}} = (72v_2^2cs^2\omega_2^2 - 96v_2^2cs^2\omega_1\omega_2^2 + cs^4\omega_1^2\omega_2^2 - 7v_2^2\omega_1^2\omega_2^2 - 12v_2^4\omega_1^2\omega_2 + 4cs^2\omega_1^2\omega_2 - cs^2\omega_1^2\omega_2^2 + 7v_2^4\omega_1^2\omega_2^2 - 4v_2^4\omega_1^2 + 16v_2^4\omega_2^2 + 12v_2^2\omega_1^2\omega_2 + 8cs^4\omega_2^2 + 48v_2^2cs^2\omega_1\omega_2 - 4cs^2\omega_1^2 - 4cs^4\omega_1^2\omega_2 - 16v_2^2\omega_1\omega_2 - 48v_2^2cs^2\omega_1^2\omega_2 + 24v_2^2cs^2\omega_1^2 + 8cs^2\omega_1\omega_2^2 - 24v_2^4\omega_1\omega_2^2 + 16v_2^4\omega_1\omega_2 -$

$$8cs^2\omega_2^2 + 4cs^4\omega_1^2 + 24v_2^2cs^2\omega_1^2\omega_2^2 - 8cs^4\omega_1\omega_2^2 + 24v_2^2\omega_1\omega_2^2 + 4v_2^4\omega_1^2 - 16v_2^2\omega_2^2)\frac{1}{12\omega_1^2\omega_2^2}$$

coefficient $C_{\mathrm{D}_y^3 v_2}^{(2)}$ **at** $\frac{\partial^3 v_2}{\partial x_2^3}$:

$$C_{\mathrm{D}_y^3 v_2}^{(2),\mathrm{SRT}} = (-24 + 5cs^2\omega^2 - 4\omega^2 - 36cs^2\omega + 11v_2^2\omega^2 + 36cs^2 - 60v_2^2\omega + 24\omega + 60v_2^2)\frac{\rho v_2}{6\omega^2}$$

$$C_{\mathrm{D}_y^3 v_2}^{(2),\mathrm{MRT1}} = (-24 + 36cs^2 - 36\omega_{10}cs^2 - 4\omega_{10}^2 + 24\omega_{10} + 5\omega_{10}^2cs^2 - 60v_2^2\omega_{10} + 11v_2^2\omega_{10}^2 + 60v_2^2)\frac{\rho v_2}{6\omega_{10}^2}$$

$$C_{\mathrm{D}_y^3 v_2}^{(2),\mathrm{MRT2}} = (-24 - 4\omega_{10}^2 + 24\omega_{10} - 36cs^2\omega_{10} - 60v_2^2\omega_{10} + 11v_2^2\omega_{10}^2 + 60v_2^2 + 5cs^2\omega_{10}^2 + 36cs^2)\frac{\rho v_2}{6\omega_{10}^2}$$

$$C_{\mathrm{D}_y^3 v_2}^{(2),\mathrm{CLBM1}} = (-24 - 36\omega_{10}cs^2 + 36cs^2 - 4\omega_{10}^2 + 24\omega_{10} - 60v_2^2\omega_{10} + 11v_2^2\omega_{10}^2 + 60v_2^2 + 5\omega_{10}^2cs^2)\frac{\rho v_2}{6\omega_{10}^2}$$

$$C_{\mathrm{D}_y^3 v_2}^{(2),\mathrm{CLBM2}} = (-24 + 36cs^2 - 36\omega_{10}cs^2 - 4\omega_{10}^2 + 24\omega_{10} + 5\omega_{10}^2cs^2 - 60v_2^2\omega_{10} + 11v_2^2\omega_{10}^2 + 60v_2^2)\frac{\rho v_2}{6\omega_{10}^2}$$

$$C_{\mathrm{D}_y^3 v_2}^{(2),\mathrm{CuLBM1}} = (-24 + 5cs^2\omega_5^2 - 36cs^2\omega_5 - 4\omega_5^2 + 36cs^2 - 60v_2^2\omega_5 + 11v_2^2\omega_5^2 + 60v_2^2 + 24\omega_5)\frac{\rho v_2}{6\omega_5^2}$$

$$C_{\mathrm{D}_y^3 v_2}^{(2),\mathrm{CuLBM2}} = (11v_2^2\omega_1^2\omega_2^2 + 16\omega_1\omega_2^2 - 12cs^2\omega_1^2\omega_2 + 5cs^2\omega_1^2\omega_2^2 - 12\omega_2^2 - 8\omega_1\omega_2 + 8v_2^2\omega_1^2 - 20v_2^2\omega_1^2\omega_2 + 8cs^2\omega_1^2 + 24v_2^2\omega_1\omega_2 - 24cs^2\omega_1\omega_2^2 + 8\omega_1^2\omega_2 - 4\omega_1^2\omega_2^2 + 20cs^2\omega_2^2 + 8cs^2\omega_1\omega_2 - 40v_2^2\omega_1\omega_2^2 + 28v_2^2\omega_2^2 - 4\omega_1^2)\frac{\rho v_2}{6\omega_1^2\omega_2^2}$$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2)}$ **at** $\frac{\partial^3 v_2}{\partial x_1^2 \partial x_3}$:

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2),\mathrm{SRT}} = 0$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2),\mathrm{MRT1}} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7\omega_8\omega_5 - \omega_7\omega_5^2 + \omega_5^2 - \omega_8\omega_5)\frac{\rho v_3 cs^2}{\omega_7\omega_8\omega_5^2}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2),\mathrm{MRT2}} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7\omega_8\omega_5 - \omega_7\omega_5^2 + \omega_5^2 - \omega_8\omega_5)\frac{\rho cs^2 v_3}{\omega_7\omega_8\omega_5^2}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2),\mathrm{CLBM1}} = 0$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2),\mathrm{CLBM2}} = 0$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2),\mathrm{CuLBM1}} = 0$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_2}^{(2),\mathrm{CuLBM2}} = (-v_3^2\omega_3\omega_1 - 2v_3^2\omega_4 - \omega_4\omega_1 - 2\omega_3 + v_3^2\omega_4\omega_1 - 3\omega_3cs^2\omega_1 + \omega_3\omega_1 - 6cs^2\omega_4 + 2\omega_4 + 6\omega_3cs^2 + 3cs^2\omega_4\omega_1 + 2v_3^2\omega_3)\frac{\rho v_3}{4\omega_3\omega_4\omega_1}$$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2)}$ **at** $\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3}$:

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2),\mathrm{SRT}} = \frac{-\rho v_2 cs^2}{6}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2),\mathrm{MRT1}} = (-\omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_7\omega_5 - 6\omega_7\omega_8 + 6\omega_6\omega_5 + 6\omega_6\omega_7 + 6\omega_7\omega_8\omega_5 - 6\omega_8\omega_5)\frac{\rho v_2 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2),\mathrm{MRT2}} = (-\omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_7\omega_5 - 6\omega_7\omega_8 + 6\omega_6\omega_5 + 6\omega_6\omega_7 + 6\omega_7\omega_8\omega_5 - 6\omega_8\omega_5)\frac{\rho cs^2 v_2}{6\omega_6\omega_7\omega_8\omega_5}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2),\mathrm{CLBM1}} = \frac{-\rho v_2 cs^2}{6}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2),\mathrm{CLBM2}} = \frac{-\rho v_2 cs^2}{6}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2),\mathrm{CuLBM1}} = \frac{-\rho cs^2 v_2}{6}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_z v_3}^{(2),\mathrm{CuLBM2}} = \frac{-\rho v_2 cs^2}{6}$$

coefficient $C^{(2)}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho}$ **at** $\frac{\partial^3\rho}{\partial x_1\partial x_2\partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z\rho} = (-2v_1^2\omega_1\omega_2 + v_3^2\omega_1^2 - 2v_3^2\omega_1\omega_2 + v_1^2\omega_2^2 - 2\omega_2^2 + 4\omega_1\omega_2 + 6cs^2\omega_1^2 + v_1^2\omega_1^2 + v_3^2\omega_2^2 + 6cs^2\omega_2^2 - 12cs^2\omega_1\omega_2 - 2\omega_1^2)\frac{v_1v_3}{3\omega_1^2\omega_2^2}$

coefficient $C^{(2)}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_1\partial x_2\partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7\omega_8\omega_5 - \omega_7\omega_5^2 + \omega_5^2 - \omega_8\omega_5)\frac{\rho v_3 cs^2}{\omega_7\omega_8\omega_5^2}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7\omega_8\omega_5 - \omega_7\omega_5^2 + \omega_5^2 - \omega_8\omega_5)\frac{\rho cs^2 v_3}{\omega_7\omega_8\omega_5^2}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_1} = (-4\omega_3\omega_4\omega_1^2 - 3\omega_4\omega_1^2\omega_2^2 + 9cs^2\omega_4\omega_1^2\omega_2^2 + 18\omega_3cs^2\omega_1\omega_2^2 + 6v_1^2\omega_3\omega_4\omega_2^2 - 3\omega_3cs^2\omega_4\omega_1^2\omega_2 - 4v_3^2\omega_3\omega_4\omega_1\omega_2^2 + 4\omega_3\omega_4\omega_1\omega_2 - 12v_1^2\omega_3\omega_4\omega_1\omega_2 - v_3^2\omega_3\omega_4\omega_1^2\omega_2 - 3v_3^2\omega_3\omega_1^2\omega_2^2 - \omega_3\omega_4\omega_1\omega_2^2 - 6cs^2\omega_4\omega_1^2\omega_2 - 2v_3^2\omega_3\omega_4\omega_2^2 + 8cs^2\omega_4\omega_1^2 + 2\omega_4\omega_1^2\omega_2 - 6\omega_3\omega_1\omega_2^2 + 3\omega_3cs^2\omega_4\omega_1\omega_2^2 + 3\omega_3\omega_1^2\omega_2^2 + 6v_3^2\omega_3\omega_1\omega_2^2 + 6v_1^2\omega_3\omega_4\omega_1^2 - 2v_3^2\omega_4\omega_1^2\omega_2 + v_3^2\omega_3\omega_4\omega_1\omega_2^2 - 4\omega_3cs^2\omega_4\omega_2^2 + 3v_3^2\omega_4\omega_1^2\omega_2^2 + \omega_3\omega_4\omega_1^2\omega_2 + 2v_3^2\omega_3\omega_4\omega_1^2 + 4\omega_4\omega_1\omega_2^2 - 9\omega_3cs^2\omega_1^2\omega_2^2 - 12cs^2\omega_4\omega_1\omega_2^2 - 4\omega_3cs^2\omega_4\omega_1\omega_2)\frac{\rho v_3}{6\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C^{(2)}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3}$ **at** $\frac{\partial^3 v_3}{\partial x_1\partial x_2\partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7^2 + \omega_7\omega_8\omega_5 - \omega_8\omega_5 - \omega_7^2\omega_5)\frac{\rho v_1 cs^2}{\omega_7^2\omega_8\omega_5}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7^2 + \omega_7\omega_8\omega_5 - \omega_8\omega_5 - \omega_7^2\omega_5)\frac{\rho v_1 cs^2}{\omega_7^2\omega_8\omega_5}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z v_3} = (-4\omega_3\omega_4\omega_1^2 - 3\omega_4\omega_1^2\omega_2^2 + 9cs^2\omega_4\omega_1^2\omega_2^2 + 18\omega_3cs^2\omega_1\omega_2^2 - 2v_1^2\omega_3\omega_4\omega_2^2 - 3\omega_3cs^2\omega_4\omega_1^2\omega_2 - 3v_1^2\omega_3\omega_1^2\omega_2^2 + 4\omega_3\omega_4\omega_1\omega_2 + v_1^2\omega_3\omega_4\omega_1\omega_2^2 - 4v_1^2\omega_4\omega_1\omega_2^2 - \omega_3\omega_4\omega_1\omega_2^2 - 6cs^2\omega_4\omega_1^2\omega_2 + 6v_3^2\omega_3\omega_4\omega_2^2 + 8cs^2\omega_4\omega_1^2 + 2\omega_4\omega_1^2\omega_2 - 6\omega_3\omega_1\omega_2^2 + 3\omega_3cs^2\omega_4\omega_1\omega_2^2 + 3\omega_3\omega_1^2\omega_2^2 - v_1^2\omega_3\omega_4\omega_1^2\omega_2 + 3v_1^2\omega_4\omega_1^2\omega_2^2 + 2v_1^2\omega_3\omega_4\omega_1^2 - 12v_3^2\omega_3\omega_4\omega_1\omega_2 - 2v_1^2\omega_4\omega_1^2\omega_2 - 4\omega_3cs^2\omega_4\omega_2^2 + \omega_3\omega_4\omega_1^2\omega_2 + 6v_3^2\omega_3\omega_4\omega_1^2 + 6v_1^2\omega_3\omega_1\omega_2^2 + 4\omega_4\omega_1\omega_2^2 - 9\omega_3cs^2\omega_1^2\omega_2^2 - 12cs^2\omega_4\omega_1\omega_2^2 - 4\omega_3cs^2\omega_4\omega_1\omega_2)\frac{\rho v_1}{6\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C^{(2)}_{\mathrm{D}_y^2 \mathrm{D}_z \rho}$ **at** $\frac{\partial^3 \rho}{\partial x_2^2 \partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y^2 \mathrm{D}_z \rho} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y^2 \mathrm{D}_z \rho} = (3\omega_{16}\omega_{10}cs^2 - 3\omega_{10}\omega_7 cs^2 + \omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_7 + 3\omega_{16}\omega_7 cs^2 + v_2^2\omega_{10}^2\omega_7 + \omega_{10}^2 + \omega_{10}\omega_7 - \omega_{16}\omega_{10} + v_2^2\omega_{16}\omega_7 - \omega_{10}^2\omega_7 - 3\omega_{16}\omega_{10}\omega_7 cs^2 - v_2^2\omega_{16}\omega_{10}\omega_7 + v_2^2\omega_{16}\omega_{10} - 3\omega_{10}^2 cs^2 - v_2^2\omega_{10}\omega_7 - v_2^2\omega_{10}^2 + 3\omega_{10}^2\omega_7 cs^2)\frac{v_2 v_3}{\omega_{16}\omega_{10}^2\omega_7}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y^2 \mathrm{D}_z \rho} = (3cs^2\omega_{10}^2\omega_7 + \omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_7 + v_2^2\omega_{10}^2\omega_7 - 3cs^2\omega_{16}\omega_{10}\omega_7 + \omega_{10}^2 + \omega_{10}\omega_7 - \omega_{16}\omega_{10} + v_2^2\omega_{16}\omega_7 - \omega_{10}^2\omega_7 - v_2^2\omega_{16}\omega_{10}\omega_7 + v_2^2\omega_{16}\omega_{10} - v_2^2\omega_{10}\omega_7 - 3cs^2\omega_{10}\omega_7 - v_2^2\omega_{10}^2 + 3cs^2\omega_{16}\omega_{10} - 3cs^2\omega_{10}^2 + 3cs^2\omega_{16}\omega_7)\frac{v_2 v_3}{\omega_{16}\omega_{10}^2\omega_7}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y^2 \mathrm{D}_z \rho} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y^2 \mathrm{D}_z \rho} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y^2 \mathrm{D}_z \rho} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y^2 \mathrm{D}_z \rho} = (2v_3^2\omega_1^2 - 3\omega_1\omega_2^2 + 2v_3^2\omega_1\omega_2 - 9cs^2\omega_1^2\omega_2 + 3v_3^2\omega_1\omega_2^2 + 2\omega_2^2 + 2\omega_1\omega_2 + 2v_2^2\omega_1^2 + 12cs^2\omega_1^2 - 4v_2^2\omega_1\omega_2 - 4v_2^2\omega_2^2 + 9cs^2\omega_1\omega_2^2 + 3\omega_1^2\omega_2 - 3v_3^2\omega_1^2\omega_2 - 6cs^2\omega_2^2 - 6cs^2\omega_1\omega_2 + 2v_2^2\omega_2^2 - 4\omega_1^2)\frac{v_2 v_3}{6\omega_1^2\omega_2^2}$

coefficient $C^{(2)}_{\mathrm{D}_y^2 \mathrm{D}_z v_2}$ **at** $\frac{\partial^3 v_2}{\partial x_2^2 \partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y^2 \mathrm{D}_z v_2} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y^2 \mathrm{D}_z v_2} = (\omega_{16}\omega_{10}cs^2 - \omega_{10}\omega_7 cs^2 + \omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_7 + \omega_{16}\omega_7 cs^2 + 3v_2^2\omega_{10}^2\omega_7 + \omega_{10}^2 + \omega_{10}\omega_7 - \omega_{16}\omega_{10} + 3v_2^2\omega_{16}\omega_7 - \omega_{10}^2\omega_7 - \omega_{16}\omega_{10}\omega_7 cs^2 - 3v_2^2\omega_{16}\omega_{10}\omega_7 + 3v_2^2\omega_{16}\omega_{10} - \omega_{10}^2 cs^2 - 3v_2^2\omega_{10}\omega_7 - 3v_2^2\omega_{10}^2 + \omega_{10}^2\omega_7 cs^2)\frac{\rho v_3}{\omega_{16}\omega_{10}^2\omega_7}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y^2 \mathrm{D}_z v_2} = (cs^2\omega_{10}^2\omega_7 + \omega_{16}\omega_{10}\omega_7 - \omega_{16}\omega_7 + 3v_2^2\omega_{10}^2\omega_7 - cs^2\omega_{16}\omega_{10}\omega_7 + \omega_{10}^2 + \omega_{10}\omega_7 - \omega_{16}\omega_{10} + 3v_2^2\omega_{16}\omega_7 - \omega_{10}^2\omega_7 - 3v_2^2\omega_{16}\omega_{10}\omega_7 + 3v_2^2\omega_{16}\omega_{10} - 3v_2^2\omega_{10}\omega_7 - cs^2\omega_{10}\omega_7 - 3v_2^2\omega_{10}^2 + cs^2\omega_{16}\omega_{10} - cs^2\omega_{10}^2 + cs^2\omega_{16}\omega_7)\frac{\rho v_3}{\omega_{16}\omega_{10}^2\omega_7}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y^2 \mathrm{D}_z v_2} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y^2 \mathrm{D}_z v_2} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y^2 \mathrm{D}_z v_2} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y^2 \mathrm{D}_z v_2} = (4\omega_3\omega_1\omega_2 + 3\omega_3 cs^2\omega_1\omega_2^2 - 4\omega_3\omega_1^2 - v_3^2\omega_3\omega_1^2\omega_2 - 2\omega_1\omega_2^2 + 8\omega_3 cs^2\omega_1^2 - 6cs^2\omega_1^2\omega_2 + 2v_3^2\omega_1\omega_2^2 - 4\omega_3 cs^2\omega_1\omega_2 + 6v_2^2\omega_3\omega_2^2 + 2v_3^2\omega_3\omega_1^2 - \omega_3\omega_1\omega_2^2 - 3\omega_3 cs^2\omega_1^2\omega_2 - 4\omega_3 cs^2\omega_2^2 - 12v_2^2\omega_3\omega_1\omega_2 + 6cs^2\omega_1\omega_2^2 + 2\omega_1^2\omega_2 + v_3^2\omega_3\omega_1\omega_2^2 + 6v_2^2\omega_3\omega_1^2 - 2v_3^2\omega_1^2\omega_2 - 2v_3^2\omega_3\omega_2^2 + \omega_3\omega_1^2\omega_2)\frac{\rho v_3}{6\omega_3\omega_1^2\omega_2^2}$

coefficient $C^{(2)}_{\mathrm{D}_y^2 \mathrm{D}_z v_3}$ **at** $\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y^2 \mathrm{D}_z v_3} = (12 - 11cs^2\omega^2 + 3\omega^2 + 36cs^2\omega - 3v_2^2\omega^2 - 36cs^2 + 12v_2^2\omega - 12\omega - 12v_2^2)\frac{\rho v_2}{12\omega^2}$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y^2 \mathrm{D}_z v_3} = (-3v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 12\omega_{10}^2\omega_7 cs^2 + 12\omega_{10}\omega_7^2 - 12\omega_{16}\omega_7^2 + 12v_2^2\omega_{10}^2\omega_7^2 + 42\omega_{16}\omega_{10}^2\omega_7 cs^2 + 6\omega_{16}\omega_{10}\omega_7^2 - 12v_2^2\omega_{10}^2\omega_7 - 18\omega_{16}\omega_{10}\omega_7^2 cs^2 + 6v_2^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{10}^2\omega_7 - 24\omega_{16}\omega_{10}\omega_7 cs^2 - 11\omega_{16}\omega_{10}^2\omega_7^2 cs^2 + 3\omega_{16}\omega_{10}^2\omega_7^2 + 36\omega_{16}\omega_7^2 cs^2 - 12v_2^2\omega_{10}\omega_7^2 - 12\omega_{10}\omega_7^2 cs^2 - 6\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{10}^2\omega_7 cs^2 - 6v_2^2\omega_{16}\omega_{10}\omega_7^2 + 12v_2^2\omega_{16}\omega_7^2 - 24\omega_{16}\omega_{10}^2 cs^2 - 12\omega_{10}^2\omega_7)\frac{\rho v_2}{12\omega_{16}\omega_{10}^2\omega_7^2}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y^2 \mathrm{D}_z v_3} = (-3v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 18cs^2\omega_{16}\omega_{10}\omega_7 + 12\omega_{10}\omega_7^2 - 12\omega_{16}\omega_7^2 - 12cs^2\omega_{10}^2\omega_7 + 12v_2^2\omega_{10}^2\omega_7^2 + 6\omega_{16}\omega_{10}\omega_7^2 + 12cs^2\omega_{10}^2\omega_7^2 - 12v_2^2\omega_{10}^2\omega_7 - 24cs^2\omega_{16}\omega_{10}\omega_7 + 6v_2^2\omega_{16}\omega_{10}^2\omega_7 + 42cs^2\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{10}^2\omega_7 + 36cs^2\omega_{16}\omega_7^2 - 24cs^2\omega_{16}\omega_{10}^2 + 3\omega_{16}\omega_{10}^2\omega_7^2 - 12cs^2\omega_{10}\omega_7^2 - 12v_2^2\omega_{10}\omega_7^2 - 6\omega_{16}\omega_{10}^2\omega_7 - 6v_2^2\omega_{16}\omega_{10}\omega_7^2 - 11cs^2\omega_{16}\omega_{10}^2\omega_7^2 + 12v_2^2\omega_{16}\omega_7^2 - 12\omega_{10}^2\omega_7)\frac{\rho v_2}{12\omega_{16}\omega_{10}^2\omega_7^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(2),\mathrm{CLBM1}} = (-6\omega_{16}\omega_{10}^2 + 36\omega_{10}^2 cs^2\omega_7 + 6\omega_{16}\omega_{10}\omega_7 - 12\omega_{16}\omega_7 + 12v_2^2\omega_{10}^2\omega_7 - 18\omega_{16}\omega_{10}cs^2\omega_7 + 12\omega_{10}^2 + 12\omega_{10}\omega_7 - 3v_2^2\omega_{16}\omega_{10}^2\omega_7 + 12v_2^2\omega_{16}\omega_7 - 12\omega_{10}^2\omega_7 - 6v_2^2\omega_{16}\omega_{10}\omega_7 - 11\omega_{16}\omega_{10}^2 cs^2\omega_7 + 36\omega_{16}cs^2\omega_7 - 12v_2^2\omega_{10}\omega_7 + 18\omega_{16}\omega_{10}^2 cs^2 - 36\omega_{10}cs^2\omega_7 - 12v_2^2\omega_{10}^2 + 6v_2^2\omega_{16}\omega_{10}^2 + 3\omega_{16}\omega_{10}^2\omega_7 - 36\omega_{10}^2 cs^2)\frac{\rho v_2}{12\omega_{16}\omega_{10}^2\omega_7}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(2),\mathrm{CLBM2}} = (-6\omega_{16}\omega_{10}^2 - 36\omega_{10}\omega_7 cs^2 + 6\omega_{16}\omega_{10}\omega_7 - 12\omega_{16}\omega_7 + 12v_2^2\omega_{10}^2\omega_7 - 11\omega_{16}\omega_{10}^2\omega_7 cs^2 + 12\omega_{10}^2 + 12\omega_{10}\omega_7 - 3v_2^2\omega_{16}\omega_{10}^2\omega_7 + 36\omega_{16}\omega_7 cs^2 - 36\omega_{10}^2 cs^2 + 12v_2^2\omega_{16}\omega_7 - 12\omega_{10}^2\omega_7 - 6v_2^2\omega_{16}\omega_{10}\omega_7 - 18\omega_{16}\omega_{10}\omega_7 cs^2 - 12v_2^2\omega_{10}\omega_7 - 12v_2^2\omega_{10}^2 + 36\omega_{10}^2\omega_7 cs^2 + 18\omega_{16}\omega_{10}^2 cs^2 + 6v_2^2\omega_{16}\omega_{10}^2 + 3\omega_{16}\omega_{10}^2\omega_7)\frac{\rho v_2}{12\omega_{16}\omega_{10}^2\omega_7}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(2),\mathrm{CuLBM1}} =$
$(-11 cs^2\omega_3\omega_{11}\omega_5^2 + 3\omega_3\omega_{11}\omega_5^2 - 12v_2^2\omega_3\omega_5 - 36 cs^2\omega_5^2 + 36 cs^2\omega_3\omega_{11} + 12v_2^2\omega_3\omega_5^2 + 6\omega_3\omega_{11}\omega_5 - 12\omega_3\omega_{11} + 18 cs^2\omega_{11}\omega_5^2 + 12\omega_5^2 - 18 cs^2\omega_3\omega_{11}\omega_5 - 6\omega_{11}\omega_5^2 + 12v_2^2\omega_3\omega_{11} - 3v_2^2\omega_3\omega_{11}\omega_5^2 + 36 cs^2\omega_3\omega_5^2 - 12\omega_3\omega_5^2 + 6v_2^2\omega_{11}\omega_5^2 - 12v_2^2\omega_5^2 + 12\omega_3\omega_5 - 6v_2^2\omega_3\omega_{11}\omega_5 - 36 cs^2\omega_3\omega_5)\frac{\rho v_2}{12\omega_3\omega_{11}\omega_5^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(2),\mathrm{CuLBM2}} = (-8\omega_3\omega_4\omega_1^2 + 8v_2^2\omega_3\omega_4\omega_2^2 - 6\omega_4\omega_1^2\omega_2^2 + 2v_2^2\omega_3\omega_4\omega_1\omega_2^2 + 18 cs^2\omega_4\omega_1^2\omega_2^2 - 36\omega_3 cs^2\omega_1\omega_2^2 - 12\omega_3 cs^2\omega_4\omega_1^2\omega_2 - 4\omega_3\omega_4\omega_1\omega_2 + 6v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 8v_2^2\omega_4\omega_1\omega_2^2 - 18v_3^2\omega_3\omega_4\omega_1^2\omega_2 - 8\omega_3\omega_4\omega_1\omega_2^2 - 12 cs^2\omega_4\omega_1^2\omega_2 - 24v_3^2\omega_3\omega_4\omega_2^2 + 16 cs^2\omega_4\omega_1^2 - 11\omega_3 cs^2\omega_4\omega_1^2\omega_2 + 4\omega_4\omega_1^2\omega_2 + 12\omega_3\omega_1\omega_2^2 + 12\omega_3 cs^2\omega_4\omega_1\omega_2^2 - 2v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 6\omega_3\omega_1^2\omega_2^2 + 4v_2^2\omega_3\omega_4\omega_1^2 + 6v_2^2\omega_4\omega_1^2\omega_2^2 + 12v_3^2\omega_3\omega_4\omega_1\omega_2 + 3\omega_3\omega_4\omega_1^2\omega_2^2 + 18v_3^2\omega_3\omega_4\omega_1\omega_2^2 + 16\omega_3 cs^2\omega_4\omega_2^2 + 8\omega_3\omega_4\omega_1^2\omega_2 + 12v_3^2\omega_3\omega_4\omega_1^2 - 12v_2^2\omega_3\omega_1\omega_2^2 - 4v_2^2\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1\omega_2^2 - 3v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 + 18\omega_3 cs^2\omega_1^2\omega_2^2 - 24 cs^2\omega_4\omega_1\omega_2^2 + 4\omega_3 cs^2\omega_4\omega_1\omega_2)\frac{\rho v_2}{12\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2)}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2}$**:**

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2),\mathrm{SRT}} = \frac{-\rho v_2 cs^2}{6}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2),\mathrm{MRT1}} = (-\omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_7\omega_5 - 6\omega_7\omega_8 + 6\omega_6\omega_5 + 6\omega_6\omega_7 + 6\omega_7\omega_8\omega_5 - 6\omega_8\omega_5)\frac{\rho v_2 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2),\mathrm{MRT2}} = (-\omega_6\omega_7\omega_8\omega_5 - 6\omega_6\omega_7\omega_5 - 6\omega_7\omega_8 + 6\omega_6\omega_5 + 6\omega_6\omega_7 + 6\omega_7\omega_8\omega_5 - 6\omega_8\omega_5)\frac{\rho cs^2 v_2}{6\omega_6\omega_7\omega_8\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2),\mathrm{CLBM1}} = \frac{-\rho v_2 cs^2}{6}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2),\mathrm{CLBM2}} = \frac{-\rho v_2 cs^2}{6}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2),\mathrm{CuLBM1}} = \frac{-\rho cs^2 v_2}{6}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_1}^{(2),\mathrm{CuLBM2}} = \frac{-\rho v_2 cs^2}{6}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2)}$ **at** $\frac{\partial^3 v_2}{\partial x_1 \partial x_3^2}$**:**

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2),\mathrm{MRT1}} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7^2 + \omega_7\omega_8\omega_5 - \omega_8\omega_5 - \omega_7^2\omega_5)\frac{\rho v_1 cs^2}{\omega_7^2\omega_8\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2),\mathrm{MRT2}} = (\omega_7\omega_5 - \omega_7\omega_8 + \omega_7^2 + \omega_7\omega_8\omega_5 - \omega_8\omega_5 - \omega_7^2\omega_5)\frac{\rho v_1 cs^2}{\omega_7^2\omega_8\omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z^2 v_2}^{(2),\mathrm{CuLBM2}} = (-\omega_4\omega_1 + 2v_1^2\omega_3 - v_1^2\omega_3\omega_1 - 2\omega_3 - 3\omega_3 cs^2\omega_1 + \omega_3\omega_1 - 6 cs^2\omega_4 + v_1^2\omega_4\omega_1 - 2v_1^2\omega_4 + 2\omega_4 + 6\omega_3 cs^2 + 3 cs^2\omega_4\omega_1)\frac{\rho v_1}{4\omega_3\omega_4\omega_1}$

coefficient $C_{\mathrm{D}_y \mathrm{D}_z^2 \rho}^{(2)}$ **at** $\frac{\partial^3 \rho}{\partial x_2 \partial x_3^2}$**:**

$$C^{(2),\text{SRT}}_{\mathrm{D}_y\mathrm{D}_z^2\rho} = (-12 - \omega^2 + 12\omega)\frac{cs^4}{6\omega^2}$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^2\rho} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^2\rho} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2\rho} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2\rho} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$$

$$C^{(2),\text{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2\rho} = (-12 - \omega_3^2 + 12\omega_3)\frac{cs^4}{6\omega_3^2}$$

$$C^{(2),\text{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2\rho} =$$
$$(-4v_3^4\omega_2^2 + 3v_3^4\omega_1\omega_2^2 - cs^4\omega_1^2\omega_2^2 - 2v_3^2\omega_1^2 + 6v_3^2cs^2\omega_1\omega_2 + 12v_3^2cs^2\omega_1^2 - 2v_3^2\omega_1\omega_2 + 2cs^2\omega_1^2\omega_2 - 3v_3^2\omega_1\omega_2^2 + 15v_3^2cs^2\omega_1\omega_2^2 - 14cs^4\omega_2^2 + 2v_3^4\omega_1\omega_2 - 2cs^2\omega_1^2 - 2cs^4\omega_1^2\omega_2 - 3v_3^4\omega_1^2\omega_2 + 4v_3^2\omega_2^2 + 2v_3^2\omega_1^2 - 2cs^2\omega_1\omega_2^2 - 18v_3^2cs^2\omega_2^2 + 3v_3^2\omega_1^2\omega_2 + 2cs^2\omega_2^2 + 2cs^4\omega_1^2 + 14cs^4\omega_1\omega_2^2 - 15v_3^2cs^2\omega_1^2\omega_2)\frac{1}{6\omega_1^2\omega_2^2}$$

coefficient $C^{(2)}_{\mathrm{D}_y\mathrm{D}_z^2 v_2}$ at $\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2}$:

$$C^{(2),\text{SRT}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_2 cs^2}{6}$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-12\omega_{10}\omega_7^2 + 12\omega_{16}\omega_{10}\omega_7 + 12\omega_7^2 - \omega_{16}\omega_{10}\omega_7^2 - 12\omega_{16}\omega_7 + 12\omega_{10}\omega_7 - 12\omega_{16}\omega_{10})\frac{\rho v_2 cs^2}{6\omega_{16}\omega_{10}\omega_7^2}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-12\omega_{10}\omega_7^2 + 12\omega_{16}\omega_{10}\omega_7 + 12\omega_7^2 - \omega_{16}\omega_{10}\omega_7^2 - 12\omega_{16}\omega_7 + 12\omega_{10}\omega_7 - 12\omega_{16}\omega_{10})\frac{\rho cs^2 v_2}{6\omega_{16}\omega_{10}\omega_7^2}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_2 cs^2}{6}$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_2 cs^2}{6}$$

$$C^{(2),\text{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho cs^2 v_2}{6}$$

$$C^{(2),\text{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = \frac{-\rho v_2 cs^2}{6}$$

coefficient $C^{(2)}_{\mathrm{D}_y\mathrm{D}_z^2 v_3}$ at $\frac{\partial^3 v_3}{\partial x_2 \partial x_3^2}$:

$$C^{(2),\text{SRT}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = (-\omega_7^2 - 2\omega_{19} + 2\omega_7 + \omega_{19}\omega_7)\frac{\rho v_3 cs^2}{\omega_{19}\omega_7^2}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = (-\omega_7^2 - 2\omega_{19} + 2\omega_7 + \omega_{19}\omega_7)\frac{\rho cs^2 v_3}{\omega_{19}\omega_7^2}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$$

$$C^{(2),\text{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$$

$$C^{(2),\text{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = (8v_3^2\omega_1^2 - 5\omega_1\omega_2^2 + 6v_3^2\omega_1\omega_2 - 9cs^2\omega_1^2\omega_2 + 11v_3^2\omega_1\omega_2^2 + 6\omega_2^2 - 2\omega_1\omega_2 + 8cs^2\omega_1^2 - 14v_3^2\omega_2^2 + 9cs^2\omega_1\omega_2^2 + 5\omega_1^2\omega_2 - 11v_3^2\omega_1^2\omega_2 - 10cs^2\omega_2^2 + 2cs^2\omega_1\omega_2 - 4\omega_1^2)\frac{\rho v_3}{6\omega_1^2\omega_2^2}$$

coefficient $C^{(2)}_{\mathrm{D}_z^3\rho}$ at $\frac{\partial^3 \rho}{\partial x_3^3}$:

$C_{\mathrm{D}_z^3\rho}^{(2),\mathrm{SRT}} = (-1 + 3cs^2 + v_3^2)\frac{v_2 v_3}{12}$

$C_{\mathrm{D}_z^3\rho}^{(2),\mathrm{MRT1}} = (-36\omega_{11}cs^2 + 3\omega_{19}\omega_7\omega_{11}cs^2 - 12v_3^2\omega_{11} - 12\omega_{19} - \omega_{19}\omega_7\omega_{11} + 12v_3^2\omega_{19} + 6\omega_{19}\omega_7 + 18\omega_7\omega_{11}cs^2 - 6\omega_7\omega_{11} + v_3^2\omega_{19}\omega_7\omega_{11} + 12\omega_{11} + 36\omega_{19}cs^2 + 6v_3^2\omega_7\omega_{11} - 18\omega_{19}\omega_7cs^2 - 6v_3^2\omega_{19}\omega_7)\frac{v_2 v_3}{12\omega_{19}\omega_7\omega_{11}}$

$C_{\mathrm{D}_z^3\rho}^{(2),\mathrm{MRT2}} = (18cs^2\omega_7\omega_{11} - 36cs^2\omega_{11} - 18cs^2\omega_{19}\omega_7 + 3cs^2\omega_{19}\omega_7\omega_{11} - 12v_3^2\omega_{11} - 12\omega_{19} - \omega_{19}\omega_7\omega_{11} + 12v_3^2\omega_{19} + 6\omega_{19}\omega_7 - 6\omega_7\omega_{11} + v_3^2\omega_{19}\omega_7\omega_{11} + 12\omega_{11} + 6v_3^2\omega_7\omega_{11} + 36cs^2\omega_{19} - 6v_3^2\omega_{19}\omega_7)\frac{v_2 v_3}{12\omega_{19}\omega_7\omega_{11}}$

$C_{\mathrm{D}_z^3\rho}^{(2),\mathrm{CLBM1}} = (-1 + 3cs^2 + v_3^2)\frac{v_2 v_3}{12}$

$C_{\mathrm{D}_z^3\rho}^{(2),\mathrm{CLBM2}} = (-1 + 3cs^2 + v_3^2)\frac{v_2 v_3}{12}$

$C_{\mathrm{D}_z^3\rho}^{(2),\mathrm{CuLBM1}} = (-1 + 3cs^2 + v_3^2)\frac{v_2 v_3}{12}$

$C_{\mathrm{D}_z^3\rho}^{(2),\mathrm{CuLBM2}} = (-1 + 3cs^2 + v_3^2)\frac{v_2 v_3}{12}$

coefficient $C_{\mathrm{D}_z^3 v_2}^{(2)}$ at $\frac{\partial^3 v_2}{\partial x_3^3}$:

$C_{\mathrm{D}_z^3 v_2}^{(2),\mathrm{SRT}} = (6 - 3cs^2\omega^2 + \omega^2 + 18cs^2\omega + 6v_3^2\omega - 18cs^2 - 6v_3^2 - 6\omega - v_3^2\omega^2)\frac{\rho v_3}{6\omega^2}$

$C_{\mathrm{D}_z^3 v_2}^{(2),\mathrm{MRT1}} =$
$(-6\omega_7 cs^2 - 3\omega_{19}\omega_7^2 cs^2 - 3\omega_7^2 + 6\omega_7 - v_3^2\omega_{19}\omega_7^2 - 3\omega_{19}\omega_7 + 3v_3^2\omega_7^2 - 12\omega_{19}cs^2 - 6v_3^2\omega_7 + 15\omega_{19}\omega_7 cs^2 + 3\omega_7^2 cs^2 + \omega_{19}\omega_7^2 + 3v_3^2\omega_{19}\omega_7)\frac{\rho v_3}{6\omega_{19}\omega_7^2}$

$C_{\mathrm{D}_z^3 v_2}^{(2),\mathrm{MRT2}} =$
$(15cs^2\omega_{19}\omega_7 - 3cs^2\omega_{19}\omega_7^2 - 3\omega_7^2 + 6\omega_7 - v_3^2\omega_{19}\omega_7^2 - 3\omega_{19}\omega_7 - 6cs^2\omega_7 + 3v_3^2\omega_7^2 - 6v_3^2\omega_7 + 3cs^2\omega_7^2 + \omega_{19}\omega_7^2 - 12cs^2\omega_{19} + 3v_3^2\omega_{19}\omega_7)\frac{\rho v_3}{6\omega_{19}\omega_7^2}$

$C_{\mathrm{D}_z^3 v_2}^{(2),\mathrm{CLBM1}} = (6 - 3\omega_{19}cs^2\omega_7 - 3\omega_{19} - 18cs^2 - 3\omega_7 + 3v_3^2\omega_{19} + \omega_{19}\omega_7 + 3v_3^2\omega_7 - 6v_3^2 + 9cs^2\omega_7 - v_3^2\omega_{19}\omega_7 + 9\omega_{19}cs^2)\frac{\rho v_3}{6\omega_{19}\omega_7}$

$C_{\mathrm{D}_z^3 v_2}^{(2),\mathrm{CLBM2}} = (6 + 9\omega_7 cs^2 - 18cs^2 - 3\omega_{19} - 3\omega_7 + 9\omega_{19}cs^2 + 3v_3^2\omega_{19} + \omega_{19}\omega_7 + 3v_3^2\omega_7 - 6v_3^2 - 3\omega_{19}\omega_7 cs^2 - v_3^2\omega_{19}\omega_7)\frac{\rho v_3}{6\omega_{19}\omega_7}$

$C_{\mathrm{D}_z^3 v_2}^{(2),\mathrm{CuLBM1}} = (6 + 9cs^2\omega_3 - 3\omega_3 + 9cs^2\omega_{10} - 3\omega_{10} - 18cs^2 - v_3^2\omega_3\omega_{10} + 3v_3^2\omega_3 - 6v_3^2 - 3cs^2\omega_3\omega_{10} + 3v_3^2\omega_{10} + \omega_3\omega_{10})\frac{\rho v_3}{6\omega_3\omega_{10}}$

$C_{\mathrm{D}_z^3 v_2}^{(2),\mathrm{CuLBM2}} = (3v_3^2\omega_3\omega_1 - 6\omega_3\omega_4 - 6v_3^2\omega_4 - 6\omega_3 cs^2\omega_4\omega_1 - 3\omega_4\omega_1 + 18\omega_3 cs^2\omega_4 + 6\omega_3 + 3v_3^2\omega_4\omega_1 + 9\omega_3 cs^2\omega_1 - 3\omega_3\omega_1 - 18cs^2\omega_4 + 6v_3^2\omega_3\omega_4 + 2\omega_3\omega_4\omega_1 + 6\omega_4 - 18\omega_3 cs^2 + 9cs^2\omega_4\omega_1 - 6v_3^2\omega_3 - 2v_3^2\omega_3\omega_4\omega_1)\frac{\rho v_3}{12\omega_3\omega_4\omega_1}$

coefficient $C_{\mathrm{D}_z^3 v_3}^{(2)}$ at $\frac{\partial^3 v_3}{\partial x_3^3}$:

$C_{\mathrm{D}_z^3 v_3}^{(2),\mathrm{SRT}} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_2}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(2),\mathrm{MRT1}} = (-12\omega_{11}cs^2 + \omega_{19}\omega_7\omega_{11}cs^2 - 36v_3^2\omega_{11} - 12\omega_{19} - \omega_{19}\omega_7\omega_{11} + 36v_3^2\omega_{19} + 6\omega_{19}\omega_7 + 6\omega_7\omega_{11}cs^2 - 6\omega_7\omega_{11} + 3v_3^2\omega_{19}\omega_7\omega_{11} + 12\omega_{11} + 12\omega_{19}cs^2 + 18v_3^2\omega_7\omega_{11} - 6\omega_{19}\omega_7 cs^2 - 18v_3^2\omega_{19}\omega_7)\frac{\rho v_2}{12\omega_{19}\omega_7\omega_{11}}$

$C_{\mathrm{D}_z^3 v_3}^{(2),\mathrm{MRT2}} = (6cs^2\omega_7\omega_{11} - 12cs^2\omega_{11} - 6cs^2\omega_{19}\omega_7 + cs^2\omega_{19}\omega_7\omega_{11} - 36v_3^2\omega_{11} - 12\omega_{19} - \omega_{19}\omega_7\omega_{11} + 36v_3^2\omega_{19} + 6\omega_{19}\omega_7 - 6\omega_7\omega_{11} + 3v_3^2\omega_{19}\omega_7\omega_{11} + 12\omega_{11} + 18v_3^2\omega_7\omega_{11} + 12cs^2\omega_{19} - 18v_3^2\omega_{19}\omega_7)\frac{\rho v_2}{12\omega_{19}\omega_7\omega_{11}}$

$C_{\mathrm{D}_z^3 v_3}^{(2),\mathrm{CLBM1}} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_2}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(2),\mathrm{CLBM2}} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_2}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(2),\mathrm{CuLBM1}} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_2}{12}$

$C_{\mathrm{D}_z^3 v_3}^{(2),\mathrm{CuLBM2}} = (-1 + cs^2 + 3v_3^2)\frac{\rho v_2}{12}$

coefficient $C^{(2)}_{\mathrm{D}^4_x \rho}$ at $\frac{\partial^4 \rho}{\partial x_1^4}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}^4_x \rho} = (3v_1^2\omega - 12v_1^2 cs^2\omega + 6v_1^4 + 2cs^4 + cs^2\omega - 6v_1^2 - 3v_1^4\omega - 2cs^2 + 24v_1^2 cs^2 - cs^4\omega)\frac{v_2}{24\omega}$$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}^4_x \rho} = (-144v_1^2\omega_9\omega_{12}cs^2\omega_5 - 96v_1^4\omega_9\omega_{12}^2\omega_5 - 48\omega_9\omega_{12}^2 cs^4\omega_5 + 24\omega_9^2\omega_{12}cs^2 - 24v_1^2\omega_9\omega_{12}\omega_5^2 + 12v_1^4\omega_9^2\omega_5^2 - 12\omega_9^2\omega_{12}cs^4\omega_5^2 - 24\omega_9\omega_{12}^2 cs^2 -$
$12v_1^2\omega_9^2\omega_{12}^2 cs^2\omega_5^2 - 144v_1^2\omega_{12}^2 cs^2\omega_5^2 + 24v_1^2\omega_9^2\omega_5 + 96v_1^4\omega_9\omega_{12}\omega_5 + 3v_1^2\omega_9^2\omega_{12}^2\omega_5^2 - 48v_1^2\omega_9\omega_{12}^2 - 12\omega_{12}^2 cs^4\omega_5^2 + 24\omega_9^2 cs^2\omega_5 + 24\omega_{12}^2 cs^4\omega_5 -$
$12\omega_9^2 cs^2\omega_5^2 + \omega_9^2\omega_{12}^2 cs^2\omega_5^2 + 48\omega_9\omega_{12}cs^4\omega_5 + 288v_1^2\omega_{12}^2 cs^2\omega_5 - 12v_1^2\omega_9^2\omega_5^2 - 30v_1^4\omega_9^2\omega_{12}\omega_5 + 48v_1^4\omega_9\omega_{12}\omega_5 - 24v_1^4\omega_9^2\omega_5 + 72v_1^2\omega_9\omega_{12}cs^2\omega_5^2 +$
$48v_1^4\omega_9\omega_{12}^2 + 14\omega_9\omega_{12}^2 cs^4\omega_5 + 36v_1^4\omega_9\omega_{12}^2\omega_5 + 12\omega_9^2\omega_{12}cs^2\omega_5^2 + 72v_1^4\omega_{12}^2\omega_5 - 144v_1^2\omega_9^2 cs^2\omega_5 + 96v_1^2\omega_9\omega_{12}^2\omega_5 - 24\omega_9 cs^4\omega_5 + 216v_1^2\omega_9\omega_{12}^2 cs^2 +$
$24v_1^4\omega_9\omega_{12}\omega_5^2 + 12\omega_{12}^2 cs^2\omega_5^2 + 432v_1^2\omega_9\omega_{12}cs^2\omega_5 + 48v_1^2\omega_9^2\omega_{12} - 96v_1^2\omega_9\omega_{12}\omega_5 + 48\omega_9\omega_{12}^2 cs^2\omega_5 + 36v_1^2\omega_{12}^2\omega_5^2 - 3v_1^4\omega_9\omega_{12}^2\omega_5^2 - 216v_1^2\omega_9\omega_{12}cs^2 +$
$150v_1^2\omega_9\omega_{12}^2 cs^2\omega_5^2 - 72v_1^2\omega_{12}^2\omega_5 - 432v_1^4\omega_9\omega_{12}^2 cs^2\omega_5 - 14\omega_9\omega_{12}^2 cs^2\omega_5^2 + 30v_1^2\omega_9\omega_{12}^2\omega_5 - 24\omega_9\omega_{12}cs^4 - 48v_1^4\omega_9\omega_{12} + 12\omega_9 cs^4\omega_5^2 - 48v_1^4\omega_9\omega_{12}\omega_5 -$
$24\omega_{12}^2 cs^2\omega_5 - 126v_1^2\omega_9^2\omega_{12}cs^2\omega_5^2 - \omega_9^2\omega_{12}cs^4\omega_5^2 - 48\omega_9\omega_{12}cs^2\omega_5 + 24\omega_9\omega_{12}^2 cs^4 + 72v_1^2\omega_9^2 cs^2\omega_5^2 - 36v_1^4\omega_{12}^2\omega_5^2 - 36v_1^2\omega_9\omega_{12}^2\omega_5^2)\frac{v_2}{24\omega_9^2\omega_{12}^2\omega_5^2}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}^4_x \rho} = (-12cs^4\omega_{12}^2\omega_5 - 14\omega_9 cs^2\omega_{12}^2\omega_5^2 - 96v_1^4\omega_9\omega_{12}^2\omega_5 - 48\omega_9^2 cs^2\omega_{12}\omega_5 - 126v_1^2\omega_9^2 cs^2\omega_{12}\omega_5^2 - 24v_1^2\omega_9\omega_{12}\omega_5^2 - 432v_1^2\omega_9 cs^2\omega_{12}^2\omega_5 +$
$12v_1^4\omega_9^2\omega_5 + 24v_1^2\omega_9^2\omega_5 + 12\omega_9 cs^4\omega_5^2 + 96v_1^4\omega_9^2\omega_{12}\omega_5 + 3v_1^2\omega_9^2\omega_{12}^2\omega_5^2 - 48v_1^2\omega_9\omega_{12}^2 - 24cs^2\omega_{12}^2\omega_5 - 48\omega_9 cs^4\omega_{12}^2\omega_5 + 72v_1^4\omega_9 cs^2\omega_5^2 -$
$12\omega_9 cs^4\omega_{12}^2\omega_5 + 12cs^2\omega_{12}^2\omega_5^2 + 14\omega_9 cs^4\omega_{12}^2\omega_5 + 48\omega_9 cs^4\omega_{12}\omega_5 - 144v_1^2\omega_9 cs^2\omega_5 - 12v_1^2\omega_9^2\omega_5 - 24\omega_9 cs^4\omega_5 - 30v_1^4\omega_9\omega_{12}\omega_5 +$
$432v_1^2\omega_9^2 cs^2\omega_{12}\omega_5 + 150v_1^2\omega_9 cs^2\omega_{12}^2\omega_5^2 + 48v_1^2\omega_9\omega_{12}\omega_5 + 24\omega_9 cs^4\omega_{12} - 24v_1^4\omega_9\omega_5 + 24\omega_9 cs^2\omega_{12} + 24cs^4\omega_{12}^2\omega_5 + 48\omega_9 cs^2\omega_{12}^2\omega_5 +$
$48v_1^4\omega_9\omega_{12} + 36v_1^4\omega_9\omega_{12}^2\omega_5 + 216v_1^2\omega_9 cs^2\omega_{12}^2 + 12\omega_9^2 cs^2\omega_{12}\omega_5^2 + 288v_1^2 cs^2\omega_{12}^2\omega_5 + 72v_1^4\omega_{12}^2\omega_5 - 12\omega_9^2 cs^2\omega_5^2 + 72v_1^2\omega_9 cs^2\omega_{12}\omega_5^2 +$
$96v_1^2\omega_9\omega_{12}^2\omega_5 + 24v_1^4\omega_9\omega_{12}\omega_5 + \omega_9^2 cs^2\omega_{12}^2\omega_5 + 48v_1^2\omega_9^2\omega_{12} - 96v_1^2\omega_9\omega_{12}\omega_5 + 36v_1^2\omega_9\omega_{12}^2\omega_5 - 3v_1^4\omega_9\omega_{12}^2\omega_5^2 - 72v_1^2\omega_9^2\omega_5 - 216v_1^2\omega_9^2 cs^2\omega_{12} -$
$24\omega_9 cs^2\omega_{12}^2 - 24\omega_9^2 cs^4\omega_{12} + 30v_1^2\omega_9\omega_{12}\omega_5^2 - \omega_9^2 cs^4\omega_{12}^2\omega_5 - 48v_1^4\omega_9\omega_{12} - 48v_1^4\omega_9\omega_{12}\omega_5 - 12v_1^2\omega_9 cs^2\omega_{12}^2\omega_5 - 144v_1^2 cs^2\omega_{12}^2\omega_5 -$
$36v_1^4\omega_{12}^2\omega_5 - 36v_1^2\omega_9\omega_{12}^2\omega_5 - 144v_1^2\omega_9 cs^2\omega_{12}\omega_5 + 24\omega_9^2 cs^2\omega_5)\frac{v_2}{24\omega_9^2\omega_{12}^2\omega_5^2}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}^4_x \rho} = (-\omega_9 cs^4 + 24v_1^2 cs^2 - 3v_1^4\omega_9 + 6v_1^4 - 2cs^2 - 6v_1^2 + 2cs^4 + 3v_1^2\omega_9 - 12v_1^2\omega_9 cs^2 + \omega_9 cs^2)\frac{v_2}{24\omega_9}$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}^4_x \rho} = (-2cs^2 - 3v_1^4\omega_9 + 6v_1^4 + 24v_1^2 cs^2 - \omega_9 cs^4 - 6v_1^2 + 3v_1^2\omega_9 + \omega_9 cs^2 + 2cs^4 - 12v_1^2\omega_9 cs^2)\frac{v_2}{24\omega_9}$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}^4_x \rho} = (-cs^4\omega_4 - 3v_1^4\omega_4 + 2cs^4 + 6v_1^4 - 6v_1^2 + 3v_1^2\omega_4 - 2cs^2 - 12cs^2 v_1^2\omega_4 + cs^2\omega_4 + 24cs^2 v_1^2)\frac{v_2}{24\omega_4}$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}^4_x \rho} = (4cs^4\omega_2 - 2cs^2\omega_1 + 9v_1^2\omega_1\omega_2 + 6v_1^4\omega_1 - 9v_1^4\omega_1\omega_2 - 12v_1^2\omega_2 + 24v_1^2 cs^2\omega_1 - 36v_1^2 cs^2\omega_1\omega_2 - 3cs^4\omega_1\omega_2 - 4cs^2\omega_2 + 2cs^4\omega_1 +$
$3cs^2\omega_1\omega_2 - 6v_1^2\omega_1 + 12v_1^4\omega_2 + 48v_1^2 cs^2\omega_2)\frac{v_2}{72\omega_1\omega_2}$

coefficient $C^{(2)}_{\mathrm{D}^4_x v_1}$ at $\frac{\partial^4 v_1}{\partial x_1^4}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}^4_x v_1} = (-4 - 5v_1^2\omega - 3cs^2\omega + 10v_1^2 + 6cs^2 + 2\omega)\frac{\rho v_1 v_2}{12\omega}$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}^4_x v_1} = (-12\omega_9^2\omega_5^2 - 60\omega_9^2\omega_{12}cs^2 - 72\omega_9^2\omega_{12}\omega_5 + 12\omega_9\omega_{12}cs^2\omega_5^2 + 36v_1^2\omega_9\omega_{12}\omega_5^2 + 60\omega_9\omega_{12}^2 cs^2 - 48v_1^2\omega_9^2\omega_5 - 5v_1^2\omega_9^2\omega_{12}^2\omega_5^2 +$
$84v_1^2\omega_9\omega_{12}^2 - 48\omega_9^2 cs^2\omega_5 + 72\omega_9\omega_{12}^2\omega_5 + 24\omega_9^2 cs^2\omega_5^2 - 25\omega_9\omega_{12}^2\omega_5^2 - 3\omega_9^2\omega_{12}^2 cs^2\omega_5^2 + 24v_1^2\omega_9^2\omega_5^2 + 21\omega_9^2\omega_{12}\omega_5 - 72v_1^2\omega_9\omega_{12}\omega_5 - 36\omega_9\omega_{12}^2 -$
$24\omega_9\omega_{12}cs^2\omega_5^2 + 24\omega_9^2\omega_5 - 33\omega_9^2\omega_{12}cs^2\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_5^2 - 168v_1^2\omega_9\omega_{12}^2\omega_5 - 36\omega_{12}^2 cs^2\omega_5^2 - 48\omega_{12}^2\omega_5 - 84v_1^2\omega_9^2\omega_{12} + 168v_1^2\omega_9^2\omega_{12}\omega_5 -$
$120\omega_9\omega_{12}^2 cs^2\omega_5 - 12\omega_9\omega_{12}\omega_5^2 - 60v_1^2\omega_{12}^2\omega_5^2 + 120v_1^2\omega_{12}^2\omega_5 + 39\omega_9\omega_{12}^2 cs^2\omega_5^2 - 51v_1^2\omega_9\omega_{12}^2\omega_5^2 + 24\omega_9\omega_{12}^2\omega_5 + 72\omega_{12}^2 cs^2\omega_5 + 24\omega_{12}^2\omega_5^2 +$
$120\omega_9^2\omega_{12}cs^2\omega_5 + 61v_1^2\omega_9\omega_{12}^2\omega_5^2 + 36\omega_9^2\omega_{12})\frac{\rho v_1 v_2}{12\omega_9^2\omega_{12}^2\omega_5^2}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}^4_x v_1} =$
$(39\omega_9 cs^2\omega_{12}^2\omega_5^2 - 12\omega_9^2\omega_5^2 + 120\omega_9^2 cs^2\omega_{12}\omega_5 - 72\omega_9^2\omega_{12}\omega_5 + 36v_1^2\omega_9\omega_{12}\omega_5^2 - 48v_1^2\omega_9^2\omega_5 - 5v_1^2\omega_9^2\omega_{12}^2\omega_5^2 + 84v_1^2\omega_9\omega_{12}^2 + 72cs^2\omega_{12}^2\omega_5 + 72\omega_9\omega_{12}^2\omega_5 -$
$36cs^2\omega_{12}^2\omega_5 - 25\omega_9\omega_{12}^2\omega_5^2 + 24v_1^2\omega_9^2\omega_5^2 + 21\omega_9^2\omega_{12}\omega_5 - 72v_1^2\omega_9\omega_{12}\omega_5 - 36\omega_9\omega_{12}^2 - 60\omega_9^2 cs^2\omega_{12} + 24\omega_9^2\omega_5 - 120\omega_9 cs^2\omega_{12}^2\omega_5 - 33\omega_9^2 cs^2\omega_{12}\omega_5^2 +$
$2\omega_9^2\omega_{12}^2\omega_5^2 + 24\omega_9^2 cs^2\omega_5^2 - 168v_1^2\omega_9\omega_{12}^2\omega_5 - 24\omega_9 cs^2\omega_{12}\omega_5 - 48\omega_{12}^2\omega_5 - 3\omega_9^2 cs^2\omega_{12}^2\omega_5 - 84v_1^2\omega_9^2\omega_{12} + 168v_1^2\omega_9^2\omega_{12}\omega_5 - 12\omega_9\omega_{12}\omega_5^2 - 60v_1^2\omega_{12}^2\omega_5^2 +$
$120v_1^2\omega_{12}^2\omega_5 + 60\omega_9 cs^2\omega_{12}^2 - 51v_1^2\omega_9\omega_{12}^2\omega_5^2 + 24\omega_9\omega_{12}^2\omega_5 + 12\omega_9 cs^2\omega_{12}^2\omega_5 + 24\omega_{12}^2\omega_5^2 + 61v_1^2\omega_9\omega_{12}^2\omega_5^2 + 36\omega_9^2\omega_{12} - 48\omega_9^2 cs^2\omega_5)\frac{\rho v_1 v_2}{12\omega_9^2\omega_{12}^2\omega_5^2}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}^4_x v_1} = (-4 + 2\omega_9 + 6cs^2 + 10v_1^2 - 5v_1^2\omega_9 - 3\omega_9 cs^2)\frac{\rho v_1 v_2}{12\omega_9}$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}^4_x v_1} = (-4 + 2\omega_9 + 6cs^2 + 10v_1^2 - 5v_1^2\omega_9 - 3\omega_9 cs^2)\frac{\rho v_1 v_2}{12\omega_9}$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}^4_x v_1} = (-4 + 10v_1^2 - 5v_1^2\omega_4 + 6cs^2 + 2\omega_4 - 3cs^2\omega_4)\frac{\rho v_1 v_2}{12\omega_4}$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}^4_x v_1} = (6cs^2\omega_1 - 15v_1^2\omega_1\omega_2 + 20v_1^2\omega_2 + 6\omega_1\omega_2 + 12cs^2\omega_2 - 4\omega_1 - 9cs^2\omega_1\omega_2 + 10v_1^2\omega_1 - 8\omega_2)\frac{\rho v_1 v_2}{36\omega_1\omega_2}$

coefficient $C^{(2)}_{\mathrm{D}^4_x v_2}$ at $\frac{\partial^4 v_2}{\partial x_1^4}$:

$$C^{(2),\text{SRT}}_{\text{D}^4_x v_2} = (-14cs^2\omega^2 - 108v_1^2\omega + 216v_1^2cs^2\omega + cs^2\omega^3 - 84v_1^2cs^2\omega^2 - 3v_1^2\omega^3 - 72v_1^4 + 48cs^4 + 36cs^2\omega + 6v_1^2cs^2\omega^3 + 42v_1^2\omega^2 + 72v_1^2 - 3cs^4\omega^3 + 30cs^4\omega^2 + 108v_1^4\omega - 24cs^2 - 144v_1^2cs^2 - 72cs^4\omega - 42v_1^4\omega^2 + 3v_1^4\omega^3)\frac{\rho}{24\omega^3}$$

$$C^{(2),\text{MRT1}}_{\text{D}^4_x v_2} = (6v_1^2\omega_{12}^2cs^2\omega_5^3 + 72v_1^4\omega_{12}\omega_5^2 + 24v_1^2\omega_5^2 - 3\omega_{12}^2cs^4\omega_5^3 - 72v_1^2\omega_{12}^2cs^2\omega_5^2 + 48v_1^2\omega_{12}\omega_5 - 24\omega_{12}cs^2\omega_5 + 24\omega_{12}^2cs^4\omega_5^2 - 12v_1^2\omega_5^3 - 18v_1^4\omega_{12}\omega_5^3 - 48\omega_{12}^2cs^4\omega_5 + 156v_1^2\omega_{12}^2cs^2\omega_5 + 24\omega_{12}^2cs^4 - 72v_1^2\omega_{12}\omega_5^2 + 12v_1^2cs^2\omega_5^3 + 24\omega_{12}cs^2\omega_5^2 - 48v_1^4\omega_{12}\omega_5 - 6\omega_{12}cs^2\omega_5^3 - 24v_1^2cs^2\omega_5^2 + 18v_1^2\omega_{12}\omega_5^3 + 24v_1^4\omega_{12}^2\omega_5 + 24\omega_{12}cs^4\omega_5 - 8\omega_{12}^2cs^2\omega_5^2 + 12v_1^4\omega_5^3 - 24v_1^2\omega_{12}cs^2\omega_5 - 3v_1^2\omega_{12}^2\omega_5^3 + 24v_1^2\omega_{12}^2\omega_5^2 - 24v_1^4\omega_5^2 + \omega_{12}^2cs^2\omega_5^3 - 24v_1^2\omega_{12}^2\omega_5 - 12v_1^2\omega_{12}cs^2\omega_5^3 + 6\omega_{12}cs^4\omega_5^3 + 3v_1^4\omega_{12}^2\omega_5^3 - 96v_1^2\omega_{12}^2cs^2 + 12\omega_{12}^2cs^2\omega_5 + 48v_1^2\omega_{12}cs^2\omega_5^2 - 24v_1^4\omega_{12}^2\omega_5 - 24\omega_{12}cs^4\omega_5^2)\frac{\rho}{24\omega_{12}^2\omega_5^3}$$

$$C^{(2),\text{MRT2}}_{\text{D}^4_x v_2} = (24cs^4\omega_{12}^2\omega_5^2 + 72v_1^4\omega_{12}\omega_5^2 + 48v_1^2cs^2\omega_{12}\omega_5^2 + 24v_1^2\omega_5^2 + 48v_1^2\omega_{12}\omega_5 - 3cs^4\omega_{12}^2\omega_5^3 - 12v_1^2\omega_5^3 + 12cs^2\omega_{12}^2\omega_5 - 96v_1^2cs^2\omega_{12}^2 - 12v_1^2cs^2\omega_{12}\omega_5^3 - 18v_1^4\omega_{12}\omega_5^3 - 8cs^2\omega_{12}^2\omega_5^2 - 72v_1^2\omega_{12}\omega_5^2 - 48v_1^4\omega_{12}\omega_5 - 24v_1^2cs^2\omega_{12}\omega_5 + cs^2\omega_{12}^2\omega_5^3 - 48cs^4\omega_{12}\omega_5 + 18v_1^2\omega_{12}\omega_5^3 + 156v_1^2cs^2\omega_{12}^2\omega_5 + 24v_1^4\omega_{12}^2\omega_5 - 6cs^2\omega_{12}\omega_5^3 + 12v_1^2cs^2\omega_5^3 + 24cs^4\omega_{12}\omega_5 + 12v_1^4\omega_5^3 - 3v_1^2\omega_{12}^2\omega_5^3 + 24cs^2\omega_{12}\omega_5^2 + 24v_1^2\omega_{12}^2\omega_5^2 - 24v_1^2cs^2\omega_5^2 - 24v_1^4\omega_5^2 - 24v_1^2\omega_{12}^2\omega_5 + 6cs^4\omega_{12}\omega_5^3 + 24cs^4\omega_{12}^2 - 24cs^2\omega_{12}\omega_5 + 3v_1^4\omega_{12}^2\omega_5^3 + 6v_1^2cs^2\omega_{12}^2\omega_5^3 - 24cs^4\omega_{12}\omega_5^2 - 72v_1^2cs^2\omega_{12}^2\omega_5^2 - 24v_1^4\omega_{12}^2\omega_5)\frac{\rho}{24\omega_{12}^2\omega_5^3}$$

$$C^{(2),\text{CLBM1}}_{\text{D}^4_x v_2} = (24\omega_{12}cs^4\omega_5 + 24\omega_{12}^2cs^4 + 72v_1^2\omega_{12}cs^2\omega_5 + 72v_1^4\omega_{12}\omega_5^2 + 72v_1^2\omega_5^2 - 8\omega_{12}^2cs^2\omega_5^2 + \omega_{12}^2cs^2\omega_5^3 - 36v_1^2\omega_5^3 - 30v_1^4\omega_{12}\omega_5^3 - 72v_1^2\omega_{12}cs^2\omega_5^3 - 72v_1^2\omega_{12}\omega_5^2 + 6\omega_{12}cs^4\omega_5^3 + 144v_1^2\omega_{12}cs^2\omega_5^2 + 12\omega_{12}^2cs^2\omega_5 - 24\omega_{12}cs^4\omega_5^2 + 30v_1^2\omega_{12}\omega_5^3 + 6v_1^2\omega_{12}^2cs^2\omega_5^3 - 3\omega_{12}^2cs^4\omega_5^3 + 36v_1^4\omega_5^3 - 3v_1^2\omega_{12}^2\omega_5^3 - 24\omega_{12}cs^2\omega_5 - 12v_1^2\omega_{12}^2cs^2\omega_5^2 + 12v_1^2\omega_{12}^2\omega_5^2 - 72v_1^4\omega_5^2 + 24\omega_{12}^2cs^4\omega_5^2 - 48\omega_{12}^2cs^4\omega_5 + 108v_1^2cs^2\omega_5^3 + 24\omega_{12}cs^2\omega_5^2 + 3v_1^4\omega_{12}^2\omega_5^3 - 36v_1^2\omega_{12}^2cs^2\omega_5 - 12v_1^4\omega_{12}^2\omega_5^2 - 6\omega_{12}cs^2\omega_5^3 - 216v_1^2cs^2\omega_5^2)\frac{\rho}{24\omega_{12}^2\omega_5^3}$$

$$C^{(2),\text{CLBM2}}_{\text{D}^4_x v_2} = (-36v_1^2\omega_{12}^2cs^2\omega_5 + 24\omega_{12}cs^2\omega_5^2 + 108v_1^2cs^2\omega_5^3 + 72v_1^4\omega_{12}\omega_5^2 - 48\omega_{12}^2cs^4\omega_5 + 72v_1^2\omega_5^2 - 216v_1^2cs^2\omega_5^2 - 6\omega_{12}cs^2\omega_5^3 - 36v_1^2\omega_5^3 - 30v_1^4\omega_{12}\omega_5^3 - 3\omega_{12}^2cs^4\omega_5^3 - 72v_1^2\omega_{12}\omega_5^2 + 6v_1^2\omega_{12}^2cs^2\omega_5^3 + 24\omega_{12}^2cs^4\omega_5^2 - 12v_1^2\omega_{12}^2cs^2\omega_5^2 - 24\omega_{12}cs^2\omega_5 + 30v_1^2\omega_{12}\omega_5^3 + 24\omega_{12}^2cs^4 + 6\omega_{12}cs^4\omega_5^3 - 72v_1^2\omega_{12}cs^2\omega_5^3 + 36v_1^4\omega_5^3 - 3v_1^2\omega_{12}^2\omega_5^3 - 24\omega_{12}cs^4\omega_5^2 + 12v_1^2\omega_{12}^2\omega_5^2 + 12\omega_{12}^2cs^2\omega_5 - 72v_1^4\omega_5^2 + 144v_1^2\omega_{12}cs^2\omega_5^2 - 8\omega_{12}^2cs^2\omega_5^2 + 72v_1^2\omega_{12}cs^2\omega_5 + 3v_1^4\omega_{12}^2\omega_5^3 + 24\omega_{12}cs^4\omega_5 + \omega_{12}^2cs^2\omega_5^3 - 12v_1^4\omega_{12}^2\omega_5)\frac{\rho}{24\omega_{12}^2\omega_5^3}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}^4_x v_2} =$$
$$(-24cs^2\omega_9\omega_1 + 6cs^4\omega_9\omega_1^3 + 30v_1^2\omega_9\omega_1^3 + 144cs^2v_1^2\omega_9\omega_1^2 + 36v_1^4\omega_1^3 - 72v_1^4\omega_1^2 - 72cs^2v_1^2\omega_9\omega_1^3 - 72v_1^2\omega_9\omega_1^2 - 24cs^4\omega_9\omega_1^2 + 24cs^4\omega_9\omega_1 - 6cs^2\omega_9\omega_1^3 - 30v_1^4\omega_9\omega_1^3 + 24cs^4\omega_9^2 + 72cs^2v_1^2\omega_9\omega_1 + 72v_1^4\omega_9\omega_1^2 + 24cs^2\omega_9\omega_1^2 - 216cs^2v_1^2\omega_1^2 - 36cs^2v_1^2\omega_9^2\omega_1 + 72v_1^2\omega_1^2 - 12v_1^4\omega_9^2\omega_1^2 - 8cs^2\omega_9^2\omega_1^2 + 108cs^2v_1^2\omega_1^3 - 48cs^4\omega_9^2\omega_1 + cs^2\omega_9^2\omega_1^3 + 3v_1^4\omega_9^2\omega_1^3 - 36v_1^2\omega_1^3 + 12v_1^2\omega_9^2\omega_1^3 + 6cs^2v_1^2\omega_9^2\omega_1^3 + 24cs^4\omega_9^2\omega_1^2 + 12cs^2\omega_9^2\omega_1 - 3cs^4\omega_9^2\omega_1^3 - 12cs^2v_1^2\omega_9^2\omega_1^2 - 3v_1^2\omega_9^2\omega_1^3)\frac{\rho}{24\omega_9^2\omega_1^3}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}^4_x v_2} = (-108v_1^2\omega_3cs^2\omega_4\omega_1^2 - 36v_1^2\omega_3^2cs^2\omega_4^2\omega_1 + 18v_1^4\omega_3\omega_4\omega_1^3 - 8\omega_3^2cs^2\omega_4^2\omega_1^2 - 12v_1^4\omega_3^2\omega_4^2\omega_1^2 - 48\omega_3^2cs^4\omega_4^2\omega_1 + 24\omega_3^2cs^4\omega_4^2 + 54v_1^2\omega_3cs^2\omega_4\omega_1^3 + 3v_1^4\omega_3^2\omega_4^2\omega_1^3 + \omega_3^2cs^2\omega_4^2\omega_1^3 - 36v_1^4\omega_3\omega_4\omega_1^2 + 24\omega_3^2cs^4\omega_4^2\omega_1^2 + 6v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3 - 36v_1^2\omega_3\omega_4\omega_1^2 + 15v_1^2\omega_3\omega_4\omega_1^3 - 54v_1^2\omega_3^2cs^2\omega_1^2 + 12\omega_3^2cs^2\omega_4^2\omega_1 + 27v_1^2\omega_3cs^2\omega_1^3 - 36v_1^2\omega_3\omega_4\omega_1^2 - 12v_1^2\omega_3cs^2\omega_4^2\omega_1^2 - 3\omega_3cs^4\omega_4^2\omega_1^3 + 15v_1^2\omega_3\omega_4^2\omega_1^3 - 12\omega_3^2cs^2\omega_4\omega_1 - 9v_1^2\omega_3^2\omega_1^3 - 54v_1^2cs^2\omega_4^2\omega_1^2 + 9v_1^4\omega_4^2\omega_1^3 + 12\omega_3cs^2\omega_4^2\omega_1^2 + 36v_1^2\omega_3cs^2\omega_4^2\omega_1 - 18v_1^2\omega_3\omega_4\omega_1^3 + 72v_1^2\omega_3cs^2\omega_4\omega_1^2 + 3\omega_3cs^4\omega_4\omega_1^3 + 12v_1^2\omega_3\omega_4^2\omega_1^2 - 3\omega_3cs^2\omega_4^2\omega_1^3 - 18v_1^4\omega_4^2\omega_1^2 + 27v_1^2cs^2\omega_4^2\omega_1^3 + 18v_1^2\omega_3^2\omega_1^2 - 3v_1^2\omega_3^2\omega_4^2\omega_1^3 + 36v_1^2\omega_3\omega_4\omega_1^2 - 12\omega_3cs^4\omega_4\omega_1^2 - 36v_1^2\omega_3^2cs^2\omega_4\omega_1^3 + 12\omega_3cs^4\omega_4^2\omega_1 + 12\omega_3^2cs^4\omega_4\omega_1 + 9v_1^4\omega_3^2\omega_1^3 - 12\omega_3cs^4\omega_4^2\omega_1^2 - 36v_1^2\omega_3cs^2\omega_4^2\omega_1^3 - 9v_1^2\omega_4^2\omega_1^3 + 36v_1^4\omega_3\omega_4\omega_1^2 - 15v_1^4\omega_3\omega_4\omega_1^3 - 3\omega_3^2cs^2\omega_4\omega_1^3 + 18v_1^2\omega_4^2\omega_1^2 + 72v_1^2\omega_3cs^2\omega_4^2\omega_1^2 + 3\omega_3cs^4\omega_4^2\omega_1^3 + 36v_1^2\omega_3^2cs^2\omega_4\omega_1 - 18v_1^4\omega_3^2\omega_1^2 + 12\omega_3^2cs^2\omega_4^2\omega_1 + 36v_1^4\omega_3^2\omega_4\omega_1^2 - 15v_1^4\omega_3\omega_4^2\omega_1^3 - 12\omega_3cs^2\omega_4^2\omega_1)\frac{\rho}{24\omega_3^2\omega_4^2\omega_1^3}$$

coefficient $C^{(2)}_{\text{D}^3_x \text{D}_y \rho}$ at $\frac{\partial^4 \rho}{\partial x_1^3 \partial x_2}$:

$$C^{(2),\text{SRT}}_{\text{D}^3_x \text{D}_y \rho} = (24 - 42cs^2\omega^2 + 36v_1^2\omega + 14\omega^2 + 3cs^2\omega^3 - \omega^3 + v_1^2\omega^3 + 108cs^2\omega - 14v_1^2\omega^2 - 24v_1^2 - 72cs^2 - 36\omega)\frac{v_1cs^2}{12\omega^3}$$

$$C^{(2),\text{MRT1}}_{\text{D}^3_x \text{D}_y \rho} = (-12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_9\omega_{12}^2cs^2\omega_5^2\omega_{21} + 18\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5^3 + 12v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 + 12v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5\omega_{21} + 18\omega_{15}\omega_9\omega_{12}^2cs^4\omega_5\omega_{21} + 12\omega_{15}\omega_9^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 27\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 36\omega_9^2\omega_{12}^2v_2^2\omega_{10}cs^2\omega_5^3 - 6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_9^2\omega_{12}^2v_2^2cs^2\omega_5^3 + 18\omega_{15}\omega_9^2v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 12v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2 - 12\omega_{15}\omega_9^2\omega_{10}\omega_{10}cs^2\omega_5^2 - 6\omega_{15}\omega_9^2\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 72\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_5\omega_{21} + 12\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 + 12\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 - 36\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^2\omega_{21} + 36\omega_9^2\omega_{12}^2v_2^2\omega_{10}cs^2\omega_5^2 + 36\omega_9\omega_{12}^2v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 9\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 48\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5^2 - 12\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 72\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_5^2\omega_{21} - 12v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 48\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 36\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 6\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^3 - 12v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3 - 9\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 - 6\omega_{15}v_1^2\omega_9^2\omega_{12}^2cs^2\omega_5^3 + 6\omega_{15}v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} + 156\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5\omega_{21} - 96\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_1\omega_{21} - 36\omega_9\omega_{12}^2cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{10}cs^4\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^2v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 36\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5 - 36\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5\omega_{21} - 12v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 - 6\omega_{15}\omega_9\omega_{10}cs^2\omega_5^3\omega_{21} - 108\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 24\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 + 24\omega_{15}\omega_9\omega_{12}v_2^2v_2^2\omega_{10}\omega_5^3 + 6\omega_{15}v_1^2\omega_9\omega_{10}cs^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_5^3 - 12\omega_9\omega_{12}^2cs^2\omega_5^3 + 36\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^2 + 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} + 36\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}cs^4\omega_5^3 + 18\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 15\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 15\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_{15}\omega_9^2\omega_{12}v_2^2cs^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^4\omega_5\omega_{21} + 72\omega_{15}\omega_9\omega_{12}^2v_2^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3 - 36\omega_9\omega_{12}^2v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} -$$

$$24\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} - 18\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 36\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5 - 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2 + 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 +$$
$$3\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 42\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2 v_2^3\omega_5 - 3\omega_{15}v_1^2\omega_9^3\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} -$$
$$18\omega_{15}\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3 - 15\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^3 +$$
$$12\omega_{15}v_2^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 45\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 60\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5^2\omega_{21} + \omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} -$$
$$6\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3 - 18\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3 + 6\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} - 12\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} -$$
$$12\omega_{15}\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_{15}\omega_9^3\omega_{12}\omega_{10}cs^4\omega_5 + 72\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5\omega_{21} - 6\omega_{15}v_1^2\omega_9^3\omega_{12}^2 v_2^2\omega_5 - 6\omega_{15}\omega_9^3 v_2^2\omega_{10}\omega_5^3\omega_{21} -$$
$$36\omega_9\omega_{12}^2 v_2^2 cs^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^2 - 12v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} - \omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 6\omega_{15}v_1^2\omega_9^2 v_2^2\omega_{10}\omega_5^3\omega_{21} -$$
$$12\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2 - 5\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3 + 36\omega_9^2\omega_{12}^2 cs^4\omega_5^3 + 36\omega_{15}\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9\omega_{12}^2 cs^2\omega_5^3 +$$
$$54\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^2\omega_{21} + 15\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3 - 24\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} -$$
$$12v_1^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 - 12v_1^2\omega_9\omega_{12}^2 cs^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 24\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} + 5\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} -$$
$$12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} + 12v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2 - 12\omega_{15}v_1^2\omega_9^2 v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} +$$
$$12\omega_{15}\omega_9^2 v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3 + 12v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} -$$
$$24\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 144\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} + 3\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 12v_1^2\omega_9\omega_{12}^2 v_2^2\omega_5^3 -$$
$$6\omega_{15}v_1^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21})\frac{v_1}{12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21}}$$

$$C^{(2),\text{MRT2}}_{D_x^3 D_y \rho} =$$
$$(-12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 12v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 36\omega_{15}cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$12\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 72\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_5^3 +$$
$$6\omega_{15}v_1^2\omega_9^3 cs^2\omega_{12}^2\omega_{10}\omega_5^3 - 12\omega_{15}v_1^2\omega_9^3 cs^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9^2 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} -$$
$$42\omega_{15}\omega_9^3 cs^4\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9^3 cs^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^3 cs^2\omega_{12}^2\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9^3 cs^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 - 36\omega_9 cs^4\omega_{12}^2\omega_5^3\omega_{21} +$$
$$9\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 48\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 12v_1^2\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} - 48\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} -$$
$$12\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_5^3 - 45\omega_{15}\omega_9^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 9\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} -$$
$$12\omega_{15}v_1^2\omega_9^3 cs^2\omega_{12}^2\omega_{10}\omega_5^2 - 36\omega_{15}\omega_9^3 cs^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 15\omega_{15}\omega_9^2 cs^4\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^3 cs^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_9^3 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2 +$$
$$36\omega_{15}\omega_9^3 cs^2\omega_{12}v_2^2\omega_{10}\omega_5 + 6\omega_{15}v_1^2\omega_9^3 cs^2\omega_{10}\omega_5^3\omega_{21} - 3\omega_{15}v_1^2\omega_9^3 cs^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 12v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$12\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 + 3\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 18\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^2\omega_5^3 - 6\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 - 18\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 + 12\omega_9^3 cs^2\omega_{12}^2\omega_{10}\omega_5^3 -$$
$$18\omega_{15}cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 - 18\omega_{15}\omega_9^2 cs^4\omega_{12}\omega_{10}\omega_5^3 + 24\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} +$$
$$144\omega_{15}\omega_9^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}\omega_9^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 156\omega_{15}\omega_9^2 cs^4\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 36\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$12\omega_{15}v_1^2\omega_9^3 cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 36\omega_9^3 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 + 15\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}\omega_9 cs^4\omega_{12}^2\omega_5^3 - 12\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} -$$
$$15\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}\omega_9 cs^4\omega_{12}\omega_{10}\omega_5^2 - 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2 - 12\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^2 +$$
$$12\omega_{15}\omega_9^3\omega_{12}^2 v_2^2\omega_{10}\omega_5^2 - 12v_1^2\omega_9 cs^2\omega_{12}^2\omega_5^3\omega_{21} + 72\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} - 60\omega_{15}\omega_9^3 cs^4\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} -$$
$$24\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} - 12v_1^2\omega_9^3 cs^2\omega_{12}^2\omega_{10}\omega_5^3 - 72\omega_{15}\omega_9^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9^3 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2 v_2^3\omega_5 +$$
$$12\omega_{15}\omega_9^2 cs^4\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9^3 cs^4\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} - 6\omega_{15}v_1^2\omega_9^2 cs^2\omega_{12}^2\omega_5^3 - 108\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$24\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} + 12v_1^2\omega_9 cs^2\omega_{12}^2 v_2^2\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}v_1^2\omega_9^2 cs^2\omega_{12}^2\omega_5^3 + 5\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} +$$
$$12v_1^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^2 + 36\omega_{15}\omega_9^3 cs^2\omega_{12}v_2^2\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} + 12\omega_9 cs^2\omega_{12}^2\omega_5^3 + 36\omega_9^2 cs^2\omega_{12}v_2^2\omega_5^3 - 36\omega_{15}\omega_9 cs^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} -$$
$$12\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} - 5\omega_{15}v_1^2\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^3 - 6\omega_{15}\omega_9^3 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_9 cs^2\omega_{12}^2\omega_5^3 -$$
$$36\omega_9 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}\omega_9^2 cs^4\omega_{12}^2\omega_{10}\omega_5^2 - 15\omega_{15}\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}v_1^2\omega_9^3 cs^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}v_1^2\omega_9^3\omega_{12}v_2^2\omega_{10}\omega_5^3 +$$
$$27\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_9 cs^2\omega_{12}^2 v_2^2\omega_5^3 - 12v_1^2\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - \omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^3\omega_{12}v_2^2\omega_{10}\omega_5^3 -$$
$$24\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 12v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 - 6\omega_{15}\omega_9 cs^4\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}\omega_9^2 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^2 + 6\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_{10}\omega_5^3 +$$
$$\omega_{15}v_1^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 96\omega_{15}\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} + 3\omega_{15}\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 12v_1^2\omega_9 cs^2\omega_{12}^2\omega_5^3 -$$
$$6\omega_{15}v_1^2\omega_9^2 cs^2\omega_{12}\omega_{10}\omega_5^3 - 36\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5 - 6\omega_{15}\omega_9 cs^2\omega_{12}^2 v_2^3\omega_{21} - 18\omega_{15}\omega_9^3 cs^2\omega_{12}v_2^2\omega_5^3 + 12\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} +$$
$$12v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2 - 12\omega_{15}v_1^2\omega_9^2 v_2^2\omega_{10}\omega_5^2\omega_{21} + 54\omega_{15}\omega_9 cs^4\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 12\omega_{15}\omega_9^2 cs^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} +$$
$$18\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9 cs^2\omega_{12}^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2 + 36\omega_9 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} +$$
$$18\omega_{15}\omega_9 cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_9 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 24\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_5^2\omega_{21} + 36\omega_9^2 cs^4\omega_{12}^2\omega_5^3 - 72\omega_{15}\omega_9 cs^2\omega_{12}v_2^2\omega_5^2\omega_{21} +$$
$$12\omega_{15}v_1^2\omega_9^3 cs^2\omega_{12}\omega_{10}\omega_5^2 - 18\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_9^2 cs^4\omega_{12}^2\omega_{10}\omega_5^2 + 6\omega_{15}\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 12v_1^2\omega_9\omega_{12}^2 v_2^2\omega_5^3 - 6\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} +$$
$$18\omega_{15}\omega_9^2 cs^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 + 24\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2 cs^4\omega_{12}\omega_{10}\omega_5\omega_{21} - 12\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_{10}\omega_5^2)\frac{v_1}{12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21}}$$

$$C^{(2),\text{CLBM1}}_{D_x^3 D_y \rho} = (\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 36\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5 - \omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5 -$$
$$12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_{21} + 36\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}^2\omega_{10}\omega_{21} + 12\omega_{12}^2\omega_5^2\omega_{21} + 12\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 18\omega_{15}\omega_9\omega_{10}cs^2\omega_5^2\omega_{21} +$$
$$18\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2 - 12\omega_{15}v_1^2\omega_9\omega_{10}\omega_{10}\omega_5\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2 + 6\omega_{15}v_1^2\omega_{12}^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_{21} - 12v_1^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} -$$
$$36\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5 + 54\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5 - 12\omega_9\omega_{12}^2\omega_5^2 - 6\omega_{15}\omega_9\omega_{10}\omega_5^2\omega_{21} - 15\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} -$$
$$6\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_5^2 - 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_{21} + 36\omega_9\omega_{12}^2 cs^2\omega_5^2 + 36\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_{21} + 18\omega_{15}\omega_{12}^2 cs^2\omega_5^2\omega_{21} + 5\omega_{15}\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} -$$
$$18\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 36\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} - 36\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5 - 6\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2 + 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} -$$
$$12\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5 - 18\omega_{15}\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 12v_1^2\omega_{12}^2\omega_5^2\omega_{21} + 3\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 3\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_{21} -$$
$$3\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_9\omega_{12}^2\omega_5^2 - 9\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 12v_1^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_9\omega_{12}^2\omega_{10}\omega_5 - 18\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2 +$$
$$6\omega_{15}\omega_9\omega_{10}\omega_5^2 - 12v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9\omega_{10}\omega_5\omega_{21} + 54\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} + 12v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5 -$$
$$36\omega_{12}^2 cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} - 36\omega_{15}\omega_9\omega_{10}cs^2\omega_5\omega_{21} - 12\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^2\omega_{21} + 12\omega_9\omega_{12}^2\omega_{10}\omega_5^2 +$$
$$36\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5 + 12\omega_{15}\omega_9 cs^2\omega_{12}\omega_{10}\omega_{21} - 12\omega_{15}v_1^2\omega_{12}^2\omega_{10}\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5\omega_{21} -$$
$$5\omega_{15}v_1^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} - 6\omega_{15}\omega_{12}^2\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2 - 18\omega_{15}\omega_9\omega_{12}^2 cs^2\omega_5^2 + 12v_1^2\omega_9\omega_{12}^2\omega_5^2)\frac{v_1 cs^2}{12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21}}$$

$$C^{(2),\text{CLBM2}}_{D_x^3 D_y \rho} = (\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 54\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} + 36\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5 + 18\omega_{15}v_1^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} - \omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} +$$
$$12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5 - 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_{21} - 36\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_{21} - 9\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}^2\omega_{10}\omega_{21} + 12\omega_{12}^2\omega_5^2\omega_{21} -$$

$$18\omega_{15}\omega_9\omega_{12}^2 cs^2\omega_5^2 + 3\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{10}\omega_5\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2 + 6\omega_{15}v_1^2\omega_{12}^2\omega_5^2\omega_{21} -$$
$$12v_1^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5 - 12\omega_9^2\omega_{12}^2\omega_5^2 - 36\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} - 6\omega_{15}\omega_9\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_5^2 -$$
$$12\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_{21} + 5\omega_{15}\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}\omega_9\omega_{10}cs^2\omega_5\omega_{21} - 18\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2 - 36\omega_{12}^2cs^2\omega_5^2\omega_{21} -$$
$$6\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2 + 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5\omega_{21} + 36\omega_9\omega_{12}^2cs^2\omega_5^2 + 36\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5 - 18\omega_{15}\omega_{12}^2\omega_{10}\omega_5\omega_{21} -$$
$$12v_1^2\omega_{12}^2\omega_5^2\omega_{21} + 18\omega_{15}\omega_9\omega_{10}cs^2\omega_5^2\omega_{21} + 3\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5 - 3\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_9\omega_{12}^2\omega_5^2 -$$
$$36\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5 + 12v_1^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2 + 36\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_9\omega_{12}^2\omega_{10}\omega_5 + 6\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2 -$$
$$12v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9\omega_{10}\omega_5\omega_{21} + 12v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5 - 12\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} +$$
$$6\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^2\omega_{21} + 36\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5 + 12\omega_9\omega_{12}^2\omega_{10}\omega_5^2 + 18\omega_{15}\omega_{12}^2cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_{21} - 12\omega_{15}v_1^2\omega_{12}^2\omega_{10}\omega_{21} -$$
$$15\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 36\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 18\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2 -$$
$$5\omega_{15}v_1^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}^2\omega_5^2\omega_{21} + 6\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^2 + 12v_1^2\omega_9\omega_{12}^2\omega_5^2 + 54\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21})\frac{v_1 cs^2}{12\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^2\omega_{21}}$$

$C^{(2),\text{CuLBM1}}_{D_x^3 D_y \rho} = (6v_1^2\omega_4^2\omega_1^2 + 36cs^2\omega_9\omega_1 + 3cs^2\omega_9^2\omega_4\omega_1^2 - 12\omega_9\omega_1 + 12\omega_4\omega_1 - 12v_1^2\omega_9\omega_4 - \omega_9^2\omega_4\omega_1^2 - 6v_1^2\omega_9\omega_4^2 - 36cs^2\omega_4\omega_1 + 18v_1^2\omega_9\omega_4\omega_1 +$
$12\omega_9^2\omega_4\omega_1 + 12v_1^2\omega_9\omega_1 - 3v_1^2\omega_9\omega_4\omega_1^2 + 18cs^2\omega_4\omega_1^2 - 6\omega_4\omega_1^2 - 36cs^2\omega_9\omega_4 - 36cs^2\omega_9^2\omega_4\omega_1 + 6\omega_9\omega_1^2 + 12\omega_9\omega_4 - 12v_1^2\omega_4\omega_1 - 18cs^2\omega_9\omega_1^2 +$
$v_1^2\omega_9^2\omega_4\omega_1^2 + 36cs^2\omega_9^2\omega_4 - \omega_9^2\omega_1^2 - 18\omega_9\omega_4\omega_1 + 12\omega_9^2 - 12\omega_9^2\omega_4 + 3cs^2\omega_9^2\omega_1^2 + 6v_1^2\omega_9^2\omega_1 + 54cs^2\omega_9\omega_4\omega_1 - 36cs^2\omega_9^2 + 12v_1^2\omega_9^2\omega_4 + v_1^2\omega_9^2\omega_1^2 -$
$9cs^2\omega_9\omega_4\omega_1^2 - 12v_1^2\omega_9^2 + 18cs^2\omega_9^2\omega_1 - 12v_1^2\omega_9^2\omega_4\omega_1 - 6\omega_9^2\omega_1 + 3\omega_9\omega_4\omega_1^2)\frac{cs^2 v_1}{12\omega_9^2\omega_4\omega_1^2}$

$C^{(2),\text{CuLBM2}}_{D_x^3 D_y \rho} = (48\omega_3 cs^4\omega_4^2\omega_1^3\omega_2 + 216\omega_3 cs^4\omega_4^2\omega_1^2\omega_2^3 - 9v_1^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 - 108\omega_3^2 cs^4\omega_4^2\omega_1^3 + 8\omega_3^2\omega_4^2\omega_1^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 + 394v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 +$
$12\omega_3^2 cs^4\omega_4^2\omega_1^2\omega_2 - 18\omega_3 cs^2\omega_3^3\omega_2^3 - 18v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 + 160v_1^2\omega_3^2\omega_4^2\omega_2^3 + 54cs^4\omega_4^2\omega_1^3\omega_2 + 28\omega_3^2\omega_4^2\omega_1\omega_2^2 - 36v_1^2\omega_3 cs^2\omega_4^2\omega_4^2\omega_1^3\omega_2^2 -$
$36v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 + 120\omega_3 cs^4\omega_4^2\omega_1^2\omega_2 + 9\omega_3^2 cs^4\omega_4\omega_1^3\omega_2^3 + 448v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 - 276\omega_3 cs^4\omega_4^2\omega_1^3\omega_2 - 342\omega_3^2 cs^4\omega_4^2\omega_1^2\omega_2^2 + 6v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^3 +$
$48v_1^4\omega_3^2\omega_4^2\omega_1^3 - 104\omega_3^2 cs^2\omega_4^2\omega_1^3 + 36\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 + 144\omega_3 cs^4\omega_4^2\omega_1^3\omega_2^2 - 412v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^2 - 256v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 320v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^3 +$
$228v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 16v_1^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 - 368\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 + 54\omega_3^2 cs^4\omega_1^3\omega_2^3 + 72v_1^2\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^3 - 27\omega_3 cs^4\omega_4^2\omega_1^3\omega_2 + 32v_1^2\omega_3^2\omega_4^2\omega_4\omega_1\omega_2^3 +$
$72\omega_3^2 cs^4\omega_4^2\omega_1^2\omega_2 + 56\omega_3 cs^2\omega_4^2\omega_1\omega_2^3 - 712v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 + 18v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 - 460v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 + 18\omega_3^2 cs^4\omega_4^2\omega_1^3\omega_2^3 - 36\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 -$
$108\omega_3 cs^4\omega_4^2\omega_1^3\omega_2 + 40v_1^2\omega_3 cs^2\omega_4^2\omega_1^2\omega_2 + 18v_1^2\omega_3^2 cs^2\omega_1^3\omega_2 - 24v_1^4\omega_3^2\omega_4\omega_1\omega_2 + 56\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 - 108cs^4\omega_4^2\omega_1^2\omega_2^2 + 144\omega_3 cs^4\omega_4^2\omega_1^3 +$
$104v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 6v_2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 1232v_1^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 - 16\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 - 72\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^3 + 52\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 + 6v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 -$
$96v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 144v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 208\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 - 36v_1^2 cs^2\omega_4^2\omega_1^3\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^3\omega_2 + 36v_1^2\omega_3^2 cs^2\omega_4\omega_1\omega_1^3\omega_2^3 - 27\omega_3 cs^4\omega_4\omega_1^3\omega_2^3 -$
$40\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^2 - 56v_1^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 + 92v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 16\omega_3^2\omega_4^2\omega_2^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 + 152v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 56v_1^2\omega_3^2\omega_4\omega_1^3 + 14\omega_3^2\omega_4^2\omega_1^3\omega_2 +$
$208\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 56v_1^2\omega_3 cs^2\omega_4^2\omega_1\omega_2^3 - 132v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 184\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 - 78v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 14\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 18v_1^2 cs^2\omega_4^2\omega_1^3\omega_2^3 -$
$20\omega_3^2\omega_4^2\omega_1^3\omega_2 + 78v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 118\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 + 588\omega_3^2 cs^4\omega_4^2\omega_1\omega_2^3 - 288\omega_3^2 cs^4\omega_4^2\omega_1^3\omega_2^3 + 9\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^3 - 92v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 +$
$120v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 168\omega_3 cs^4\omega_4^2\omega_1\omega_2^3 - 88\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 - 6v_2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 6\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 36cs^2\omega_4^2\omega_1^3\omega_2^3 + 6v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 -$
$136v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 36\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^2 + 108\omega_3^2 cs^4\omega_4\omega_1^2\omega_2^3 - 9v_1^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2 - 144\omega_3^2 cs^4\omega_4^2\omega_1\omega_2^3 - 784v_1^2\omega_3^2 cs^2\omega_4^2\omega_2^3)\frac{v_1}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{D_x^3 D_y v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2}$**:**

$C^{(2),\text{SRT}}_{D_x^3 D_y v_1} = (-12 + 2cs^2\omega^2 - 54v_1^2\omega - 6\omega^2 - cs^2\omega^3 + 18v_1^2\omega^2 + 36v_1^2 + 18\omega)\frac{\rho cs^2}{12\omega^3}$

$C^{(2),\text{MRT1}}_{D_x^3 D_y v_1} = (-12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_9^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_9\omega_{12}^2 cs^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5^3 + 36v_1^2\omega_9^2\omega_{12}^2 cs^2\omega_5^3 +$
$36v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^3\omega_{21} + 6\omega_{15}\omega_9\omega_{12}^2 cs^4\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_5^3\omega_{21} + 9\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} -$
$12\omega_9^2\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^3 - 6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_9^2\omega_{12}^2 v_2^2 cs^2\omega_5^3 + 6\omega_{15}\omega_9^2 v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 36v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2 -$
$12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 + 12\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 60\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5\omega_{21} +$
$36\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 + 12\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5\omega_{21} + 12\omega_9^2\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^2 + 12\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} -$
$6\omega_{15}\omega_9\omega_{12}^2 v_2^2 cs^2\omega_5^3\omega_{21} + 27\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 144\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^2 + 60\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} -$
$24\omega_{15}\omega_9^2\omega_{12}v_2^2 cs^2\omega_5^2\omega_{21} - 36v_1^2\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} - 48\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2 - 12\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} -$
$12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 + 6\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_5^3 - 36v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3 - 9\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} +$
$6\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3 - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2 cs^2\omega_5^3 + 18\omega_{15}v_1^2\omega_9\omega_{12}^2 cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_{21} -$
$12\omega_9\omega_{12}^2 cs^4\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{12}^2 cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2 v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{10}\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} -$
$12\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^3 - 12\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^3\omega_{21} - 36v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}\omega_5^3 -$
$36\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 72\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 24\omega_{15}\omega_9\omega_{12}v_2^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_9^2\omega_{10}cs^2\omega_5^2\omega_{21} -$
$6\omega_{15}\omega_9^2\omega_{12}v_2^2 cs^2\omega_5^3 - 12\omega_9^2\omega_{12}^2 cs^2\omega_5^3 + 12\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5^3 + 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} + 36\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2\omega_{12}cs^4\omega_5^3 +$
$6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 15\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}v_2^2 cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 +$
$12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^4\omega_5\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}v_2^2 cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^2 - 12\omega_9\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} -$
$108\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5\omega_{21} - 24\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} - 18\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 - 36\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 +$
$12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 - 6\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2 v_2^2\omega_5^3 + 30\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$
$72\omega_{15}v_1^2\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5\omega_{21} - 6\omega_{15}\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} + 54\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5^3 - 5\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^3\omega_{21} -$
$6\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^3 + 36\omega_{15}v_1^2\omega_{12}\omega_9^2\omega_{10}\omega_5^2\omega_{21} - 15\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 5\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_9^2\omega_5^3\omega_{21} -$
$6\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3 - 6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3 + 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_5^3\omega_{21} - 12\omega_9\omega_{12}^2 v_2^2\omega_{10}\omega_5^3\omega_{21} -$
$12\omega_{15}\omega_{12}^2 v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^3 + 24\omega_{15}\omega_9\omega_{12}^2 v_2^2\omega_{10}cs^2\omega_5\omega_{21} - 18\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^3 - 6\omega_{15}\omega_9^2 v_2^2\omega_{10}\omega_5^3\omega_{21} -$
$12\omega_9\omega_{12}^2 v_2^2 cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 - 36v_1^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3 + 18\omega_{15}v_1^2\omega_9^2 v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2 -$
$15\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_9^2\omega_{12}cs^4\omega_5^3 + 12\omega_{15}\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}^2 cs^2\omega_5^3 +$
$18\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^4\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} - 102\omega_{15}v_1^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 - 72\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} -$

$$36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 - 36v_1^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} + 5\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} -$$
$$12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2 + 12\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 - 36v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + \omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2v_2^2\omega_{10}\omega_5^2\omega_{21} -$$
$$48\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_{21} + 36\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3 + 36v_1^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} -$$
$$24\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 48\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - \omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^4\omega_5^3\omega_{21} + 36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3 -$$
$$18\omega_{15}v_1^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 72\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} - 15\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21})\frac{\rho}{12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21}}$$

$C_{\mathrm{D}_x^3\mathrm{D}_yv_1}^{(2),\mathrm{MRT2}} =$

$$(-12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 36v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 12\omega_{15}cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2v_2^3\omega_{21} + 24\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 18\omega_{15}\omega_9^2cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_9^2cs^2\omega_{12}^2\omega_5^3 +$$
$$18\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^3 + 24\omega_{15}v_1^2\omega_9^2cs^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 18\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 102\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} -$$
$$18\omega_{15}\omega_9^2cs^4\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2cs^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^3 + 12\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 - 12\omega_9cs^4\omega_{12}^2\omega_5^3\omega_{21} +$$
$$27\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 144\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 36v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} - 48\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} -$$
$$12\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^2 + 6\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^3 - 15\omega_{15}\omega_9^2cs^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 9\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} -$$
$$36\omega_{15}v_1^2\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^2 - 12\omega_{15}\omega_9^2cs^2v_2^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2cs^4\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_9^2cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9^2cs^2\omega_{12}v_2^2\omega_{10}\omega_5^2 -$$
$$12\omega_{15}v_1^2\omega_9^2cs^2\omega_{10}\omega_5^3\omega_{21} + 30\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 48\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_{21} - 36v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$12\omega_{15}\omega_9v_2^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^2cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9cs^4\omega_{12}^2\omega_5^3 - 6\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 - 6\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 12\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^3 -$$
$$6\omega_{15}cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 72\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9^2cs^2v_2^2\omega_{10}\omega_5^3 - 6\omega_{15}\omega_9^2cs^4\omega_{12}\omega_{10}\omega_5^3 + 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_5^2\omega_{21} +$$
$$48\omega_{15}\omega_9^2cs^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9^2cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9^2cs^4\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 36\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$60\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 12\omega_9^2cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 + 15\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_9cs^4\omega_{12}^2\omega_5^3\omega_{21} - 45\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} -$$
$$12\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2cs^4\omega_{12}\omega_{10}\omega_5^2 - 36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 - 12\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^2 + 12\omega_{15}\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 -$$
$$36v_1^2\omega_9cs^2\omega_{12}^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5\omega_{21} - 108\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} - 5\omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 24\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5\omega_{21} -$$
$$36v_1^2\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^3 - 24\omega_{15}\omega_9^2cs^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 15\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_9^2\omega_{12}^2v_2^2\omega_5^3 + 6\omega_{15}\omega_9^2cs^4\omega_{12}^2\omega_{10}\omega_5^3 +$$
$$\omega_{15}\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}^2\omega_5^3 - 36\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} + 72\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5\omega_{21} + 36v_1^2\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} +$$
$$36\omega_{15}v_1^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} + 5\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 36v_1^2\omega_9^2cs^2\omega_{12}^2\omega_{10}\omega_5^3 + 12\omega_{15}\omega_9cs^2\omega_{12}v_2^2\omega_5^3\omega_{21} +$$
$$6\omega_{15}\omega_9^2v_2^2\omega_5^3\omega_{21} + 12\omega_9cs^2\omega_{12}^2\omega_5^3\omega_{21} + 12\omega_9^2cs^2\omega_{12}^2v_2^2\omega_5^3 - 12\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5\omega_{21} - 12\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} -$$
$$15\omega_{15}v_1^2\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 18\omega_{15}v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3 - 6\omega_{15}\omega_9^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_9^2cs^2\omega_{12}^2\omega_5^3 - 12\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5^2 -$$
$$5\omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 18\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 9\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_9cs^2\omega_{12}^2v_2^2\omega_5^3\omega_{21} -$$
$$36v_1^2\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 - 72\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 +$$
$$6\omega_{15}\omega_9^2cs^2\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - \omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 36v_1^2\omega_9^2cs^2\omega_{12}^2\omega_5^3 -$$
$$18\omega_{15}v_1^2\omega_9cs^2\omega_{12}\omega_{10}\omega_5^3 - 12\omega_9^2cs^4\omega_{12}^2\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 - 6\omega_{15}\omega_9cs^2\omega_{12}^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9^2cs^2\omega_{12}^2v_2^2\omega_5^3 + 12\omega_9\omega_{12}^2v_2^2\omega_5^3\omega_{21} +$$
$$36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_{10}\omega_5^2 - 36\omega_{15}v_1^2\omega_9^2v_2^2\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}\omega_9cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} +$$
$$54\omega_{15}v_1^2\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_9cs^2\omega_{12}^2\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_9^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5\omega_{21} +$$
$$6\omega_{15}\omega_9cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 60\omega_{15}v_1^2\omega_9^2cs^2\omega_{12}\omega_{10}\omega_{10}\omega_5\omega_{21} - 24\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 12\omega_9^2cs^4\omega_{12}^2\omega_5^3 - 24\omega_{15}\omega_9^2cs^2\omega_{12}v_2^2\omega_5^2\omega_{21} +$$
$$36\omega_{15}v_1^2\omega_9cs^2\omega_{12}\omega_{10}\omega_5^2 - 18\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_9^2cs^4\omega_{12}^2\omega_{10}\omega_5^3 + 6\omega_{15}\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} + 36v_1^2\omega_9^2\omega_{12}^2v_2^2\omega_5^3 - 18\omega_{15}v_1^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3\omega_{21} +$$
$$6\omega_{15}\omega_9cs^2\omega_{12}^2v_2^2\omega_{10}\omega_5^3 + 72\omega_{15}v_1^2\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9cs^4\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 12\omega_{15}\omega_9cs^2\omega_{12}\omega_{10}\omega_5^2)\frac{\rho}{12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21}}$$

$C_{\mathrm{D}_x^3\mathrm{D}_yv_1}^{(2),\mathrm{CLBM1}} = (-12\omega_{12}cs^2\omega_5^3\omega_{21} - 36v_1^2\omega_{12}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{10}\omega_5^3\omega_{21} - 12\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}\omega_5\omega_{21} - 12\omega_9\omega_{12}\omega_{10}\omega_5^2 -$

$6\omega_9\omega_{12}cs^2\omega_5^3 + 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 15\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 18\omega_{15}\omega_9\omega_{10}cs^2\omega_5^2\omega_{21} - 5\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$

$36\omega_{15}v_1^2\omega_9\omega_{10}\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2 + 36v_1^2\omega_9\omega_{12}\omega_5^3 + 12\omega_9\omega_{12}\omega_{10}\omega_5^3 - 36v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{10}cs^2\omega_5^3 +$

$18\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} + 6\omega_{15}\omega_9\omega_{12}\omega_5^3 - 12\omega_{15}\omega_9\omega_{10}\omega_5^2 + 18\omega_{15}\omega_9\omega_{10}\omega_5^2\omega_{21} - 36v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}\omega_5^3\omega_{21} +$

$36v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9\omega_{10}cs^2\omega_5^2 + 6\omega_{15}\omega_9\omega_{10}cs^2\omega_5^3\omega_{21} + 54\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$

$6\omega_{15}\omega_9\omega_{10}\omega_5^3 + 36v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2 - 12\omega_9\omega_{12}\omega_5^3 + 6\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} + 18\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^3\omega_{21} -$

$36\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^3 + 36\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^3 + \omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 3\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3 -$

$5\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 18\omega_{15}v_1^2\omega_{12}\omega_5^3\omega_{21} + 6\omega_{15}\omega_{12}cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5 + 5\omega_{15}\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2 +$

$12\omega_{12}\omega_5^3\omega_{21} - 12\omega_{15}\omega_9\omega_{10}\omega_5\omega_{21} + 12\omega_9\omega_{12}cs^2\omega_5^3 - 18\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_{21} + 12\omega_{15}\omega_9\omega_{10}cs^2\omega_5\omega_{21} -$

$12\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 - 54\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^2\omega_{21} + 12\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2 - 18\omega_{15}\omega_{12}\omega_{10}\omega_5^2\omega_{21} - \omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21})\frac{\rho cs^2}{12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21}}$

$C_{\mathrm{D}_x^3\mathrm{D}_yv_1}^{(2),\mathrm{CLBM2}} = (-36v_1^2\omega_{12}\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{10}\omega_5^3\omega_{21} - 12\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 12\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{10}\omega_5\omega_{21} - 12\omega_9\omega_{12}\omega_{10}\omega_5^2 -$

$18\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_{21} - 5\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_{12}cs^2\omega_5^3\omega_{21} - 15\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$

$36\omega_{15}v_1^2\omega_9\omega_{10}\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2 + 36v_1^2\omega_9\omega_{12}\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} + 12\omega_9\omega_{12}\omega_{10}\omega_5^3 - 36v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} +$

$12\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2 - \omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_9\omega_{12}\omega_5^3 - 12\omega_{15}\omega_9\omega_{10}\omega_5^2 + 18\omega_{15}\omega_9\omega_{10}\omega_5^2\omega_{21} - 36v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{12}\omega_{10}\omega_5^2\omega_{21} -$

$6\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 + 12\omega_9\omega_{12}cs^2\omega_5^3 - 6\omega_{15}\omega_{12}\omega_5^3\omega_{21} + 36v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}\omega_9\omega_{10}cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^2 +$

$54\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_9\omega_{10}\omega_5^3 + 36v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^2 - 12\omega_9\omega_{12}\omega_5^3 - 5\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 18\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^3\omega_{21} -$

$36\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{12}\omega_5^3 + 36\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^3 - 18\omega_{15}\omega_9\omega_{10}cs^2\omega_5^2\omega_{21} + \omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 3\omega_{15}v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} -$

$12\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3 - 6\omega_{15}\omega_9\omega_{10}cs^2\omega_5^3 + 18\omega_{15}v_1^2\omega_{12}\omega_5^3\omega_{21} + 5\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3 +$

$12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^2 + 12\omega_{12}\omega_5^3\omega_{21} - 12\omega_{15}\omega_9\omega_{10}\omega_5\omega_{21} - 12\omega_{12}cs^2\omega_5^3\omega_{21} - 18\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^3 + 12\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_9\omega_{12}cs^2\omega_5^3 +$

$6\omega_{15}\omega_9\omega_{10}cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 54\omega_{15}v_1^2\omega_9\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_9\omega_{12}\omega_{10}cs^2\omega_5\omega_{21})\frac{\rho cs^2}{12\omega_{15}\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21}}$

$C_{\mathrm{D}_x^3\mathrm{D}_yv_1}^{(2),\mathrm{CuLBM1}} = (-54v_1^2\omega_4\omega_1^2 - 12cs^2\omega_9\omega_1 + 3v_1^2\omega_9\omega_1^3 + 12\omega_9\omega_1 + 18v_1^2\omega_4\omega_1^3 - 12\omega_4\omega_1 + 18v_1^2\omega_9\omega_1^2 + 12cs^2\omega_4\omega_1 - \omega_9\omega_1^3 - 36v_1^2\omega_9\omega_1 -$

$3v_1^2\omega_9\omega_4\omega_1^2 - 18cs^2\omega_4\omega_1^2 + cs^2\omega_9\omega_1^3 + 18\omega_4\omega_1^2 - 12cs^2\omega_9\omega_4 + 6cs^2\omega_4\omega_1^3 - 6\omega_9\omega_1^2 - 6\omega_4\omega_1^3 + 36v_1^2\omega_4\omega_1 + 6cs^2\omega_9\omega_1^2 + 36v_1^2\omega_1^2 - 6cs^2\omega_1^3 +$

$$18cs^2\omega_9\omega_4\omega_1 + 12cs^2\omega_1^2 - 18v_1^2\omega_1^3 + 6\omega_1^3 - 5cs^2\omega_9\omega_4\omega_1^2 - cs^2\omega_9\omega_4\omega_1^3 - 12\omega_1^2 + \omega_9\omega_4\omega_1^2)\frac{\rho cs^2}{12\omega_9\omega_4\omega_1^3}$$

$C_{\mathrm{D}_x^3\mathrm{D}_y v_1}^{(2),\mathrm{CuLBM2}} = (-28\omega_3 cs^4\omega_4\omega_1\omega_2^2 + 16\omega_3 cs^4\omega_4\omega_1^3 + 408v_1^4\omega_3\omega_4\omega_1\omega_2^3 + 27v_1^2 cs^2\omega_4\omega_1^3\omega_2^3 - 20cs^2\omega_4\omega_1^2\omega_2^2 + 96v_1^4\omega_3\omega_4\omega_1^3 - 222v_1^2\omega_3\omega_4\omega_1\omega_2^3 - 16\omega_3 cs^2\omega_4\omega_1^3\omega_2 - 24v_1^4\omega_3\omega_4\omega_1\omega_2 - 54v_1^2 cs^2\omega_4\omega_1^3\omega_2^2 + 4\omega_3\omega_4\omega_1^3 + 144v_1^2\omega_3 cs^2\omega_4\omega_1^3 + 94\omega_3 cs^4\omega_4\omega_1\omega_2^3 - 24\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 + 12v_1^2\omega_3\omega_4\omega_1\omega_2^3 + 144v_1^2\omega_3\omega_4\omega_2^3 - 8cs^2\omega_4\omega_1^3\omega_2 + 18cs^2\omega_4\omega_1^2\omega_2^3 - 36\omega_3 cs^2\omega_1\omega_2^3 + 24\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 + 42\omega_3 cs^2\omega_4\omega_1^3\omega_2 - 20\omega_3 cs^2\omega_4\omega_1^3 + 18cs^2\omega_4\omega_1^3\omega_2^2 + 24v_1^2 cs^2\omega_4\omega_1^3\omega_2 + 8cs^4\omega_4\omega_1\omega_2^3 - 54v_1^2 cs^2\omega_4\omega_1^2\omega_2^3 + 108v_1^2\omega_3 cs^2\omega_1\omega_2^3 - 60v_1^2\omega_3 cs^2\omega_4\omega_1\omega_2^2 - 4\omega_3\omega_4\omega_1\omega_2^2 - 9cs^2\omega_4\omega_1^3\omega_2^2 - 6\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 + 14\omega_3\omega_4\omega_1\omega_2^3 + 432v_1^2\omega_3 cs^2\omega_4\omega_1\omega_2^2 + 60v_1^2 cs^2\omega_4\omega_1^2\omega_2^2 + 36\omega_3 cs^4\omega_1\omega_2^3 - 312v_1^2\omega_3 cs^2\omega_4\omega_2^3 - 9\omega_3 cs^2\omega_1^3\omega_2^2 - 8\omega_3\omega_4\omega_2^3 + 32\omega_3 cs^2\omega_4\omega_1\omega_2^2 - 81v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 - 10\omega_3\omega_4\omega_1^3\omega_2 - 153v_1^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 - 3\omega_3 cs^4\omega_4\omega_1^3\omega_2^3 - 7\omega_3\omega_4\omega_1^3\omega_2^3 + 3v_2^2\omega_3 cs^2\omega_4\omega_1\omega_2^2 + 8\omega_3 cs^4\omega_4\omega_1^3\omega_2 - 288v_1^2\omega_3 cs^2\omega_4\omega_1^3\omega_2 - 60v_1^2\omega_3\omega_4\omega_1^3 + 20cs^4\omega_4\omega_1^2\omega_2^3 - 36\omega_3 cs^4\omega_1^2\omega_2^3 + 138v_1^4\omega_3\omega_4\omega_1^3\omega_2^2 - 96v_1^2\omega_3\omega_4\omega_1^2\omega_2 - 54\omega_3 cs^2\omega_4\omega_1\omega_2^3 + v_2^4\omega_3\omega_4\omega_1^3\omega_2^2 - 68\omega_3 cs^4\omega_4\omega_2^3 - 108v_1^2\omega_3 cs^2\omega_1^2\omega_2^3 + 24v_1^2 cs^2\omega_4\omega_1\omega_2^3 + 8cs^4\omega_4\omega_1^3\omega_2 - v_2^2\omega_3\omega_4\omega_4\omega_1^3\omega_2^2 + 192v_1^4\omega_3\omega_4\omega_1\omega_2^2\omega_2 - 18cs^4\omega_4\omega_1^2\omega_2^3 - 4\omega_3\omega_4\omega_1^2\omega_2^2 - 264v_1^4\omega_3\omega_4\omega_2^3 + 17\omega_3 cs^4\omega_4\omega_1^3\omega_2^2 - 90v_1^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 - 18cs^4\omega_4\omega_1^3\omega_2^2 + v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 168v_1^4\omega_3\omega_4\omega_4\omega_1^2\omega_2^2 + 9\omega_3 cs^4\omega_1^3\omega_2^3 - 29\omega_3 cs^4\omega_4\omega_1^3\omega_2^3 + 8\omega_3\omega_4\omega_1^2\omega_2 + 120v_1^2\omega_3 cs^2\omega_4\omega_1^3\omega_2 - 32\omega_3 cs^4\omega_4\omega_1^3\omega_2 + 84v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 - v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 36\omega_3 cs^2\omega_1^2\omega_2^3 - 8cs^2\omega_4\omega_1\omega_2^3 - 3v_2^2\omega_3 cs^2\omega_4\omega_1^3\omega_2^3 + 7\omega_3\omega_4\omega_1^3\omega_2^2 + 153v_1^2\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 + 10\omega_3 cs^4\omega_4\omega_1^2\omega_2^2 + 40\omega_3 cs^2\omega_4\omega_2^3 + 27v_1^2\omega_3 cs^2\omega_1^3\omega_2^2 - 138v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 + 9cs^4\omega_4\omega_1^3\omega_2^3 - 240v_1^4\omega_3\omega_4\omega_1^3\omega_2 + 138v_1^2\omega_3\omega_4\omega_1^3\omega_2 + 81v_1^2\omega_3\omega_4\omega_1^2\omega_2^3)\frac{\rho}{36\omega_3\omega_4\omega_1^3\omega_2^3}$

coefficient $C_{\mathrm{D}_x^3\mathrm{D}_y v_2}^{(2)}$ **at** $\frac{\partial^4 v_2}{\partial x_1^3\partial x_2}$:

$C_{\mathrm{D}_x^3\mathrm{D}_y v_2}^{(2),\mathrm{SRT}} = (2 + v_1^2\omega + 3cs^2\omega - 2v_1^2 - 6cs^2 - \omega)\frac{\rho v_1 v_2}{12\omega}$

$C_{\mathrm{D}_x^3\mathrm{D}_y v_2}^{(2),\mathrm{MRT1}} = (-24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2 - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^3 - 18\omega_{15}v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 66\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3 - 6\omega_{15}^2 v_1^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 - 24\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2 + 60\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 + 24\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 84\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 24\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2 + 24\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2 + 24\omega_{15}^2\omega_9^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}^2 cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2 - 36\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} + 24\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 - 96\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_{21} + 156\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5\omega_{21} + 18\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 4\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3 - 24\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3 - 12\omega_{15}^2\omega_9^2\omega_{10}^2\omega_5^3\omega_{21} + v_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2 cs^2\omega_5^3\omega_{21} - 132\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 90\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 24\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5 + 12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2 - 12\omega_{15}^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 72\omega_{15}\omega_9^2\omega_{12}^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 18\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} + 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3 - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 24\omega_{15}^2\omega_9^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 66\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 66\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 36\omega_{15}^2\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2 - 84\omega_{15}\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 24\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}cs^2\omega_5^3 + 6\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 - 72\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5\omega_{21} + 6\omega_{15}^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - \omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 - 42\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^3 + 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 24\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 24\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5 - 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 24\omega_{15}^2 v_1^2\omega_9^2\omega_{10}^2\omega_5^2\omega_{21} + 48\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 36\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} + 24\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} - 18\omega_{15}^2\omega_{12}^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 3\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} - 48\omega_{15}^2\omega_9^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 18\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 + 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_5)\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21}}$

$C_{\mathrm{D}_x^3\mathrm{D}_y v_2}^{(2),\mathrm{MRT2}} = (-24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2 + 60\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^3 - 18\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 90\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 66\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 24\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^3 - 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}\omega_5^3 + 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 24\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3 + 24\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 24\omega_{15}^2\omega_9^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 36\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} + 24\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 18\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 132\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 24\omega_9^2 cs^2\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} + 4\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 84\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 24\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{10}^2\omega_5^3\omega_{21} + v_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 156\omega_{15}^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 12\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 24\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 24\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 36\omega_{15}^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 66\omega_{15}^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 48\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3 - 12\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_9 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 66\omega_{15}^2 v_1^2\omega_9^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2 - 48\omega_{15}^2 cs^2\omega_{10}^2\omega_5^2\omega_{21} - 72\omega_{15}^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + 72\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 24\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 + 3\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 18\omega_{15}^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - \omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} + 24\omega_{15}^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 84\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 12\omega_{15}^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3 + 24\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} + 24\omega_{15}\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2 - 96\omega_{15}^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 24\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5 - 24\omega_{15}^2 v_1^2\omega_9^2\omega_{10}^2\omega_5^2\omega_{21} + 36\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 24\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_5^2\omega_{21} + 24\omega_{15}^2\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 36\omega_{15}^2\omega_9^2 cs^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} + 12\omega_{15}\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 42\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 18\omega_{15}^2 v_1^2\omega_9\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}\omega_9 cs^2\omega_{12}^2\omega_{10}^2\omega_5^3 + 12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^3 + 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}\omega_5^2\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}^2\omega_9^2\omega_{12}\omega_{10}\omega_5)\frac{\rho v_1 v_2}{12\omega_{15}^2\omega_9^2\omega_{12}^2\omega_{10}^2\omega_5^3\omega_{21}}$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y v_2}^{(2),\mathrm{CLBM1}} = (-\omega_9\omega_{12} + 3\omega_9 + 3\omega_{12}cs^2 - \omega_{12} + v_1^2\omega_9\omega_{12} + 3\omega_9\omega_{12}cs^2 - 3v_1^2\omega_9 - 9\omega_9cs^2 + v_1^2\omega_{12})\frac{\rho v_1 v_2}{12\omega_9\omega_{12}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y v_2}^{(2),\mathrm{CLBM2}} = (-\omega_9\omega_{12} + 3\omega_9 - \omega_{12} + v_1^2\omega_9\omega_{12} + 3\omega_{12}cs^2 - 3v_1^2\omega_9 - 9\omega_9cs^2 + v_1^2\omega_{12} + 3\omega_9\omega_{12}cs^2)\frac{\rho v_1 v_2}{12\omega_9\omega_{12}}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y v_2}^{(2),\mathrm{CuLBM1}} = (-\omega_9 + v_1^2\omega_9\omega_4 + 3cs^2\omega_9\omega_4 - \omega_9\omega_4 - 3v_1^2\omega_4 + v_1^2\omega_9 + 3\omega_4 - 9cs^2\omega_4 + 3cs^2\omega_9)\frac{\rho v_1 v_2}{12\omega_9\omega_4}$$

$$C_{\mathrm{D}_x^3 \mathrm{D}_y v_2}^{(2),\mathrm{CuLBM2}} = (9\omega_3\omega_1\omega_2 + 12\omega_3 cs^2\omega_4\omega_1 - 9v_1^2\omega_4\omega_1\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 + 6v_1^2\omega_3\omega_4\omega_1\omega_2 - 27\omega_3 cs^2\omega_1\omega_2 + 4v_1^2\omega_3\omega_4\omega_2 - 8\omega_3\omega_4\omega_1 - 18v_2^2\omega_3\omega_4\omega_2 - 27cs^2\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 + 6\omega_3 cs^2\omega_4\omega_2 - 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 + 18v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 18\omega_3 cs^2\omega_4\omega_1\omega_2)\frac{\rho v_1 v_2}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho}^{(2)}$ **at** $\frac{\partial^4\rho}{\partial x_1^2 \partial x_2^2}$**:**

$$C_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho}^{(2),\mathrm{SRT}} = (24 - 46cs^2\omega^2 + 14\omega^2 + 5cs^2\omega^3 - \omega^3 + 108cs^2\omega + v_2^2\omega^3 - 14v_2^2\omega^2 - 72cs^2 + 36v_2^2\omega - 36\omega - 24v_2^2)\frac{v_2 cs^2}{12\omega^3}$$

$C_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho}^{(2),\mathrm{MRT1}} = (-36\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} - 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_{12}\omega_{10}^2 cs^4\omega_5^3 - 6\omega_{15}^2 v_1^2\omega_{10}^2\omega_5^3\omega_{21} - 6\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_{12}\omega_{10}^3 cs^2\omega_5\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}^3 cs^2\omega_5 - 24\omega_{15}v_1^2\omega_{12}v_2^3\omega_{10}\omega_5\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5^3 - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 36v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2 v_2^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3 + 6\omega_{15}^2\omega_{10}^3 cs^2\omega_5^3 - 12v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 36\omega_{15}^2 v_1^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{10}\omega_{10}cs^2\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3 - 36v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 84\omega_{15}^2\omega_{12}\omega_{10}^2 cs^4\omega_5\omega_{21} + 12v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 72\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}^2 cs^4\omega_5 - 12\omega_{15}^2\omega_{10}^3 cs^2\omega_5^2 - 12\omega_{15}^2\omega_{10}^3 cs^2\omega_5^2 - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5^2 + 12\omega_{15}^2 v_2^2\omega_{10}^2 cs^2\omega_5^2 + 6\omega_{15}^2 v_2^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}\omega_{10}cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2 v_2^2\omega_{10}^3\omega_5^3 + 12v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3 + 18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 180\omega_{15}^2\omega_{12}\omega_{10}^3 cs^4\omega_5\omega_{21} + 36v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2 + 18\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} + 36\omega_{15}^2 v_1^2\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 48\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_{15}v_1^3\omega_{10}cs^2\omega_5^2 - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}^2 cs^2\omega_5\omega_{21} - 72\omega_{15}v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5\omega_{21} + 18\omega_{15}\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5\omega_{21} + 12\omega_{15}^2 v_1^2 v_2^2\omega_{10}\omega_5^2 - 6\omega_{15}^2 v_2^2\omega_{10}^3 cs^2\omega_5^3 + 24\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 18\omega_{15}^2 v_1^2\omega_{10}^3 cs^2\omega_5^3 + 18\omega_{15}^2 v_1^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3 + 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5\omega_{21} - 12v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}^3 cs^4\omega_5^3\omega_{21} + 18\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3 + 108\omega_{15}v_1^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_{12}cs^2\omega_5^3\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}v_2^3\omega_{10}\omega_5^2 - 12\omega_{15}^2 v_1^2\omega_{10}^3\omega_5^2 - 18\omega_{15}^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2 v_1^2 v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2 v_2^2\omega_{10}^2\omega_5^3 + 30\omega_{15}\omega_{10}cs^4\omega_5^3\omega_{21} - 12v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 36\omega_{15}^2\omega_{10}^3 cs^4\omega_5^2 - 36\omega_{15}v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3 - 24\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3 - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 36\omega_{15}\omega_{12}\omega_{10}cs^4\omega_5^2 + 12\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 - 12\omega_{12}\omega_{10}^3 cs^2\omega_5^3\omega_{21} + 6\omega_{15}^2 v_1^3\omega_{10}\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5^3 - 6\omega_{15}^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12v_1^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 2\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 36\omega_{15}^2\omega_{12}\omega_{10}^3 cs^4\omega_5^2 - 88\omega_{15}^2\omega_{12}\omega_{10}^3 cs^4\omega_5^2\omega_{21} - 6\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3 - 36\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5^3 - \omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 36\omega_{15}^2\omega_{10}^2 cs^4\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5\omega_{21} + 72\omega_{15}v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}^2 cs^4\omega_5^3\omega_{21} - 18\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^2 - 18\omega_{15}^2\omega_{10}^3 cs^4\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2\omega_5^3 + 36\omega_{15}^2 v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{12}v_2^2 cs^2\omega_5^3\omega_{21} - 96\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_{21} + 150\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} + 36\omega_{15}^2\omega_{12}cs^4\omega_5^3\omega_{21} + \omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3\omega_{21} + 72\omega_{15}^2 v_1^2\omega_{12}cs^2\omega_5\omega_{21} + 6\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 12\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3 - 42\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3 + 6\omega_{15}^2 v_1^2 v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^2 + 6\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3 + 6\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3\omega_{21} - 12\omega_{12}\omega_{10}^3 cs^4\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 36\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^2 + 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^3 - 24\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 54\omega_{15}^2 v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 12\omega_{15}^2\omega_{12}\omega_{10}^3 cs^2\omega_5^2\omega_{21} + 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} - 36\omega_{15}v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 18\omega_{15}^2\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3 + 12\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 12\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 5\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} + 18\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 42\omega_{15}\omega_{12}\omega_{10}^2 cs^4\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^2)\frac{v_2}{12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21}}$

$C_{\mathrm{D}_x^2 \mathrm{D}_y^2 \rho}^{(2),\mathrm{MRT2}} = (-18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 24\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{10}^2\omega_5^3\omega_{21} - 18\omega_{15}^2 cs^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 6\omega_{15}^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3 - 36\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 24\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} + 36\omega_{15}^2 v_1^2 cs^2\omega_{10}^3\omega_5^2 - 18\omega_{15}^2 cs^4\omega_{10}^3\omega_5^3 + 6\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5^2 + 36v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 12v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 6\omega_{15}^2 cs^2 v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 6\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 150\omega_{15}^2 cs^4\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 42\omega_{15}cs^4\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 12v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2 cs^2\omega_{12}\omega_{10}^3\omega_5^2 + 12\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 72\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 18\omega_{15}cs^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5^3 + 18\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} + 72\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} - 54\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}^2 v_1^2 cs^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 36\omega_{15}^2 cs^4\omega_{10}^3\omega_5^2 - 18\omega_{15}^2 v_1^2 cs^2\omega_{10}^3\omega_5^3 - 36\omega_{15}^2 cs^4\omega_{10}^3\omega_5^2\omega_{21} - 12cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 - 36v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 6\omega_{15}^2 cs^4\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 18\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^3\omega_{10}^3\omega_5^3 - 12\omega_{15}^2 cs^2 v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 72\omega_{15}^2 cs^4\omega_{10}^3\omega_5\omega_{21} + 180\omega_{15}^2 cs^4\omega_{12}\omega_{10}^2\omega_5\omega_{21} + 6\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 2\omega_{15}^2 cs^2\omega_{10}^3\omega_5^3\omega_{21} + 6\omega_{15}^2 cs^2\omega_{10}^3\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 12\omega_{15}^2 v_1^2\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 2\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}cs^2\omega_{12}\omega_{10}^2\omega_5^3 + 12\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_5^3\omega_{21} - 12\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}^2 cs^4\omega_{10}^3\omega_5^3\omega_{21} + 36\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 36\omega_{15}v_1^2 cs^2\omega_{10}^3\omega_5^2\omega_{21} + 12\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} + 12cs^4\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2 v_2^2\omega_{10}^3\omega_5^3 + 24\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}^2 cs^2\omega_{12}v_2^3\omega_{10}^3\omega_5^3 - 12\omega_{15}^2 cs^2\omega_{10}^3\omega_5^3 - 12\omega_{15}^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3 + 12cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 12v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 18\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3 + 12\omega_{15}^2 cs^2 v_2^3\omega_{10}^3\omega_5^3 + 18\omega_{15}^2 cs^4\omega_{12}\omega_{10}^3\omega_5^3 + 6\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 12cs^4\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^3 - 36\omega_{15}^2 cs^4\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 36\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}v_1^3\omega_{10}^3\omega_5^3 - 12\omega_{15}^2 cs^2\omega_{12}v_2^3\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}^2 v_1^2 v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 12v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 36\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^2 - 24\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 30\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$

$$36\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^2 - 6\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 6\omega_{15}^2v_1^2\omega_{10}^3\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 - 12\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} + 18\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} -$$
$$88\omega_{15}^2cs^4\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 36\omega_{15}^2v_1^2cs^2\omega_{12}\omega_5^3\omega_{21} + 12v_1^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 72\omega_{15}^2v_1^2cs^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 36\omega_{15}^2cs^4\omega_{12}\omega_{10}^3\omega_5^2 - 6\omega_{15}^2cs^2v_2^2\omega_{10}^3\omega_5^3 -$$
$$36v_1^2cs^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}^2cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 36\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^2 - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_5^3\omega_{10}^3\omega_5^3 +$$
$$12\omega_{15}^2cs^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 6\omega_{15}^2v_1^2\omega_{12}\omega_{10}^2\omega_5^3 - 36\omega_{15}v_1^2cs^2\omega_{12}\omega_{10}^3\omega_5^3 + 12\omega_{15}^2cs^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 96\omega_{15}^2cs^4\omega_{12}\omega_{10}^3\omega_{21} +$$
$$6\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 12cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 6\omega_{15}^2v_1^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2v_1^2\omega_{12}\omega_{10}^3\omega_5^2 - 42\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} +$$
$$6\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 48\omega_{15}^2cs^4\omega_{12}\omega_{10}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^3 - 12cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} + \omega_{15}^2cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} +$$
$$108\omega_{15}v_1^2cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 18\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 18\omega_{15}^2cs^4\omega_{12}\omega_{10}^3\omega_5^3 + 18\omega_{15}^2v_1^2cs^2\omega_{12}\omega_{10}^3\omega_5^3 - 12cs^4\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} -$$
$$12\omega_{15}^2cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} + 24\omega_{15}^2v_1^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 6\omega_{15}^2v_1^2\omega_{12}\omega_{10}^3\omega_5^3 - 24\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - \omega_{15}^2cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 36\omega_{15}v_1^2cs^2\omega_{12}\omega_{10}^3\omega_5^3 +$$
$$36\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^3 + 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2 + 24\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} - 6\omega_{15}^2cs^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}cs^4\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$$
$$12\omega_{15}^2cs^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 36\omega_{15}^2cs^4\omega_{12}\omega_5^2\omega_{21} + 18\omega_{15}^2v_1^2cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 5\omega_{15}^2cs^4\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 36\omega_{15}v_1^2cs^2\omega_{12}\omega_{10}^3\omega_5^2 -$$
$$36\omega_{15}v_1^2cs^2\omega_{12}\omega_{10}\omega_5^3\omega_5^2\omega_{21} - 84\omega_{15}^2cs^4\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^2)\frac{v_2}{12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21}}$$

$C^{(2),\text{CLBM1}}_{\text{D}^2_x\text{D}^2_y\rho} = (36\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^2 + 18\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 6\omega_{15}^2v_2^2\omega_{10}^3\omega_5^2 - 36\omega_{15}^2\omega_{10}^3cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5^2 -$

$12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2\omega_{21} + 2\omega_{15}^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 36\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 40\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} - 12\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} -$

$36\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}^2cs^2\omega_5^2 - 6\omega_{15}^2\omega_{10}^2\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2 - 18\omega_{15}\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} +$

$12\omega_{15}\omega_{12}\omega_{10}^3\omega_5^2 + 12\omega_{15}^2\omega_{12}v_2^2\omega_5^2\omega_{21} + 6\omega_{15}^2v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5 - 12\omega_{15}\omega_{12}\omega_{10}^3\omega_5 + 12\omega_{15}\omega_{12}v_2^2\omega_{10}^2\omega_5^2 +$

$12\omega_{15}\omega_{12}\omega_{10}^3\omega_5 + 18\omega_{15}\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_{21} - 36\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^2 + 12\omega_{15}^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 6\omega_{15}^2\omega_{12}v_2^2\omega_{10}\omega_5^2 -$

$12\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}^3\omega_5^2 - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 36\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 12\omega_{15}^2v_2^2\omega_{10}^3\omega_5 +$

$54\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} + 54\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5 + \omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} + 18\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^2 + 6\omega_{15}\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} +$

$12\omega_{15}^2\omega_{12}\omega_{10}^2\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_{12}\omega_5^2\omega_{21} -$

$6\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^2 - 12\omega_{15}^2v_2^2\omega_{10}^3\omega_5\omega_{21} + 12\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 36\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5 - 36\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} - \omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_{10}^3\omega_5^2 -$

$18\omega_{15}^2\omega_{10}^3cs^2\omega_5^2 + 12\omega_{15}^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5 + 12\omega_{12}\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}^2\omega_{10}^3\omega_5 - 12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_{21} + 36\omega_{15}^2\omega_{10}^3cs^2\omega_5 +$

$36\omega_{15}^2\omega_{12}cs^2\omega_5^2\omega_{21} + 18\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}^2\omega_{10}^3\omega_5\omega_{21} + 36\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5 - 36\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_{21} +$

$18\omega_{15}^2\omega_{10}^3cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 36\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 54\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} -$

$36\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5 - 12\omega_{15}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} + 5\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}^2\omega_5^2)\frac{v_2cs^2}{12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21}}$

$C^{(2),\text{CLBM2}}_{\text{D}^2_x\text{D}^2_y\rho} = (18\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 6\omega_{15}^2v_2^2\omega_{10}^3\omega_5^2 - 36\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_{21} - 12\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5^2 - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2\omega_{21} +$

$2\omega_{15}^2\omega_{10}^2\omega_5^2\omega_{21} + 36\omega_{15}^2\omega_{10}^3cs^2\omega_5 + 36\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5 - 12\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 18\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} - 36\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5 -$

$6\omega_{15}^2\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} - 12\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 6\omega_{15}^2\omega_{10}^2\omega_5^2\omega_{21} + 36\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_{21} - 2\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2\omega_{21} + 6\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2 -$

$18\omega_{15}\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^3\omega_5^2 + 12\omega_{15}^2\omega_{12}v_2^2\omega_5^2\omega_{21} + 5\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} + 6\omega_{15}^2v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 54\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} -$

$12\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5 - 12\omega_{15}\omega_{12}\omega_{10}^3\omega_5 + 12\omega_{15}\omega_{12}v_2^2\omega_{10}^2\omega_5^2 + 12\omega_{15}\omega_{12}\omega_{10}^3\omega_{21} + 18\omega_{15}\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} +$

$12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_{21} + 18\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^2 + 18\omega_{15}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} - 6\omega_{15}^2\omega_{12}v_2^2\omega_{10}\omega_5^2 - 18\omega_{15}^2\omega_{10}cs^2\omega_5^2 -$

$12\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}\omega_5^2 - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 36\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5 - 18\omega_{15}\omega_{12}\omega_{10}\omega_5\omega_{21} + 36\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} +$

$12\omega_{15}^2v_2^2\omega_{10}^3\omega_5 + 36\omega_{15}^2\omega_{12}cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5 + \omega_{15}^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 36\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_{21} - 36\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} +$

$6\omega_{15}\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}\omega_{10}^3\omega_5^2 - 40\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} -$

$12\omega_{15}^2v_2^2\omega_{10}^3\omega_5\omega_{21} + 12\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 36\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - \omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_{10}^3\omega_5^2 - 36\omega_{15}^2\omega_{10}^3cs^2\omega_5\omega_{21} +$

$12\omega_{15}^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 54\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5\omega_{21} + 12\omega_{12}\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}^2\omega_{10}^3\omega_5 - 12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_{21} + 54\omega_{15}^2\omega_{12}\omega_{10}^2cs^2\omega_5\omega_{21} +$

$18\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2\omega_5\omega_{21} - 36\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5 + 36\omega_{15}\omega_{12}\omega_{10}^3cs^2\omega_5^2 - 6\omega_{15}\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} -$

$18\omega_{15}^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} - 18\omega_{15}^2\omega_{12}\omega_{10}^2cs^2\omega_5^2 + 12\omega_{15}\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}^2\omega_5^2)\frac{v_2cs^2}{12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21}}$

$C^{(2),\text{CuLBM1}}_{\text{D}^2_x\text{D}^2_y\rho} = (-12\omega_7^2\omega_1^2 + 36cs^2\omega_7^2\omega_1^2 + v_2^2\omega_7^2\omega_1^4\omega_5^3 + 12v_2^2\omega_7\omega_1\omega_5^2 + 12v_2^2\omega_7^2\omega_1^3 + 12\omega_1\omega_5^3 - 12v_2^2\omega_7^2\omega_5^2 + 18v_2^2\omega_7\omega_1\omega_5^3 - 36cs^2\omega_1\omega_5^3 +$

$4v_2^2\omega_7^2\omega_1^4\omega_5^2 + 12\omega_7\omega_5^3 - 18v_2^2\omega_7^2\omega_1^2\omega_5 - 36cs^2\omega_7^2\omega_5^3 + 18cs^2\omega_7^2\omega_1\omega_5^3 - 12v_2^2\omega_7^2\omega_5^2 - 6\omega_7^2\omega_1\omega_5^3 + 12\omega_7^2\omega_1\omega_5^3 - 18cs^2\omega_7\omega_1\omega_5^3 - 6\omega_7^2\omega_1\omega_5^3 +$

$18cs^2\omega_7\omega_1^2\omega_5^3 + 12v_2^2\omega_7\omega_5^3 - 40cs^2\omega_7^2\omega_1\omega_5^3 + 6\omega_7\omega_1^2\omega_5^3 + 12\omega_7^2\omega_5^3 - 18\omega_7\omega_1\omega_5^3 - 12v_2^2\omega_7\omega_5^3 + 5cs^2\omega_7^2\omega_1^2\omega_5^3 + 36cs^2\omega_7\omega_1\omega_5^3 - 4\omega_7^2\omega_5^3 -$

$36cs^2\omega_7^2\omega_5^3 - 12\omega_7\omega_5^3 + 36cs^2\omega_7^2\omega_5^3 + 54cs^2\omega_7\omega_1\omega_5^3 - \omega_7^2\omega_1^2\omega_5^3 - 12\omega_7\omega_1\omega_5^3 + 12cs^2\omega_7^2\omega_1^2\omega_5^3 - 12\omega_1^3\omega_5^3 - 54cs^2\omega_7^2\omega_1\omega_5 + 12v_2^2\omega_7^2\omega_1^2 +$

$6v_2^2\omega_7^2\omega_1\omega_5^3 - 6v_2^2\omega_7\omega_1^2\omega_5^3 + 36cs^2\omega_1^2\omega_5^3 + 18\omega_7^2\omega_1^2\omega_5 + 12\omega_1^2\omega_5^3 - 36cs^2\omega_1^2\omega_5^3 + 6v_2^2\omega_7^2\omega_1\omega_5^3 - 12v_2^2\omega_7^2\omega_1\omega_5^3 - 12v_2^2\omega_7\omega_1\omega_5^3)\frac{cs^2v_2}{12\omega_7^2\omega_1^2\omega_5^3}$

$C^{(2),\text{CuLBM2}}_{\text{D}^2_x\text{D}^2_y\rho} = (-4v_2^2\omega_3^2\omega_4^2\omega_1^3 - 12\omega_3cs^4\omega_4^2\omega_1^3\omega_2 + 32v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2 + 108\omega_3cs^4\omega_4^2\omega_1^2\omega_2 - 108\omega_3^2cs^4\omega_4^2\omega_1^3\omega_2 + 4\omega_3^2\omega_4^2\omega_1 - 4\omega_3^2\omega_4^2\omega_1\omega_2 -$

$36\omega_3^2cs^4\omega_4^2\omega_1^3\omega_2 - 36v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 20v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 138v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 24\omega_3cs^4\omega_4^2\omega_1^2\omega_2 - 18\omega_3^2cs^2\omega_1^3\omega_2 - 32v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 +$

$24v_1^2\omega_3^2\omega_4^2\omega_2 - 12v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 + 54cs^4\omega_4^2\omega_1^3\omega_2 - 4\omega_3^2\omega_4^2\omega_1\omega_2 + 96\omega_3cs^4\omega_4^2\omega_1^2\omega_2 - 4v_2^2\omega_3cs^2\omega_4^2\omega_1\omega_2 + 9\omega_3^2cs^2\omega_4\omega_1^2\omega_2 +$

$36v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2 + 16v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 102\omega_3^2cs^4\omega_4^2\omega_1\omega_2 - 119\omega_3^2cs^4\omega_4^2\omega_1^3\omega_2 + 24v_1^2\omega_3^2\omega_4^2\omega_1^3 - 52\omega_3^2cs^2\omega_4^2\omega_1^3 + 36\omega_3^2cs^2\omega_1^3\omega_2 +$

$35\omega_3^2cs^4\omega_4^2\omega_1^3\omega_2 - 4v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 30v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 + 3v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 18v_2^2\omega_3^2cs^2\omega_1^3\omega_2 - 42v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 + 216v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3 +$

$72v_1^4\omega_3^2\omega_4^2\omega_1\omega_2 + 4v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 58\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 + 54\omega_3^2cs^4\omega_1^3\omega_2 - 27\omega_3^2cs^4\omega_4^2\omega_1^3\omega_2 + 12v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 16v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3 +$

$28\omega_3cs^2\omega_4^2\omega_1\omega_2^3 + 36v_1^2\omega_3^2\omega_4^2\omega_4^2\omega_2^3 - 324v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 8v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 138v_1^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^3 + 60v_1^2\omega_3^2cs^2\omega_4^2\omega_1^2 + 15\omega_3^2cs^4\omega_4^2\omega_1^3\omega_2^3 -$

$36\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^3 - 9v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 36v_1^4\omega_3^2\omega_4^2\omega_1\omega_2 + 28\omega_3^2cs^2\omega_4^2\omega_1\omega_2 + 4v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 72cs^4\omega_4^2\omega_1^3\omega_2 + 72\omega_3^2cs^4\omega_4^2\omega_1^3 -$

$24v_1^2\omega_3^2\omega_4^2\omega_4^2\omega_1\omega_2 + 12cs^2\omega_4^2\omega_1^3\omega_2 + 324v_1^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 + 4\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 9v_2^2\omega_3^2cs^2\omega_4\omega_1^3\omega_2 - 48v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 36\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 -$

$16\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 36v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 4v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 60v_1^4\omega_3^2\omega_4^2\omega_4\omega_2 + 20\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 24v_2^2cs^2\omega_4^2\omega_1^2\omega_2 - 27\omega_3^2cs^4\omega_4^2\omega_1^3\omega_2 -$

$32\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 30v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 + 27v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 4\omega_3^2\omega_4^2\omega_2^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 + 66v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 4v_2^2\omega_3^2\omega_4^2\omega_1^3 - 48v_1^2\omega_3^2\omega_4^2\omega_1^3 +$

$74\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 36v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2 + 49\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 27v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 24v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^3 + 16v_2^2\omega_3^2cs^2\omega_4^2\omega_2^3 +$

$27v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 28v_2^2\omega_3cs^2\omega_4^2\omega_1\omega_2 - 25\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 4v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 78\omega_3^2cs^4\omega_4^2\omega_1\omega_2^3 + 36v_2^2\omega_3^2cs^2\omega_4\omega_1^2\omega_2^3 + 9\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 -$

$12v_2^2cs^2\omega_4^2\omega_1^3\omega_2^2 - 28v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^2 - 27v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 84\omega_3cs^4\omega_4^2\omega_1\omega_2^3 + 4\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 3\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 24cs^2\omega_4^2\omega_1^2\omega_2^2 +$
$12v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 108\omega_3^2cs^4\omega_4\omega_1\omega_2^2 + 18v_2^2cs^2\omega_4^2\omega_1^3\omega_2^2 + 4v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^2 - 72\omega_3^2cs^4\omega_4^2\omega_1\omega_2^2 - 216v_1^2\omega_3^2cs^2\omega_4^2\omega_2^3)\frac{v_2}{36\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2 \partial x_2^2}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = (4\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^2 + 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^3 - 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3cs^2\omega_5^3 + \omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} - 15\omega_{15}^2\omega_9\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$
$2\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2cs^2\omega_5^2\omega_{21} + 9\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 12\omega_{15}^2\omega_9\omega_{12}^2cs^2\omega_5^3\omega_{21} - 5\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} +$
$3\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5\omega_{21} + 5\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2cs^2\omega_5\omega_{21} + \omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 +$
$4\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^2 - 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2cs^2\omega_5^3 - 4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_{12}^2\omega_{10}^3cs^2\omega_5\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3cs^2\omega_5^2 +$
$13\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2cs^2\omega_5^3\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5\omega_{21} - 3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} +$
$4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2cs^2\omega_5^3 + 26\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5\omega_{21} - 3\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 4\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - 4\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} +$
$12\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 9\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} + 11\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^2\omega_{21} + 4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 +$
$2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^2\omega_5\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3 - 4\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} + 3\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2cs^2\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3cs^2\omega_5^3 -$
$24\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} - 6\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2 - 7\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} +$
$3\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^2 - 2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2 - 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}\omega_5^2\omega_{21} +$
$4\omega_{15}^2\omega_9\omega_{10}^3cs^2\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5^3\omega_{21} - 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3 - 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^2cs^2\omega_5^3\omega_{21} + 8\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^3\omega_{21} -$
$8\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^2\omega_{21} + \omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 + 2\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} + 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^2 - 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2 -$
$16\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5\omega_{21} + 4\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - \omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} - \omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^3\omega_{21} +$
$8\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3cs^2\omega_5^3\omega_{21} - 8\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^3\omega_{21} - \omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 8\omega_{15}\omega_9\omega_{12}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_{12}^2\omega_{10}^3cs^2\omega_5^2\omega_{21} -$
$4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 - 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3 - 8\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^2\omega_{21} + 8\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 +$
$4\omega_{15}^2\omega_{12}\omega_{10}^3cs^2\omega_5^2\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3 - 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3cs^2\omega_5^3 + 7\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2 - 2\omega_{15}^2\omega_9\omega_{10}^3cs^2\omega_5^3\omega_{21} -$
$2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} - 5\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5\omega_{21} - \omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21})\frac{\rho v_1 v_2}{2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21}}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} =$
$(4\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^2 + 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^3 - 6\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^2\omega_5\omega_{21} + \omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} + 4\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^3\omega_5^2 + 9\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} -$
$8\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} + 2\omega_{15}^2cs^2\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 3\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5\omega_{21} + 4\omega_{15}^2\omega_9cs^2\omega_{12}^3\omega_{10}^3\omega_5^2\omega_{21} +$
$5\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 4\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^3\omega_5^3 + 2\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}\omega_5\omega_{21} + \omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} -$
$4\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^2 - 4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 2\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 8\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} -$
$2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} + 8\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - 3\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}\omega_5^3\omega_{21} - 3\omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} -$
$15\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 13\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - 4\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - 4\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 2\omega_{15}^2\omega_9cs^2\omega_{10}^3\omega_5^3\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}\omega_5^3\omega_{21} -$
$8\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} - 9\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} + 4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 + 8\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} +$
$12\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3 + 11\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} - 4\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} +$
$6\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} - 4\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^2 - 4\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2 - 7\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} + 26\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} + 3\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} -$
$8\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^2\omega_{21} - 2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2 + 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3 +$
$3\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3 - 16\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_{21} + 4\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^2 + \omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 +$
$4\omega_{15}^2cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 4\omega_{15}^2cs^2\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} + 2\omega_{15}\omega_9\omega_{12}^2\omega_{10}^2\omega_5^2\omega_{21} - 4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2 + 4\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3 + 4\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_5^2\omega_{21} +$
$4\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - \omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 5\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - \omega_{15}^2\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 4\omega_{15}\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^2 -$
$4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 - 24\omega_{15}^2\omega_9cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 2\omega_{15}^2\omega_9\omega_{12}\omega_{10}^3\omega_5^3 - 2\omega_{15}^2cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 2\omega_{15}\omega_9\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 2\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3 +$
$4\omega_{15}\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2 + 7\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^2 - 8\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} - \omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21} + 2\omega_{15}^2\omega_9cs^2\omega_{12}^2\omega_{10}^3\omega_5^3 -$
$2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5\omega_{21} - 5\omega_{15}^2\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 4\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5^2 - 6\omega_{15}\omega_9\omega_{12}^2v_2^2\omega_{10}^3\omega_5\omega_{21} - \omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21})\frac{\rho v_1 v_2}{2\omega_{15}^2\omega_9\omega_{12}^2\omega_{10}^3\omega_5^3\omega_{21}}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} =$
$(-75v_1^2\omega_3\omega_1^3\omega_2 - 50v_1^2\omega_3\omega_1^2\omega_2^3 + 84\omega_3cs^2\omega_1^3 + 6\omega_1\omega_2^3 + 12v_2^2\omega_1^2\omega_2^2 - 9v_2^2\omega_3\omega_1^3\omega_2 - 66v_1^2\omega_3\omega_1^2\omega_2^2 + 18v_2^2\omega_3\omega_1^2\omega_2^2 - 6v_2^2\omega_3\omega_1^3\omega_2 - 36\omega_3\omega_1^3 +$
$108\omega_3cs^2\omega_1\omega_2^3 + 12v_2^2\omega_3\omega_2^3 - 12v_2^2\omega_3\omega_1^2\omega_2 + 36cs^2\omega_1^2\omega_2^2 - 60\omega_3\omega_1\omega_2^2 + 6v_1^2\omega_3\omega_1^2\omega_2 - 18cs^2\omega_1^3\omega_2 + 48v_1^2\omega_3\omega_2^3 + 50v_1^2\omega_3\omega_1^3\omega_2^2 - 12\omega_3\omega_1\omega_2^2 -$
$18cs^2\omega_1\omega_2^3 - 18\omega_3cs^2\omega_1^2\omega_2 + 42\omega_3\omega_2^3 + 12\omega_3\omega_1^2\omega_2^2 - 66\omega_3cs^2\omega_2^3 + 42\omega_3cs^2\omega_1^3\omega_2^2 + 23\omega_3\omega_1^2\omega_2^3 + 48\omega_3\omega_1^3\omega_2 - 12\omega_1^2\omega_2^2 - 23\omega_3\omega_1^3\omega_2^2 - 114v_1^2\omega_3\omega_2^3 +$
$60v_1^2\omega_3\omega_1\omega_2^2 - 12v_2^2\omega_3\omega_1\omega_2^2 - 42\omega_3cs^2\omega_1^2\omega_2^3 - 108\omega_3cs^2\omega_1^3\omega_2 - 6v_2^2\omega_1\omega_2^2 + 141v_1^2\omega_3\omega_1\omega_2^3 + 6\omega_1^3\omega_2 + 12v_2^2\omega_3\omega_1^3 + 6\omega_3\omega_1^2\omega_2 - 9v_2^2\omega_3\omega_1\omega_2^3)\frac{\rho v_1 v_2}{18\omega_3\omega_1^3\omega_2^2}$

coefficient $C^{(2)}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2^2}$:

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$$C^{(2),\text{SRT}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = \left(-24 + 8cs^2\omega^2 - 12\omega^2 - cs^2\omega^3 - 18cs^2\omega + 36v_2^2\omega^2 + 12cs^2 - 108v_2^2\omega + 36\omega + 72v_2^2\right)\frac{\rho cs^2}{12\omega^3}$$

$$C^{(2),\text{MRT1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = (6\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} - 54\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 72_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^2 cs^4\omega_5 - 6\omega_{15}^2 v_1^2\omega_{10}\omega_5^3\omega_{21} +$$

$$78_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}^3 cs^2\omega_5 - 72\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5 -$$

$$84\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_{10}\omega_5^2\omega_{21} - 12v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 36\omega_{15}^2 v_2^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} + 18\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3 + 6\omega_{15}^2\omega_{10}cs^2\omega_5^3 -$$

$$12v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{10}cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3 - 12v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3\omega_{21} -$$

$$12\omega_{15}^2\omega_{12}\omega_{10}^2 cs^4\omega_5\omega_{21} + 36v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5\omega_{21} - 12\omega_{15}v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$$

$$12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}^2 cs^4\omega_5 - 36\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2 - 12\omega_{15}^2\omega_{10}cs^2\omega_5^2 + 18\omega_{15}^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5\omega_{21} +$$

$$60\omega_{15}^2 v_2^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5^2 + 36\omega_{15}^2 v_2^2\omega_{10}^2 cs^2\omega_5^2 + 18\omega_{15}^2 v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 6\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 18\omega_{15}^2 v_1^2 v_2^2\omega_{10}\omega_5^3 +$$

$$12v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3 + 18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5\omega_{21} + 12v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 36\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2 -$$

$$132\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 36\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^2\omega_{21} -$$

$$48\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{10}^2\omega_5\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{10}cs^2\omega_5^2 - 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} + 12\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 24\omega_{15}v_1^2\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} -$$

$$144\omega_{15}\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5\omega_{21} + 36\omega_{15}^2 v_1^2 v_2^2\omega_{10}\omega_5^2 - 108\omega_{15}^2\omega_{12}v_2^2\omega_{10}cs^2\omega_5^2\omega_{21} - 18\omega_{15}^2 v_2^2\omega_{10}^3 cs^2\omega_5^3 +$$

$$72\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{10}^3 cs^2\omega_5^3 + 6\omega_{15}^2 v_1^2\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 36\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3 + 84\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5\omega_{21} - 36v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} +$$

$$6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}^3 cs^4\omega_5 + 36\omega_{15}v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 24\omega_{15}^2\omega_{12}\omega_{10}^2 cs^2\omega_5^2\omega_{21} -$$

$$12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5 + 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5 - 12\omega_{15}^2 v_1^2\omega_{10}^3\omega_5 + 24\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{12}\omega_5^3\omega_{21} - 36\omega_{15}^2 v_1^2 v_2^2\omega_{10}\omega_5^2\omega_{21} +$$

$$12\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^3\omega_{21} - 36v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{10}cs^4\omega_5^2 - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3 - 72\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}cs^2\omega_5^3 -$$

$$42\omega_{15}^2 v_2^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^3 cs^2\omega_5^2 - 24\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5 + 6\omega_{15}^2 v_1^2\omega_{10}\omega_5^3 -$$

$$36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{10}^2 cs^4\omega_5^2\omega_{21} - 6\omega_{15}^2\omega_{10}cs^2\omega_5^3\omega_{21} + 12v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 18\omega_{15}^2\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3\omega_{21} -$$

$$12\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_5^2 - 4\omega_{15}^2\omega_{12}\omega_{10}^3 cs^4\omega_5^2\omega_{21} - 18\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5 - 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2\omega_{10}cs^4\omega_5^2\omega_{21} +$$

$$36\omega_{15}^2 v_1^2 v_2^2\omega_5^3\omega_{21} + 60\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5\omega_{21} + 24\omega_{15}v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} + 12\omega_{15}v_1^2\omega_{12}\omega_{10}cs^2\omega_5^2 -$$

$$6\omega_{15}^2\omega_{10}^3 cs^4\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{15}^2\omega_{12}\omega_{10}cs^4\omega_{21} + 24\omega_{15}^2\omega_{12}\omega_{10}^2 cs^4\omega_5\omega_{21} +$$

$$24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2 cs^2\omega_5\omega_{21} + 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5 + 24\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^2\omega_{21} - 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5^2\omega_{21} +$$

$$36\omega_{15}\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3 + 18\omega_{15}^2 v_1^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^2 + 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5 - 12\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} -$$

$$12\omega_{15}v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3\omega_{21} + 6\omega_{15}^2\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3 cs^2\omega_5^3 + 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^3 - 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} -$$

$$12\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5^3\omega_{21} - 18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 108\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 36\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^2 + 24\omega_{15}^2 v_1^2\omega_{10}\omega_5\omega_{21} -$$

$$12\omega_{15}v_1^2\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}^2\omega_{10}cs^4\omega_5^3\omega_{21} + 12\omega_{15}^2\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}cs^2\omega_5^3 + 24\omega_{12}v_2^2\omega_{10}^3 cs^2\omega_5^3\omega_{21} - \omega_{15}^2\omega_{12}\omega_{10}^3 cs^4\omega_5^3\omega_{21} +$$

$$180\omega_{15}^2\omega_{12}v_2^2\omega_{10}^2 cs^2\omega_5\omega_{21} + 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5 + 72\omega_{15}\omega_{12}v_2^2\omega_{10}cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}^3 cs^4\omega_5^3\omega_{21} - 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3)\frac{\rho}{12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21}}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = (-54\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 72_{15}v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}^2 cs^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} - 6\omega_{15}^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3 -$$

$$36\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 72\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} + 12_{15}^2 v_1^2 cs^2\omega_{10}^3\omega_5 - 6\omega_{15}^2 cs^4\omega_{10}^3\omega_5 + 18\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5 - 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} -$$

$$12\omega_{15}^2 cs^2\omega_{12}\omega_{10}^3\omega_5^2 + 12v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 12v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 18\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 78\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} +$$

$$24\omega_{15}^2 cs^4\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5 + 36v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}^2 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 12\omega_{15}cs^4\omega_{12}\omega_{10}\omega_5\omega_{21} +$$

$$36\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 24\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5^3 +$$

$$180\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^2\omega_5^2\omega_{21} - 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 24\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 18\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}^2 v_1^2 cs^2\omega_{10}^2\omega_5^3\omega_{21} -$$

$$12\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}^2 cs^4\omega_{10}^3\omega_5 - 6\omega_{15}^2 v_1^2 cs^2\omega_{10}^3\omega_5 - 12\omega_{15}^2 cs^4\omega_{10}^2\omega_5^2\omega_{21} + 24cs^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 36\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2 -$$

$$12v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 6\omega_{15}^2 cs^4\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 132\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 18\omega_{15}^2 v_1^2 v_2^2\omega_{10}^3\omega_5^3 - 36\omega_{15}^2 cs^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$$

$$18\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 18\omega_{15}^2 cs^2 v_2^2\omega_{10}^2\omega_5^3 + 24\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}\omega_5\omega_{21} + 18\omega_{15}^2 cs^4\omega_{12}\omega_{10}\omega_5\omega_{21} - 48\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_{21} +$$

$$6\omega_{15}^2 cs^2\omega_{12}\omega_{10}\omega_5^3 + 6\omega_{15}^2 cs^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} + 6\omega_{15}^2 cs^2\omega_{10}^3\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 36\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3 +$$

$$12\omega_{15}^2 v_1^2\omega_{10}^2\omega_5^3\omega_{21} - 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 12\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 18\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}cs^2\omega_{12}\omega_{10}\omega_5^3 +$$

$$72\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2 cs^4\omega_{12}\omega_{10}\omega_5^3 + 12\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} + 84\omega_{15}^2 cs^4\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} +$$

$$36\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^2 - 12\omega_{15}cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 72\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 36\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5 - 12\omega_{15}^2 cs^2\omega_{10}^3\omega_5 + 12\omega_{15}cs^4\omega_{12}\omega_{10}^2\omega_5\omega_{21} -$$

$$36v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^2\omega_5^3 + 36\omega_{15}^2 cs^2 v_2^2\omega_{10}^3\omega_5^2 + 6\omega_{15}^2 cs^4\omega_{12}\omega_{10}^3\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} -$$

$$12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^3 + 6\omega_{15}^2 cs^4\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 24cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5 - 12\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{10}^3\omega_5^2 -$$

$$42\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 12\omega_{15}^2 v_1^2\omega_{12}\omega_5^3\omega_{21} - 36\omega_{15}^2 v_1^2 v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 36v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3\omega_{21} + 12\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^3 -$$

$$72\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 6\omega_{15}^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^3 - 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 6\omega_{15}^2 v_1^2\omega_{10}^3\omega_5^3 -$$

$$36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^3 + 60\omega_{15}cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 144\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 4\omega_{15}^2 cs^4\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 12\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_5^3\omega_{21} +$$

$$12v_1^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - 24\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} - 12\omega_{15}^2 cs^4\omega_{12}\omega_{10}^3\omega_5 - 18\omega_{15}^2 cs^2 v_2^2\omega_{10}^3\omega_5^3 - 12v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} +$$

$$18\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^3 - 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} + 36\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5 + 12\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} +$$

$$12\omega_{15}v_1^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{15}^2 cs^4\omega_{12}\omega_{10}\omega_{21} + 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5 + 12\omega_{15}^2 cs^2\omega_{12}\omega_{10}\omega_5^2\omega_{21} -$$

$$36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}^2 v_1^2 v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^2 - 24\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 18\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} -$$

$$12\omega_{15}^2 cs^4\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5 + 24cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} + 36\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^2\omega_{21} + 24\omega_{15}cs^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} -$$

$$6\omega_{15}^2 cs^4\omega_{12}\omega_{10}^2\omega_5^3 + 6\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5 - 84\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} + 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2\omega_5^2\omega_{21} - 6\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^3\omega_5^3 - 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}^2\omega_5\omega_{21} +$$

$$12\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5 + 12\omega_{15}cs^4\omega_{12}\omega_{10}^3\omega_5 + 108\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5\omega_{21} - 36\omega_{15}^2 v_1^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2 + 24\omega_{15}^2 v_1^2\omega_{12}\omega_{10}\omega_5\omega_{21} - 6\omega_{15}^2 cs^2\omega_{10}^3\omega_5^3 +$$

$$12\omega_{15}^2 cs^2\omega_{12}\omega_{10}^3\omega_5\omega_{21} + 6\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} - \omega_{15}^2 cs^4\omega_{12}\omega_{10}^3\omega_5^3\omega_{21} + 60\omega_{15}^2 cs^2\omega_{12}v_2^2\omega_{10}^3\omega_5^2\omega_{21} - 108\omega_{15}^2 cs^2 v_2^2\omega_{10}\omega_5^3\omega_{21} -$$

$$12\omega_{15}^2 v_1^2 cs^2\omega_{12}\omega_{10}^3\omega_5^2 - 12\omega_{15}v_1^2 cs^2\omega_{12}\omega_{10}\omega_5^3\omega_{21} - 12\omega_{15}^2 cs^4\omega_{12}\omega_{10}^3\omega_5 + 36\omega_{15}v_1^2\omega_{12}v_2^2\omega_{10}\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}\omega_{10}^3\omega_5)\frac{\rho}{12\omega_{15}^2\omega_{12}\omega_{10}^3\omega_5^3\omega_{21}}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_x^2 \mathrm{D}_y^2 v_2} = (-12\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5^2 + 6\omega_{15}\omega_{10}^2\omega_5^3 - 36\omega_{15}\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_{10}cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5\omega_{21} +$$

$$12\omega_{15}\omega_{12}\omega_{10}\omega_5\omega_{21} - 72\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 12\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 6\omega_{15}\omega_{12}\omega_{10}^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{10}^2\omega_5^3 - 6\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} +$$

$$12\omega_{15}\omega_{12}\omega_5^2\omega_{21} - 6\omega_{15}\omega_{10}\omega_5^3\omega_{21} + 36\omega_{12}v_2^2\omega_{10}\omega_5^3 + 36\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}cs^2\omega_5^3 - 6\omega_{15}\omega_{12}\omega_{10}^2\omega_5^3 - 12\omega_{15}\omega_{10}cs^2\omega_5^3\omega_{21} -$$

$$36\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^2 - 12\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 18\omega_{15}\omega_{12}v_2^2\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}^2 cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_{10}\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}^2\omega_5^3 +$$

$$24\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_{21} - 36\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} - 12\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} + 18\omega_{15}\omega_{12}v_2^2\omega_{10}^2\omega_5^3 - 12\omega_{12}\omega_{10}^2\omega_5\omega_{21} -$$
$$12\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{12}\omega_{10}^2cs^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} - 36\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{15}\omega_{10}^2cs^2\omega_5^2 + 24\omega_{12}\omega_{10}^2\omega_5\omega_{21} + 12\omega_{12}\omega_{10}^2\omega_5^3 -$$
$$18\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^3 + 72\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_{12}cs^2\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}^2cs^2\omega_5^2 - \omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_{10}\omega_{10}\omega_5^3\omega_{21} +$$
$$6\omega_{15}\omega_{12}\omega_{10}\omega_5^3 - 12\omega_{12}\omega_{10}^2\omega_5^2 - 24\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_{10}^2cs^2\omega_5^3 - 36\omega_{15}v_2^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}v_2^2\omega_{10}\omega_5^2 - 12\omega_{12}\omega_{10}^3\omega_5\omega_{21} -$$
$$18\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 36\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{12}v_2^2\omega_{10}^2\omega_5^3 - 6\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^3 + 12\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} + 18\omega_{15}v_2^2\omega_{10}\omega_5^3\omega_{21} -$$
$$18\omega_{15}v_2^2\omega_{10}\omega_5^3 - 24\omega_{15}\omega_{12}\omega_{10}\omega_5^2\omega_{21} - 4\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} + 36\omega_{12}v_2^2\omega_{10}^2\omega_5 - 12\omega_{15}\omega_{12}cs^2\omega_5^2\omega_{21} + 36\omega_{12}v_2^2\omega_{10}^2\omega_5\omega_{21})\frac{\rho cs^2}{12\omega_{15}\omega_{12}\omega_{10}^2\omega_5^3\omega_{21}}$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_2} = (6\omega_{15}\omega_{10}^2\omega_5^3 - 24\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} - 36\omega_{15}\omega_{12}v_2^2\omega_5^2\omega_{21} + 12\omega_{12}\omega_{10}\omega_5^3\omega_{21} - \omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_{12}\omega_{10}\omega_5\omega_{21} -$$
$$72\omega_{12}v_2^2\omega_{10}^2\omega_5\omega_{21} + 6\omega_{15}\omega_{12}cs^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_{10}^2\omega_5 - 12\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5\omega_{21} + 12\omega_{15}\omega_{12}\omega_5^2\omega_{21} - 6\omega_{15}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^3 +$$
$$36\omega_{12}v_2^2\omega_{10}\omega_5^3 + 36\omega_{12}v_2^2\omega_{10}^2\omega_5^3\omega_{21} - 12\omega_{15}\omega_{12}cs^2\omega_5^2\omega_{21} - 4\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^2\omega_{21} - 6\omega_{15}\omega_{12}\omega_{10}^2\omega_5 + 12\omega_{15}\omega_{10}^2cs^2\omega_5 - 36\omega_{15}v_2^2\omega_{10}\omega_5^3 -$$
$$12\omega_{12}\omega_{10}^2cs^2\omega_5^3 - 12\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 18\omega_{15}\omega_{12}v_2^2\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}^2cs^2\omega_5^3\omega_{21} + 12\omega_{15}\omega_{10}\omega_5^3\omega_{21} - 6\omega_{15}\omega_{10}^2cs^2\omega_5^3 +$$
$$12\omega_{15}\omega_{12}\omega_{10}^2\omega_5^2 - 36\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5\omega_{21} + 12\omega_{12}\omega_{10}^2cs^2\omega_5^2 + 18\omega_{15}\omega_{12}v_2^2\omega_{10}^2\omega_5^3 - 12\omega_{12}\omega_{10}\omega_5\omega_{21} - 12\omega_{12}\omega_{10}\omega_5^3 - 6\omega_{15}\omega_{12}\omega_{10}\omega_{10}cs^2\omega_5^3\omega_{21} -$$
$$36\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}cs^2\omega_5^3 + 24\omega_{12}\omega_{10}^2\omega_5^2 + 12\omega_{12}\omega_{10}\omega_5^3 - 18\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^3 + 12\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} + 72\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} +$$
$$6\omega_{15}\omega_{12}\omega_{10}\omega_5^3\omega_{21} + 6\omega_{15}\omega_{10}cs^2\omega_5^3\omega_{21} + 6\omega_{15}\omega_{12}\omega_{10}\omega_5^3 + 18\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5\omega_{21} - 12\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_{21} - 12\omega_{12}\omega_{10}^2\omega_5 -$$
$$36\omega_{15}v_2^2\omega_{10}\omega_5^2\omega_{21} + 36\omega_{15}v_2^2\omega_{10}^2\omega_5 - 12\omega_{12}\omega_{10}cs^2\omega_5^3\omega_{21} - 12\omega_{12}\omega_{10}^2\omega_5^3\omega_{21} - 18\omega_{15}\omega_{12}v_2^2\omega_{10}\omega_5^3\omega_{21} + 24\omega_{15}\omega_{12}\omega_{10}cs^2\omega_5^2\omega_{21} +$$
$$36\omega_{12}v_2^2\omega_{10}\omega_5^2\omega_{21} - 36\omega_{12}v_2^2\omega_{10}^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^2 + 18\omega_{15}v_2^2\omega_{10}\omega_5^3\omega_{21} + 12\omega_{12}\omega_{10}^2cs^2\omega_5\omega_{21} - 18\omega_{15}v_2^2\omega_{10}\omega_5^3 -$$
$$12\omega_{15}\omega_{10}cs^2\omega_5^2\omega_{21} - 24\omega_{15}\omega_{12}\omega_{10}\omega_5^2\omega_{21} + 6\omega_{15}\omega_{12}\omega_{10}^2cs^2\omega_5^3 + 36\omega_{12}v_2^2\omega_{10}^2\omega_5^3 + 36\omega_{12}v_2^2\omega_{10}^2\omega_5\omega_{21})\frac{\rho cs^2}{12\omega_{15}\omega_{12}\omega_{10}^2\omega_5^3\omega_{21}}$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_2} = (12cs^2\omega_7\omega_1^2\omega_5 - 12\omega_1\omega_5^2 + 12cs^2\omega_1\omega_5^2 - 72v_2^2\omega_1^3\omega_5 - 12\omega_7\omega_1^2\omega_5 - cs^2\omega_7\omega_1^3\omega_5^2 - 72v_2^2\omega_1^2\omega_5^2 - 36v_2^2\omega_7\omega_1^3 + 72v_2^2\omega_1^2\omega_5 -$$
$$36v_2^2\omega_7\omega_1\omega_5 + 36v_2^2\omega_1^3\omega_5^2 - 4cs^2\omega_7\omega_1^2\omega_5^2 + 36v_2^2\omega_1^3 - 12cs^2\omega_7\omega_5^2 + 24cs^2\omega_1^2\omega_5 + 36v_2^2\omega_7\omega_1^2\omega_5 + 18cs^2\omega_7\omega_1\omega_5^2 - 24\omega_1^2\omega_5 + 12cs^2\omega_1^3 + 12cs^2\omega_1^3\omega_5^2 -$$
$$12\omega_1^3\omega_5^2 + 12\omega_7\omega_1\omega_5 + 24\omega_1^3\omega_5 - 12\omega_1^3 + 36v_2^2\omega_1\omega_5^2 - 24cs^2\omega_1^3\omega_5 + 12\omega_7\omega_1^2 - 12cs^2\omega_7\omega_1\omega_5 + 24\omega_1^2\omega_5^2 - 24cs^2\omega_1^2\omega_5^2 - 12cs^2\omega_7\omega_1^2)\frac{\rho cs^2}{12\omega_7\omega_1^3\omega_5^2}$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_2} = (12v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 + 9v_1^4\omega_3^2\omega_4\omega_1^3\omega_2^2 + 60v_2^2\omega_3 cs^2\omega_4\omega_1\omega_2^3 - 54v_1^2\omega_3^2 cs^2\omega_1^2\omega_2^2 - 72\omega_3^2 cs^4\omega_1^2\omega_2^3 - 18v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 - 2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 -$$
$$4\omega_3^2\omega_4\omega_1^3\omega_2^2 + 6v_1^4\omega_3\omega_4\omega_1\omega_2^3 - 216v_2^2\omega_3^2 cs^2\omega_1^2\omega_2^3 - 9v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 18v_1^4\omega_4\omega_1^2\omega_2^3 - 18\omega_3 cs^2\omega_4\omega_1^3\omega_2^3 - 108v_1^2\omega_3^2 cs^2\omega_4\omega_2^3 - 84v_2^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^2 -$$
$$18\omega_3^2 cs^2\omega_1^3\omega_2^2 - 6v_1^2\omega_3\omega_4\omega_1\omega_2^3 + 76\omega_3^2 cs^4\omega_4\omega_1\omega_2^3 - 96v_2^2\omega_3^2 cs^2\omega_4\omega_2^3 + 72v_1^2 v_2^2\omega_3^2\omega_4\omega_1^3 + 8\omega_3^2\omega_4\omega_1^2\omega_2^2 - 54v_1^2 cs^2\omega_4\omega_1^3\omega_2^2 - 54v_1^2\omega_3^2 cs^2\omega_1^2\omega_2^3 -$$
$$v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 12v_1^4\omega_3^2\omega_4\omega_1^2\omega_2 - 18v_1^2\omega_3^2\omega_1\omega_2^3 + 8\omega_3 cs^4\omega_4\omega_1\omega_2^3 + 32\omega_3^2 cs^2\omega_4\omega_1^2\omega_2 - 28\omega_3^2 cs^4\omega_4\omega_1\omega_2^2 - 68\omega_3^2 cs^4\omega_4\omega_2^3 + 36\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 +$$
$$18v_1^4\omega_3^2\omega_1^3\omega_2^2 + 48v_2^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 + v_2^4\omega_3^2\omega_4\omega_1^3\omega_2^2 + 72\omega_3^2 cs^2\omega_1^2\omega_2^3 - 18v_1^4\omega_3^2\omega_1^2\omega_2^3 + 36\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 - 8\omega_3 cs^2\omega_4\omega_1^3\omega_2 - 144v_1^2 v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 +$$
$$150v_1^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 - 42v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 12v_2^2\omega_3^2\omega_4\omega_1^3 - v_2^4\omega_3^2\omega_4\omega_1\omega_2^3 + 54v_2^2\omega_3^2 cs^2\omega_1^3\omega_2^3 + 4\omega_3^2\omega_4\omega_2^3 - 4\omega_3^2\omega_4\omega_1^2\omega_2 + 54v_1^2 cs^2\omega_4\omega_1^3\omega_2^3 -$$
$$48v_1^2\omega_3^2\omega_4\omega_1^3 + 12v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 36\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^2 + 54v_1^2\omega_3^2 cs^2\omega_1^3\omega_2 + 18\omega_3^2 cs^4\omega_1^3\omega_2^3 - 18v_1^4\omega_3^2\omega_4\omega_1\omega_2^3 + 66v_1^2\omega_3^2\omega_4\omega_1^3\omega_2 -$$
$$18v_1^4\omega_4\omega_1^3\omega_2^2 + 9v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 12v_1^2\omega_3^2 cs^2\omega_4\omega_1\omega_2 - 90v_1^2 v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 - 18v_1^4\omega_3^2\omega_1^2\omega_2^2 - 56\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 - 48v_1^4\omega_3^2\omega_4\omega_2^3 + 18v_1^2\omega_3\omega_1^3\omega_2^3 +$$
$$2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 + 28\omega_3^2 cs^2\omega_4\omega_2^3 - 24v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 - 9v_1^4\omega_3^2\omega_4\omega_1^2\omega_2^3 - 18v_1^2\omega_3 cs^2\omega_4\omega_1\omega_2^3 + 18\omega_3^2 cs^2\omega_4\omega_1^3\omega_2 - 36v_1^4\omega_3^2\omega_4\omega_1^3\omega_2 - 24v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 -$$
$$90v_1^2 v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 - 36v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 + 2\omega_3^2 cs^4\omega_4\omega_1^3\omega_2^2 + 18v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 + 24v_1^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^2 + 108v_1^2 v_2^2\omega_3^2\omega_4\omega_2^3 - 48v_2^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2 +$$
$$12v_2^2\omega_3^2 cs^2\omega_4\omega_1^3 - 90v_1^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 + 18\omega_3 cs^4\omega_4\omega_1^3\omega_2^3 + 54v_1^4\omega_3^2\omega_4\omega_1\omega_2^3 - 90v_2^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 - 18\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 - 36v_1^2\omega_3 cs^2\omega_4\omega_1^3\omega_2 +$$
$$12v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 16\omega_3^2 cs^4\omega_4\omega_1^3 + 36v_1^4\omega_3\omega_4\omega_1^3\omega_2^2 - 18v_1^2\omega_4\omega_1^2\omega_2^3 + 180v_1^2 v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 30v_1^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 - 3\omega_3^2 cs^4\omega_4\omega_1^3\omega_2^3 - 28\omega_3^2 cs^4\omega_4\omega_1^2\omega_2 -$$
$$174v_1^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2 - 8\omega_3 cs^2\omega_4\omega_1\omega_2^3 - 72\omega_3^2 cs^2\omega_1\omega_2^3 + 6v_2^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 + 18v_1^4\omega_3^2\omega_1\omega_2^3 + 36v_1^2\omega_3\omega_4\omega_1\omega_2^2 + 54v_1^2\omega_3 cs^2\omega_1^2\omega_2^3 +$$
$$132v_1^2\omega_3^2 cs^2\omega_4\omega_1^3 + 54v_2^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2 + 12v_1^4\omega_3^2\omega_4\omega_1\omega_2^2 + 12v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 + 32\omega_3^2 cs^2\omega_4\omega_1\omega_2^2 - 18v_1^2\omega_3^2\omega_1^3\omega_2^2 - 36\omega_3 cs^4\omega_4\omega_1^3\omega_2^2 +$$
$$54v_1^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 + 6v_1^4\omega_3\omega_4\omega_1^2\omega_2^2 - 54v_1^2\omega_3 cs^2\omega_1^3\omega_2^2 - 4\omega_3^2\omega_4\omega_1\omega_2^3 - 36\omega_3 cs^4\omega_4\omega_1^2\omega_2^3 + 18v_1^2\omega_4^2\omega_1^3\omega_2^3 + 8\omega_3 cs^4\omega_4\omega_1^2\omega_2 + 132v_1^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 +$$
$$54v_1^2\omega_3^2 cs^2\omega_1\omega_2^3 - 6v_1^2\omega_3\omega_4\omega_1^2\omega_2^2 - 6v_2^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 - 36v_1^2 v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 - 6v_2^2\omega_3^2 cs^2\omega_4\omega_1\omega_2 + 30v_1^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^2 + 28\omega_3^2 cs^4\omega_4\omega_1^2\omega_2^2 +$$
$$24v_1^4\omega_3^2\omega_4\omega_1^3 - 20\omega_3^2 cs^2\omega_4\omega_1^3 + 4\omega_3^2\omega_4\omega_1^3 - 126v_2^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 + 72\omega_3^2 cs^4\omega_1^2\omega_2^3 + 90v_1^2\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 + 56\omega_3 cs^4\omega_4\omega_1^2\omega_2^2 + 24v_2^2\omega_3 cs^2\omega_4\omega_1^3\omega_2 +$$
$$18v_1^2\omega_3^2\omega_1^2\omega_2^2 - 12v_2^2\omega_3^2\omega_4\omega_2^3 + 18v_1^2\omega_4\omega_1^3\omega_2^2 - 4\omega_3^2\omega_4\omega_1\omega_2^3 - 36v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 - 12v_1^4\omega_3\omega_4\omega_1^3\omega_2 + 216v_2^2\omega_3^2 cs^2\omega_1\omega_2^3 + 12v_1^2\omega_3\omega_4\omega_1^3\omega_2 -$$
$$14\omega_3^2 cs^4\omega_4\omega_1^2\omega_2^3 + 12v_1^2\omega_3^2\omega_4\omega_2^3 - 18v_1^4\omega_3\omega_1^3\omega_2^2 + 66v_2^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^2 + 36v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 - 12v_1^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2 - 14\omega_3^2 cs^4\omega_4\omega_1^3\omega_2)\frac{\rho}{36\omega_3^2\omega_4\omega_1^3\omega_2^3}$$

coefficient $C^{(2)}_{\mathrm{D}_x\mathrm{D}_y^3\rho}$ at $\frac{\partial^4\rho}{\partial x_1\partial x_2^3}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^3\rho} = 0$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^3\rho} = (8\omega_{15}v_2^2\omega_{10}^3 + 84\omega_{15}v_2^2\omega_{10}^3 cs^2\omega_5 - 72\omega_{15}v_2^2\omega_{10}cs^2\omega_5^2 - 8\omega_{15}^2 cs^2\omega_5^2 - 4\omega_{15}\omega_{10}^3 cs^4\omega_5^2 + 4v_2^4\omega_{10}^3\omega_5^2 + 4\omega_{10}^3 cs^2\omega_5 + 4v_2^2\omega_{10}^2\omega_5^2 +$$
$$4\omega_{15}\omega_{10}^3 cs^2 - 8\omega_{15}\omega_{10}^2 cs^2\omega_5^2 + 13\omega_{15}^2 v_2^2\omega_{10}^2\omega_5^2 + 4\omega_{15}^2\omega_{10}^2 cs^4\omega_5^2 + 20\omega_{15}v_2^2\omega_{10}\omega_5^2 + 20\omega_{15}^2 v_2^2\omega_{10}^2\omega_5 + 36\omega_{15}^2 v_2^2\omega_{10}^2 cs^2 - 144\omega_{15}^2 v_2^2\omega_{10}cs^2\omega_5^2 +$$
$$4v_2^2\omega_{10}^3\omega_5 - 4\omega_{15}\omega_{10}^2 cs^2\omega_5 + 8\omega_{15}^2 v_2^4\omega_{10}^2 - 4v_2^2\omega_{10}^3\omega_5^2 + 72\omega_{15}^2 v_2^2\omega_{10}cs^2\omega_5 + 12\omega_{15}^2\omega_{10}cs^2\omega_5^2 - 8\omega_{15}^2\omega_{10}cs^4\omega_5 - 4v_2^2\omega_{10}^3\omega_5^2 - 13\omega_{15}^2 v_2^2\omega_{10}^3\omega_5^2 +$$
$$24\omega_{15}^2 v_2^4\omega_5^2 + 4\omega_{15}^2\omega_{10}cs^4 - 20\omega_{15}v_2^2\omega_{10}\omega_5^2 - 24v_2^2\omega_{10}^2 cs^2\omega_5^2 - 4\omega_{10}^2 cs^4\omega_5^2 - 20\omega_{15}^2 v_2^2\omega_{10}\omega_5 - 51\omega_{15}v_2^2\omega_{10}^2 cs^2\omega_5^2 - 4\omega_{15}\omega_{10}cs^4\omega_5^2 -$$
$$4\omega_{10}^3 cs^2\omega_5^2 + 8\omega_{15}^2\omega_{10}cs^4\omega_5 - 4v_2^4\omega_{10}^3\omega_5 - 4\omega_{15}^2\omega_{10}cs^2\omega_5^2 + 32\omega_{15}v_2^4\omega_{10}^2\omega_5 - 84\omega_{15}^2 v_2^2\omega_{10}cs^2\omega_5 + 20\omega_{15}^2 v_2^4\omega_{10}cs^2 - 4\omega_{15}\omega_{10}cs^2 +$$
$$13v_2^2\omega_{10}^3\omega_5^2 + 4\omega_{15}^2\omega_{10}cs^4\omega_5 - 8\omega_{15}v_2^4\omega_{10}^3 - 24v_2^2\omega_{10}^3 cs^2\omega_5 + 8\omega_{15}^2 cs^4\omega_5^2 + 20\omega_{15}v_2^4\omega_{10}\omega_5 - 4\omega_{10}^3 cs^4\omega_5 + 4\omega_{15}\omega_{10}^3 cs^2\omega_5^2 + 96\omega_{15}^2 v_2^2 cs^2\omega_5^2 +$$
$$16\omega_{15}v_2^2\omega_{10}^2\omega_5 - 48\omega_{15}v_2^2\omega_{10}^2 cs^2\omega_5 + 8\omega_{15}\omega_{10}^2 cs^4\omega_5^2 + 36\omega_{15}^2 v_2^2\omega_{10}\omega_5^2 - 32\omega_{15}v_2^2\omega_{10}^2\omega_5^2 + 120\omega_{15}v_2^2\omega_{10}^2 cs^2\omega_5^2 - 4\omega_{15}\omega_{10}^3 cs^4 + 4\omega_{10}^3 cs^2\omega_5^2 -$$
$$20\omega_{15}^2 v_2^2\omega_{10}\omega_5 + 24v_2^2\omega_{10}^3 cs^2\omega_5^2 + 4\omega_{15}\omega_{10}cs^2\omega_5^2 - 8\omega_{15}\omega_{10}^3 cs^2\omega_5 - 13\omega_{15}v_2^4\omega_{10}^3\omega_5^2 + 4\omega_{10}^3 cs^4\omega_5^2 - 8\omega_{15}^2 v_2^2\omega_{10} - 20\omega_{15}v_2^2\omega_{10}^3\omega_5 -$$
$$12\omega_{15}^2\omega_{10}cs^4\omega_5^2 + 8\omega_{15}^2\omega_{10}^2 cs^2\omega_5 + 51\omega_{15}^2 v_2^2\omega_{10}^2 cs^2\omega_5^2 - 36\omega_{15}v_2^2\omega_{10}^3 cs^2 - 16\omega_{15}^2 v_2^2\omega_{10}\omega_5 - 24\omega_{15}^2 v_2^2\omega_5^2 - 36\omega_{15}^2 v_2^4\omega_{10}\omega_5^2)\frac{v_1}{4\omega_{15}^2\omega_{10}^3\omega_5^2}$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^3\rho} = (8\omega_{15}v_2^2\omega_{10}^3 - 4cs^4\omega_{10}^3\omega_5 + 4v_2^2\omega_{10}^3\omega_5^2 - 72\omega_{15}cs^2 v_2^2\omega_{10}\omega_5^2 + 4v_2^2\omega_{10}^2\omega_5^2 - 8\omega_{15}^2 cs^4\omega_{10}^2\omega_5 + 24cs^2 v_2^2\omega_{10}^3\omega_5^2 - 4\omega_{15}cs^4\omega_{10}\omega_5^2 +$$

$$13\omega_{15}^2 v_2^4 \omega_{10}^2 \omega_5^2 + 36\omega_{15}^2 cs^2 v_2^2 \omega_{10}^2 - 4\omega_{15}^2 cs^2 \omega_{10}^2 \omega_5^2 + 20\omega_{15} v_2^2 \omega_{10} \omega_5^2 + 20\omega_{15}^2 v_2^2 \omega_{10} \omega_5 - 4cs^4 \omega_{10}^2 \omega_5^2 - 4cs^2 \omega_{10}^3 \omega_5^2 + 96\omega_{15}^2 cs^2 v_2^2 \omega_5^2 + 4v_2^2 \omega_{10}^3 \omega_5 - 144\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5^2 + 4\omega_{15} cs^2 \omega_{10}^3 + 4cs^2 \omega_{10}^3 \omega_5 + 8\omega_{15}^2 v_2^4 \omega_{10}^2 - 4v_2^2 \omega_{10}^3 \omega_5 - 24cs^2 \omega_{10}^2 \omega_5^2 + 72\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5 + 8\omega_{15}^2 cs^2 \omega_{10} \omega_5 - 4v_2^4 \omega_{10}^2 \omega_5^2 - 13\omega_{15}^2 v_2^2 \omega_{10} \omega_5^2 + 24\omega_{15}^2 v_2^4 \omega_5^2 + 4\omega_{15} cs^2 \omega_{10} \omega_5^2 - 20\omega_{15} v_2^4 \omega_{10} \omega_5^2 - 24cs^2 v_2^2 \omega_{10}^3 \omega_5 + 8\omega_{15}^2 cs^4 \omega_5^2 + 4\omega_{15}^2 cs^4 \omega_{10}^2 \omega_5^2 + 4cs^2 \omega_{10}^2 \omega_5^2 - 20\omega_{15} v_2^4 \omega_{10} \omega_5 + 4cs^4 \omega_{10}^3 \omega_5^2 + 4\omega_{15}^2 cs^4 \omega_{10}^2 - 4v_2^4 \omega_{10}^3 \omega_5 - 12\omega_{15}^2 cs^4 \omega_{10} \omega_5^2 + 32\omega_{15} v_2^4 \omega_{10}^2 \omega_5^2 + 20\omega_{15} v_2^4 \omega_{10} \omega_5 - 8\omega_{15} cs^2 \omega_{10}^3 \omega_5 - 36\omega_{15} cs^2 v_2^2 \omega_{10}^3 + 13\omega_{15} v_2^2 \omega_{10}^3 \omega_5^2 - 48\omega_{15} cs^2 v_2^2 \omega_{10}^2 \omega_5 - 4\omega_{15} cs^4 \omega_{10}^3 - 8\omega_{15} v_2^4 \omega_{10}^3 - 4\omega_{15} cs^4 \omega_{10}^3 \omega_5^2 - 84\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5 + 20\omega_{15} v_2^4 \omega_{10}^3 \omega_5 + 16\omega_{15} v_2^2 \omega_{10}^2 \omega_5 - 51\omega_{15} cs^2 v_2^2 \omega_{10}^2 \omega_5^2 - 4v_{15}^2 cs^2 \omega_{10} \omega_5 - 8\omega_{15} cs^2 \omega_{10}^2 \omega_5^2 + 36\omega_{15}^2 v_2^2 \omega_{10} \omega_5^2 + 84\omega_{15} cs^2 v_2^2 \omega_{10}^3 \omega_5 - 32\omega_{15} v_2^2 \omega_{10}^2 \omega_5^2 + 12\omega_{15}^2 cs^2 \omega_{10} \omega_5^2 - 8\omega_{15}^2 cs^2 \omega_5^2 - 20\omega_{15}^2 v_2^2 \omega_{10} \omega_5 + 8\omega_{15} cs^4 \omega_{10}^3 \omega_5 + 51\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5^2 - 4\omega_{15} cs^2 \omega_{10}^2 - 13\omega_{15} v_2^4 \omega_{10}^3 \omega_5^2 + 4\omega_{15} cs^2 \omega_{10}^3 \omega_5^2 - 8\omega_{15}^2 v_2^2 \omega_{10}^2 + 120\omega_{15} cs^2 v_2^2 \omega_{10}^2 \omega_5^2 - 20\omega_{15} v_2^2 \omega_{10}^3 \omega_5 + 4\omega_{15}^2 cs^4 \omega_{10} \omega_5 - 16\omega_{15} v_2^4 \omega_{10}^2 \omega_5 - 24\omega_{15}^2 v_2^2 \omega_5^2 - 36\omega_{15}^2 v_2^4 \omega_{10} \omega_5^2 + 8\omega_{15} cs^4 \omega_{10}^2 \omega_5^2) \frac{v_1}{4\omega_{15}^2 \omega_{10}^3 \omega_5^2}$$

$$C_{\mathrm{D}_x \mathrm{D}_y^3 \rho}^{(2),\mathrm{CLBM1}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y^3 \rho}^{(2),\mathrm{CLBM2}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y^3 \rho}^{(2),\mathrm{CuLBM1}} = 0$$

$$C_{\mathrm{D}_x \mathrm{D}_y^3 \rho}^{(2),\mathrm{CuLBM2}} = (-84\omega_3^2 cs^4 \omega_1^3 \omega_2 - 8v_1^2 \omega_3^2 \omega_1 \omega_2^2 - 2v_1^2 \omega_3^2 cs^2 \omega_1^2 \omega_2^2 - 6\omega_3^2 cs^4 \omega_1^2 \omega_2^3 + \omega_3^3 \omega_1^3 \omega_2^2 - 48v_2^2 \omega_3^2 \omega_1^3 - 72v_2^2 \omega_3^2 cs^2 \omega_1^2 \omega_2^3 + 12cs^2 \omega_1^3 \omega_2^2 - 324v_2^2 \omega_3^2 cs^2 \omega_1^3 \omega_2 - 72v_1^2 \omega_3^2 \omega_3^2 + 48v_2^2 \omega_3^2 \omega_1 \omega_2^2 + 40\omega_3^2 cs^2 \omega_1^2 \omega_2 - 4\omega_3^2 \omega_1^2 \omega_2 + 36cs^4 \omega_1^2 \omega_2^3 + 42\omega_3^2 cs^4 \omega_1^2 \omega_2^2 - 2v_1^2 \omega_3^2 cs^2 \omega_1^2 \omega_2^2 + 8v_1^2 \omega_3^2 \omega_2^3 - 8v_1^2 \omega_3^3 \omega_1 \omega_2^2 - 20v_1^2 \omega_3^2 cs^2 \omega_1^3 \omega_2 - 60v_2^2 \omega_3^2 \omega_1 \omega_2^3 - 5\omega_3^2 cs^2 \omega_1 \omega_2^2 + 216v_2^2 \omega_3^2 cs^2 \omega_1^2 \omega_2^2 - 8\omega_3 cs^2 \omega_1 \omega_2^3 + 5\omega_3^2 cs^2 \omega_1^2 \omega_2^3 + 56\omega_3^2 cs^2 \omega_1^3 \omega_2 + 24v_4^2 \omega_3^2 \omega_1^3 - 4\omega_3^2 \omega_1^2 \omega_2^3 - 36cs^4 \omega_1^3 \omega_2 + 8v_1^2 \omega_3 cs^2 \omega_1 \omega_2^3 - 36v_2^2 \omega_3^2 \omega_1^3 \omega_2 + 96v_1^2 v_2^2 \omega_3^2 \omega_1 \omega_2^3 - 36\omega_3^2 cs^4 \omega_1^2 \omega_2 + 2v_1^2 \omega_3^2 cs^2 \omega_1^3 \omega_2^2 + 72\omega_3^2 cs^4 \omega_1^3 - 12cs^2 \omega_1^2 \omega_2^3 + 72v_2^2 \omega_3^2 cs^2 \omega_1^3 \omega_2 + 20\omega_3^2 cs^2 \omega_2^3 - 34\omega_3^2 cs^2 \omega_1^2 \omega_2^2 + 216v_2^2 \omega_3^2 cs^2 \omega_1^3 + 72v_2^2 \omega_3^2 \omega_1^2 \omega_2 + 6\omega_3^2 cs^4 \omega_1^3 \omega_2^2 + 16v_1^2 \omega_3^2 cs^2 \omega_1^3 + 24v_1^2 v_2^2 \omega_3^2 \omega_1 \omega_2 - 4v_1^2 \omega_3^2 cs^2 \omega_1^3 \omega_2 - 8\omega_3^2 \omega_2^3 + 24\omega_3 cs^4 \omega_1 \omega_2^3 - 4\omega_3^2 \omega_1^3 \omega_2 - \omega_3^2 \omega_1^3 \omega_2^3 - 4v_1^2 \omega_3^2 \omega_1^3 - 24v_2^2 \omega_3^2 \omega_1 \omega_2 - 8\omega_3^2 cs^2 \omega_1 \omega_2^3 - 48v_1^2 v_2^2 \omega_3^2 \omega_1^3 \omega_2^2 + 4v_1^2 \omega_3^2 \omega_1^2 \omega_2 - 72v_2^4 \omega_3^2 \omega_1 \omega_2^2 + 8\omega_3^3 \omega_1 \omega_2^3 - 12\omega_3 cs^4 \omega_1^3 \omega_2 - 4v_1^2 \omega_3 cs^2 \omega_1^2 \omega_2^2 - 54\omega_3 cs^4 \omega_1^2 \omega_2^3 - 24v_2^2 \omega_3^2 \omega_1^3 \omega_2 + 24v_2^2 \omega_3^2 \omega_2^3 - 12v_1^2 cs^2 \omega_1^3 \omega_2^2 - 22\omega_3^2 cs^2 \omega_1 \omega_2^3 - 18\omega_3 cs^2 \omega_1^3 \omega_2^2 - 12\omega_3 cs^4 \omega_1^2 \omega_2^3 - 18v_1^2 \omega_3 cs^2 \omega_1^2 \omega_2^3 - 4v_1^2 \omega_3 cs^2 \omega_1^3 \omega_2 + 8\omega_3^2 \omega_1 \omega_2^3 + 24v_1^2 v_2^2 \omega_3^2 \omega_1^3 - 36v_2^4 \omega_3^2 \omega_1 \omega_2^3 - 48v_1^2 v_2^2 \omega_3^2 \omega_1^3 \omega_2 - v_1^2 \omega_3^2 \omega_1^3 \omega_2^2 - 24v_1^2 v_2^2 \omega_3^2 \omega_1^2 \omega_2^3 + 18v_1^2 \omega_3 cs^2 \omega_1^3 \omega_2^2 - 52\omega_3^2 cs^2 \omega_1^3 + 24v_1^2 v_2^2 \omega_3^2 \omega_1^3 \omega_2^2 + v_1^2 \omega_3^2 \omega_1^2 \omega_2^3 - 36\omega_3^2 cs^4 \omega_2^3 + 22v_1^2 \omega_3^2 cs^2 \omega_1 \omega_2^3 + 4v_1^2 \omega_3^2 \omega_1^3 \omega_2 + 12v_1^2 cs^2 \omega_1^2 \omega_2^3 + 84v_2^2 \omega_3^2 \omega_1^3 \omega_2 + 24v_2^2 \omega_3^2 \omega_1^2 \omega_2^3 + 4\omega_3^3 \omega_1^3 + 18\omega_3 cs^2 \omega_1^2 \omega_2^3 - 216v_2^2 \omega_3^2 cs^2 \omega_1 \omega_2^2 + 4\omega_3 cs^2 \omega_1^3 \omega_2 - 20v_1^2 \omega_3^2 cs^2 \omega_2^3 + 24v_1^2 v_2^2 \omega_3^2 \omega_1^2 \omega_2 + 8v_1^2 \omega_3^2 cs^2 \omega_1 \omega_2^2 + 42\omega_3^2 cs^4 \omega_1 \omega_2^3 + 4v_1^2 \omega_3^2 \omega_1^2 \omega_2^2 + 48v_2^4 \omega_3^2 \omega_2^3 + 54\omega_3 cs^4 \omega_1^3 \omega_2^2 + 4\omega_3 cs^2 \omega_1^2 \omega_2^3 + 108v_2^2 \omega_3^2 cs^2 \omega_1 \omega_2^3 - 24v_2^2 \omega_3^2 \omega_1^2 \omega_2^2) \frac{v_1}{36\omega_3^3 \omega_1^3 \omega_2^3}$$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y^3 v_1}^{(2)}$ **at** $\frac{\partial^4 v_1}{\partial x_1 \partial x_2^3}$:

$$C_{\mathrm{D}_x \mathrm{D}_y^3 v_1}^{(2),\mathrm{SRT}} = (-12cs^2 \omega^2 - 36v_2^2 cs^2 - 26v_2^4 \omega^2 - 36v_2^4 + 4v_2^4 \omega^3 + 36cs^4 + 54v_2^4 \omega + 36cs^2 \omega - cs^4 \omega^3 - 4v_2^2 \omega^3 + 20cs^4 \omega^2 + 54v_2^2 cs^2 \omega + 26v_2^2 \omega^2 - 24cs^2 - 54v_2^2 \omega - 54cs^4 \omega - 42v_2^2 cs^2 \omega^2 + 36v_2^2 + 12v_2^2 cs^2 \omega^3) \frac{\rho}{12\omega^3}$$

$$C_{\mathrm{D}_x \mathrm{D}_y^3 v_1}^{(2),\mathrm{MRT1}} = (18\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5^2 - 12\omega_{15} v_2^2 \omega_{10} cs^2 \omega_5 + 12\omega_{15}^2 \omega_{10}^3 cs^4 + 36\omega_{15} v_2^2 \omega_{10} \omega_5^3 - 18\omega_{15} \omega_{10}^3 cs^4 \omega_5^2 - 12v_2^4 \omega_{10}^3 \omega_5^2 + \omega_{15}^2 \omega_{10}^2 cs^4 \omega_5^3 - 306\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5^3 - 12\omega_{15} \omega_{10}^2 cs^2 \omega_5^2 + 12\omega_{15}^2 v_2^4 \omega_{10} \omega_5^2 + 6\omega_{15} \omega_{10}^3 cs^4 \omega_5 + 12v_2^4 \omega_{10}^3 \omega_5^3 + 6\omega_{15}^2 \omega_{10}^2 cs^4 \omega_5 - 12\omega_{15}^2 cs^2 \omega_5^3 - 36\omega_{15} v_2^2 \omega_{10} cs^2 \omega_5^3 - 4\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 + 19\omega_{15}^2 v_2^4 \omega_{10} \omega_5^3 + 102\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5 + 6\omega_{15} \omega_{10}^3 cs^2 \omega_5^2 + 12\omega_{15}^2 v_2^4 \omega_{10} \omega_5 - 5\omega_{15}^2 cs^2 \omega_5^2 - 108\omega_{15} v_2^2 \omega_{10} cs^2 \omega_5^2 + 12v_2^2 \omega_{10}^2 \omega_5^3 - 81\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5^3 + 6\omega_{15}^2 v_2^2 \omega_{10} \omega_5^2 + 12v_2^2 \omega_{10}^2 \omega_5^2 + 12\omega_{15} \omega_{10} cs^2 \omega_5^2 - 12v_2^2 \omega_{10}^2 cs^2 \omega_5^3 - 36\omega_{15} v_2^2 \omega_{10} \omega_5^3 - 12\omega_{15}^2 v_2^2 \omega_{10}^2 \omega_5 - 21\omega_{15} v_2^2 \omega_{10}^3 cs^2 \omega_5^3 + 12\omega_{15}^2 \omega_{10} cs^2 \omega_5^3 - 12v_2^2 \omega_{10}^3 \omega_5^3 + 4\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 - 48\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 + 12\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5^3 - 12\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5 + 30\omega_{15} v_2^2 \omega_{10}^3 cs^2 \omega_5^2 + 72\omega_{15}^2 v_2^4 \omega_5^3 - 19\omega_{15}^2 v_2^2 \omega_{10}^2 \omega_5^3 - 12v_2^4 \omega_{10}^2 \omega_5^3 + 12\omega_{15} \omega_{10}^3 cs^4 \omega_5 - 6\omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^2 - 6\omega_{15} \omega_{10}^3 cs^2 \omega_5^3 + 12\omega_{15}^2 cs^4 \omega_5^3 - 24\omega_{15} v_2^4 \omega_{10}^3 \omega_5^2 - 48\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5 + 90\omega_{15}^2 v_2^2 \omega_{10} \omega_5^3 + 13\omega_{15}^2 \omega_{10}^3 cs^4 \omega_5^2 - 6\omega_{15} \omega_{10}^2 cs^4 \omega_5^3 - 48\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5^2 + 252\omega_{15}^2 v_2^2 cs^2 \omega_5^3 + 60\omega_{15} v_2^4 \omega_{10}^2 \omega_5^3 - 24\omega_{15} v_2^4 \omega_{10}^3 \omega_5 - \omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^3 + 18\omega_{15} \omega_{10}^3 cs^2 \omega_5^2 + 27\omega_{15} v_2^2 \omega_{10}^3 \omega_5^3 - \omega_{15}^2 \omega_{10}^3 cs^4 \omega_5^3 + 12\omega_{15} \omega_{10}^2 cs^4 \omega_5^2 + 24\omega_{15} v_2^2 \omega_{10}^2 \omega_5^2 - 12\omega_{15} \omega_{10}^2 cs^4 \omega_5^3 - 12\omega_{15} v_2^2 \omega_{10}^2 cs^2 \omega_5^2 - 12v_2^2 \omega_{10}^2 cs^2 \omega_5^2 - 90\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 - 72\omega_{15}^2 v_2^2 \omega_5^3 + 60\omega_{15} v_2^4 \omega_{10}^2 cs^2 \omega_5^3 - 12\omega_{15} \omega_{10}^3 cs^2 \omega_5 + 48\omega_{15} v_2^4 \omega_{10}^3 \omega_5^2 - 24\omega_{15}^2 \omega_{10}^3 cs^4 \omega_5 + 24\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5 + 54\omega_{15} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 - 60\omega_{15} v_2^2 \omega_{10}^3 \omega_5^3 - 12\omega_{15}^2 \omega_{10} cs^4 \omega_5^2 - 27\omega_{15} v_2^4 \omega_{10}^3 \omega_5^3 + 162\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5^2 + 12v_2^2 \omega_{10}^3 cs^2 \omega_5^3) \frac{\rho}{12\omega_{15}^2 \omega_{10}^3 \omega_5^3}$$

$$C_{\mathrm{D}_x \mathrm{D}_y^3 v_1}^{(2),\mathrm{MRT2}} = (18\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^2 + 36\omega_{15} v_2^2 \omega_{10} \omega_5^3 + 6\omega_{15}^2 cs^2 \omega_{10}^3 \omega_5 - 12v_2^4 \omega_{10}^3 \omega_5^2 - \omega_{15}^2 cs^2 \omega_{10}^3 \omega_5^2 - 48\omega_{15}^2 cs^2 v_2^2 \omega_{10} - 306\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5^3 - \omega_{15}^2 cs^4 \omega_{10}^3 \omega_5^3 + 252\omega_{15}^2 cs^2 v_2^2 \omega_5^3 - 12cs^2 v_2^2 \omega_{10}^3 \omega_5^2 + 12\omega_{15}^2 v_2^4 \omega_{10}^2 \omega_5^2 + 12v_2^4 \omega_{10}^3 \omega_5^3 - 36\omega_{15} cs^2 v_2^2 \omega_{10} \omega_5^3 - 6\omega_{15}^2 cs^2 \omega_{10}^2 \omega_5^2 - 4\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 + 19\omega_{15}^2 v_2^4 \omega_{10} \omega_5^3 + 12\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5 + 12cs^2 v_2^2 \omega_{10}^3 \omega_5^3 + 13\omega_{15}^2 cs^4 \omega_{10}^3 \omega_5^2 - 108\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5^2 + 12v_2^2 \omega_{10}^3 \omega_5^3 - 18\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 + 12\omega_{15}^2 cs^4 \omega_5^3 + 12v_2^2 \omega_{10}^3 \omega_5^2 + \omega_{15}^2 cs^4 \omega_{10}^2 \omega_5^3 - 24\omega_{15}^2 cs^4 \omega_{10}^3 \omega_5 - 36\omega_{15} v_2^4 \omega_{10}^3 \omega_5 + 12\omega_{15}^2 cs^4 \omega_{10} - 12\omega_{15} v_2^2 \omega_{10}^2 \omega_5 - 12cs^2 v_2^2 \omega_{10}^2 \omega_5 - 12v_2^2 \omega_{10}^3 \omega_5 + 6\omega_{15}^2 cs^4 \omega_{10}^3 \omega_5^2 + 4\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 - 12\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5 + 72\omega_{15}^2 v_2^4 \omega_5^3 - 19\omega_{15}^2 v_2^2 \omega_{10}^2 \omega_5^3 - 5\omega_{15}^2 cs^2 \omega_{10}^3 \omega_5^2 - 12v_2^4 \omega_{10}^2 \omega_5^3 - 12\omega_{15}^2 cs^4 \omega_{10}^3 \omega_5^2 - 81\omega_{15}^2 cs^2 v_2^2 \omega_{10}^3 \omega_5^3 - 24\omega_{15} v_2^4 \omega_{10}^2 \omega_5^2 + 6\omega_{15} cs^4 \omega_{10}^3 \omega_5^2 - 12\omega_{15} cs^2 \omega_{10}^3 \omega_5 + 90\omega_{15}^2 v_2^2 \omega_{10} \omega_5^3 + 6\omega_{15} cs^2 \omega_{10}^2 \omega_5^3 - 48\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5^2 - 21\omega_{15} cs^2 v_2^2 \omega_{10}^3 \omega_5^3 - 18\omega_{15} cs^4 \omega_{10}^3 \omega_5^2 - 48\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5 + 60\omega_{15} v_2^4 \omega_{10}^2 \omega_5^3 - 24\omega_{15} v_2^4 \omega_{10}^3 \omega_5 + 12\omega_{15}^2 cs^2 v_2^2 \omega_{10}^3 \omega_5^3 - 12\omega_{15}^2 cs^4 \omega_{10} \omega_5^3 + 30\omega_{15} cs^2 v_2^2 \omega_{10}^3 \omega_5^2 + 27\omega_{15} v_2^2 \omega_{10}^3 \omega_5^3 - 12\omega_{15}^2 cs^2 \omega_{10}^2 \omega_5^2 - 12\omega_{15}^2 cs^2 v_2^2 \omega_{10}^3 \omega_5^2 + 24\omega_{15} cs^2 v_2^2 \omega_{10}^2 \omega_5^3 + 54\omega_{15}^2 cs^2 v_2^2 \omega_{10} \omega_5^2 + 12\omega_{15}^2 cs^2 \omega_{10} \omega_5^3 - 6\omega_{15} cs^2 \omega_{10}^3 \omega_5 - 6\omega_{15} cs^4 \omega_{10} \omega_5^3 - 90\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 + 12\omega_{15} cs^4 \omega_{10}^3 \omega_5 - 72\omega_{15}^2 v_2^2 \omega_5^3 + 162\omega_{15}^2 cs^2 v_2^2 \omega_{10}^3 \omega_5^2 + 48\omega_{15} v_2^4 \omega_{10}^3 \omega_5^2 + 18\omega_{15}^2 cs^2 \omega_{10}^3 \omega_5^2 + 12\omega_{15}^2 cs^2 \omega_{10} \omega_5^3 - 12\omega_{15} cs^2 v_2^2 \omega_{10} \omega_5^2 + 24\omega_{15} v_2^2 \omega_{10}^3 \omega_5 - 12\omega_{15}^2 cs^2 \omega_5^3 - 60\omega_{15} v_2^2 \omega_{10}^3 \omega_5^3 - 27\omega_{15} v_2^4 \omega_{10}^3 \omega_5^3 + 102\omega_{15}^2 cs^2 v_2^2 \omega_{10}^3 \omega_5 + 60\omega_{15} cs^2 v_2^2 \omega_{10}^3 \omega_5^2 + 12\omega_{15} cs^4 \omega_{10}^3 \omega_5^2) \frac{\rho}{12\omega_{15}^2 \omega_{10}^3 \omega_5^3}$$

$$C_{\mathrm{D}_x \mathrm{D}_y^3 v_1}^{(2),\mathrm{CLBM1}} = (6\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5^2 - 6\omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^2 + 36\omega_{15} v_2^2 \omega_{10} \omega_5^3 - 6\omega_{15} \omega_{10}^3 cs^2 \omega_5^3 + 12\omega_{15}^2 cs^4 \omega_5^3 - 36v_2^4 \omega_{10}^3 \omega_5^2 + 252\omega_{15}^2 v_2^2 cs^2 \omega_5^3 + 13\omega_{15}^2 \omega_{10}^3 cs^4 \omega_5^2 - 6\omega_{15} \omega_{10}^2 cs^4 \omega_5^3 + 36v_2^4 \omega_{10}^3 \omega_5^3 - \omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^3 + 18\omega_{15} \omega_{10}^3 cs^2 \omega_5^2 - 4\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 + 19\omega_{15} v_2^4 \omega_{10}^2 \omega_5^3 - \omega_{15}^2 \omega_{10} cs^4 \omega_5^3 + 12\omega_{15} \omega_{10}^2 cs^4 \omega_5^2 + 36v_2^2 \omega_{10}^3 \omega_5^3 + 12\omega_{15}^2 \omega_{10}^3 cs^4 - 6\omega_{15}^2 v_2^4 \omega_{10}^2 \omega_5^2 + 36v_2^2 \omega_{10}^3 \omega_5^2 - 12\omega_{15} \omega_{10} cs^4 \omega_5^3 + 36\omega_{15} v_2^2 \omega_{10}^2 cs^2 \omega_5^2 - 36\omega_{15} v_2^2 \omega_{10} \omega_5^3 +$$

$$60\omega_{15}^2 v_2^2 \omega_{10}^2 cs^2 \omega_5^3 - 12\omega_{15}\omega_{10}^3 cs^2 \omega_5 - 108 v_2^2 \omega_{10}^3 cs^2 \omega_5^2 + 198\omega_{15} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 - 36 v_2^2 \omega_{10}^3 \omega_5^3 - 12\omega_{15}^2 \omega_{10} cs^4 \omega_5^2 + 4\omega_{15}^2 v_2^4 \omega_{10} \omega_5^3 -$$
$$24\omega_{15}^3 \omega_{10}^3 cs^4 \omega_5 + 108 v_2^2 \omega_{10}^3 cs^2 \omega_5^3 + 72\omega_{15} v_2^4 \omega_5^3 - 19\omega_{15}^2 v_2^2 \omega_{10}^4 \omega_5^3 - 36 v_2^2 \omega_{10}^4 \omega_5^3 + 18\omega_{15}^2 v_2^2 \omega_{10}^2 cs^2 \omega_5^2 - 18\omega_{15}\omega_{10}^3 cs^4 \omega_5^2 + \omega_{15}^2 \omega_{10} cs^4 \omega_5^3 +$$
$$36\omega_{15} v_2^2 \omega_{10}^3 cs^2 \omega_5 - 12\omega_{15}^2 \omega_{10} cs^2 \omega_5^2 + 90\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5 - 36\omega_{15} v_2^2 \omega_{10}^3 \omega_5 - 306\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5^3 + 6\omega_{15}\omega_{10} cs^4 \omega_5^3 + 72\omega_{15} v_2^4 \omega_{10}^2 \omega_5^3 +$$
$$6\omega_{15}^2 \omega_{10}^2 cs^4 \omega_5^2 - 12\omega_{15}^2 cs^2 \omega_5^3 - 108\omega_{15} v_2^2 \omega_{10} cs^2 \omega_5^3 - 36\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5^2 + 39\omega_{15} v_2^2 \omega_{10}^3 \omega_5^3 - 18\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5 + 6\omega_{15}\omega_{10}^2 cs^2 \omega_5^3 -$$
$$5\omega_{15}^2 \omega_{10}^3 cs^2 \omega_5^2 + 12\omega_{15}^2 \omega_{10} cs^2 \omega_5^2 - 108 v_2^2 \omega_{10}^2 cs^2 \omega_5^3 - 3\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5^2 + 6\omega_{15}^2 \omega_{10}^3 cs^2 \omega_5 - 99\omega_{15} v_2^2 \omega_{10}^3 cs^2 \omega_5^3 - 90\omega_{15}^2 v_2^4 \omega_{10} \omega_5^3 - 72\omega_{15}^2 v_2^2 \omega_5^3 +$$
$$36\omega_{15} v_2^4 \omega_{10}^3 \omega_5^2 + 12\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5^3 + 12\omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^3 - 72\omega_{15} v_2^2 \omega_{10}^2 \omega_5^3 - 39\omega_{15} v_2^2 \omega_{10}^4 \omega_5^3 + 12\omega_{15}\omega_{10}^3 cs^4 \omega_5 + 54\omega_{15} v_2^2 \omega_{10}^3 cs^2 \omega_5^2) \frac{\rho}{12\omega_{15}^2 \omega_{10}^3 \omega_5^3}$$

$$C^{(2),\text{CLBM2}}_{\text{D}_x\text{D}_y^3 v_1} = (6\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5^2 - 99\omega_{15} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 + 36\omega_{15} v_2^2 \omega_{10} \omega_5^3 - 36 v_2^4 \omega_{10}^3 \omega_5^2 + 6\omega_{15}^2 \omega_{10}^3 cs^2 \omega_5 - 3\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5^2 + 12\omega_{15}^2 \omega_{10} cs^2 \omega_5^2 -$$
$$108 v_2^2 \omega_{10}^2 cs^2 \omega_5^3 + 36 v_2^4 \omega_{10}^3 \omega_5 + 54\omega_{15} v_2^2 \omega_{10}^3 cs^2 \omega_5^2 + 12\omega_{15} \omega_{10}^3 cs^4 \omega_5 - 4\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5 + 12\omega_{15}^2 \omega_{10}^3 cs^4 + 19\omega_{15}^2 v_2^4 \omega_{10}^2 \omega_5^3 + 12\omega_{15}^2 \omega_{10} cs^2 \omega_5^3 +$$
$$12\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5^3 + 36 v_2^2 \omega_{10}^2 \omega_5^3 - 306\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5^3 - 6\omega_{15} v_2^4 \omega_{10}^3 \omega_5^2 + 36 v_2^2 \omega_{10}^3 \omega_5^2 - 12\omega_{15}\omega_{10}^3 cs^2 \omega_5^2 - 36\omega_{15} v_2^4 \omega_{10} \omega_5^3 +$$
$$36\omega_{15} v_2^2 \omega_{10}^3 cs^2 \omega_5 - 18\omega_{15}\omega_{10}^3 cs^4 \omega_5^2 + \omega_{15}^2 \omega_{10} cs^4 \omega_5^3 + 6\omega_{15}\omega_{10}^2 cs^2 \omega_5^3 - 5\omega_{15}^2 \omega_{10}^3 cs^2 \omega_5^2 - 18\omega_{15}^2 v_2^2 \omega_{10}^3 cs^2 \omega_5 - 36 v_2^2 \omega_{10}^3 \omega_5^3 + 4\omega_{15}^2 v_2^4 \omega_{10}^3 \omega_5^3 -$$
$$36\omega_{15}^2 v_2^2 \omega_{10} cs^2 \omega_5^2 - 108\omega_{15} v_2^2 \omega_{10} cs^2 \omega_5^3 - 12\omega_{15}^2 cs^2 \omega_5^3 + 72\omega_{15}^2 v_2^4 \omega_5^3 - 19\omega_{15}^2 v_2^2 \omega_{10}^4 \omega_5^3 + 6\omega_{15}\omega_{10}^3 cs^4 \omega_5^3 + 6\omega_{15}^2 \omega_{10}^2 cs^4 \omega_5^2 - 36 v_2^4 \omega_{10}^3 \omega_5^3 -$$
$$108 v_2^2 \omega_{10}^3 cs^2 \omega_5^2 - 12\omega_{15}\omega_{10}^3 cs^2 \omega_5 + 60\omega_{15}^2 v_2^2 \omega_{10}^2 cs^2 \omega_5^3 + 36\omega_{15} v_2^2 \omega_{10}^2 cs^2 \omega_5^3 + 90\omega_{15}^2 v_2^2 \omega_{10} \omega_5^3 - 12\omega_{15}\omega_{10} cs^4 \omega_5^3 - 36\omega_{15} v_2^2 \omega_{10}^3 \omega_5^2 +$$
$$18\omega_{15}^2 v_2^2 \omega_{10}^2 cs^2 \omega_5^2 + 72\omega_{15} v_2^4 \omega_{10}^2 \omega_5^3 + 108 v_2^2 \omega_{10}^3 cs^2 \omega_5^3 - 24\omega_{15}^2 \omega_{10} cs^4 \omega_5 + 39\omega_{15} v_2^2 \omega_{10}^3 \omega_5^3 - 12\omega_{15}\omega_{10} cs^4 \omega_5^2 + 198\omega_{15} v_2^2 \omega_{10} cs^2 \omega_5^3 +$$
$$13\omega_{15}^2 \omega_{10} cs^4 \omega_5^2 - 6\omega_{15}\omega_{10}^2 cs^4 \omega_5^3 + 252\omega_{15}^2 v_2^2 cs^2 \omega_5^3 + 12\omega_{15}^2 cs^4 \omega_5^3 - 6\omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^2 - 90\omega_{15}^2 v_2^4 \omega_{10} \omega_5^3 - 6\omega_{15}\omega_{10}^3 cs^2 \omega_5^3 - 72\omega_{15}^2 v_2^2 \omega_5^3 +$$
$$36\omega_{15} v_2^4 \omega_{10}^3 \omega_5^2 - \omega_{15}^2 \omega_{10}^3 cs^4 \omega_5^3 - 72\omega_{15} v_2^2 \omega_{10}^2 \omega_5^3 + 12\omega_{15}\omega_{10}^3 cs^4 \omega_5^2 - 39\omega_{15} v_2^2 \omega_{10}^4 \omega_5^3 - \omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^3 + 18\omega_{15}\omega_{10}^3 cs^2 \omega_5^2) \frac{\rho}{12\omega_{15}^2 \omega_{10}^3 \omega_5^3}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}_x\text{D}_y^3 v_1} = (36 v_2^4 \omega_1^3 \omega_5^3 - 6 cs^2 \omega_7 \omega_1^3 \omega_5^3 - 39 v_2^4 \omega_7 \omega_1^3 \omega_5^3 + 6 v_2^2 \omega_7^2 \omega_1^3 \omega_5^3 + 90 v_2^2 \omega_7^2 \omega_1^3 \omega_5 + 13 cs^4 \omega_7^2 \omega_1^3 \omega_5^3 + 12 cs^2 v_2^2 \omega_7 \omega_1^3 \omega_5 - 12 cs^4 \omega_7 \omega_1^3 \omega_5 +$$
$$36 v_2^2 \omega_1^3 \omega_5^3 - 36 cs^2 v_2^2 \omega_7^2 \omega_1^2 \omega_5 + 72 v_2^4 \omega_7 \omega_1^3 \omega_5^2 + 6 cs^2 \omega_7 \omega_1^3 \omega_5^2 - 36 v_2^4 \omega_1^3 \omega_5^2 + 12 cs^4 \omega_7 \omega_1 \omega_5^3 + 6 cs^4 \omega_7^2 \omega_1^2 \omega_5^2 + 60 cs^2 v_2^2 \omega_2^2 \omega_1^3 \omega_5^2 - 108 cs^2 v_2^2 \omega_7^2 \omega_1^3 \omega_5^2 -$$
$$12 cs^2 \omega_7^2 \omega_1^3 - 108 cs^2 v_2^2 \omega_7 \omega_1^3 \omega_5^2 - 3 cs^2 v_2^2 \omega_7^2 \omega_1^2 \omega_5^2 - cs^4 \omega_7^2 \omega_1^3 \omega_5^3 - 306 cs^2 v_2^2 \omega_7^2 \omega_1^3 \omega_5 - 36 v_2^2 \omega_1^3 \omega_5^3 - 12 cs^4 \omega_7^2 \omega_1^3 \omega_5 - 4 v_2^2 \omega_7^2 \omega_1^3 \omega_5^3 - 36 v_2^4 \omega_7 \omega_1^3 \omega_5^3 +$$
$$36 v_2^4 \omega_7 \omega_1^3 \omega_5^3 - 36 v_2^2 \omega_1^2 \omega_5^3 + 18 cs^2 \omega_7 \omega_1^3 \omega_5^3 - 19 v_2^2 \omega_7^2 \omega_1^4 \omega_5^3 + 36 v_2^2 \omega_1^3 \omega_5^2 + 36 cs^2 v_2^2 \omega_7 \omega_1 \omega_5^3 + 108 cs^2 v_2^2 \omega_7 \omega_1^3 \omega_5^3 + 18 cs^2 v_2^2 \omega_7^2 \omega_1^2 \omega_5^2 + cs^4 \omega_7^2 \omega_1^3 \omega_5^2 -$$
$$12 cs^2 \omega_7 \omega_1^2 \omega_5^2 + 6 cs^2 \omega_7^2 \omega_1 \omega_5^3 + 12 cs^4 \omega_7^2 \omega_1 + 39 v_2^2 \omega_7 \omega_1^3 \omega_5^3 - 108 cs^2 v_2^2 \omega_7 \omega_1^3 \omega_5^3 + 54 cs^2 v_2^2 \omega_7^2 \omega_1^3 \omega_5^3 + 6 cs^4 \omega_7 \omega_1^3 \omega_5^3 - 5 cs^2 \omega_7^2 \omega_1^3 \omega_5^2 +$$
$$12 cs^2 \omega_7^3 \omega_1^3 \omega_5 - 6 v_2^4 \omega_7^2 \omega_1^3 \omega_5^3 - 90 v_2^4 \omega_7^2 \omega_1^3 \omega_5 + 36 cs^2 v_2^2 \omega_7 \omega_1^3 \omega_5^2 - 6 cs^4 \omega_7 \omega_1^3 \omega_5^2 - 18 cs^2 v_2^2 \omega_7^2 \omega_1 \omega_5^3 - 72 v_2^2 \omega_7 \omega_1^3 \omega_5^2 + 72 v_2^4 \omega_7^2 \omega_1^3 -$$
$$12 cs^2 \omega_7 \omega_1 \omega_5^3 - 6 cs^2 \omega_7^2 \omega_1^2 \omega_5^3 + 4 v_2^2 \omega_7^2 \omega_1^3 \omega_5^3 + 12 cs^2 \omega_7^2 \omega_1^3 \omega_5 - 18 cs^4 \omega_7 \omega_1^3 \omega_5^3 + 252 cs^2 v_2^2 \omega_7^2 \omega_1^3 - 99 cs^2 v_2^2 \omega_7 \omega_1^3 \omega_5^3 + 36 v_2^2 \omega_7 \omega_1^3 \omega_5 -$$
$$36 v_2^2 \omega_7 \omega_1^3 \omega_5^3 - cs^2 \omega_7^2 \omega_1^3 \omega_5^3 + 19 v_2^2 \omega_7 \omega_1^3 \omega_5^3 + 12 cs^4 \omega_7^2 \omega_5^3 + 12 cs^4 \omega_7 \omega_1^3 \omega_5^3 + 198 cs^2 v_2^2 \omega_7 \omega_1^3 \omega_5^3 - 72 v_2^2 \omega_7^2 \omega_1^3 - 24 cs^4 \omega_7 \omega_1 \omega_5) \frac{\rho}{12\omega_7^2 \omega_1^3 \omega_5^3}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}_x\text{D}_y^3 v_1} = (-48 v_2^2 \omega_3^2 \omega_4^2 \omega_2^3 + 16\omega_3 cs^4 \omega_4^2 \omega_1^3 \omega_2 - 108 v_2^2 \omega_3 cs^2 \omega_4^2 \omega_1^2 \omega_2^2 - 36\omega_3 cs^4 \omega_4^2 \omega_1^2 \omega_2^3 + 54 v_2^4 \omega_3^2 \omega_1^3 \omega_2^3 + 117 v_2^2 \omega_3^2 \omega_4 \omega_1^3 \omega_2^2 + 8\omega_3^2 \omega_4^2 \omega_1^3 -$$
$$216 v_2^2 \omega_3 \omega_4^2 \omega_1^2 \omega_2^3 + 16\omega_3^2 \omega_4^2 \omega_1 \omega_2^2 + 24 v_2^2 \omega_3 \omega_4^2 \omega_1^3 \omega_2 - 324 v_2^2 \omega_3^2 cs^2 \omega_1^2 \omega_2^3 - 117 v_2^2 \omega_3^2 \omega_4 \omega_1^3 \omega_2^2 - 54 v_2^2 \omega_4^2 \omega_1^3 \omega_2^2 - 492 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2 -$$
$$24 v_2^4 \omega_3 \omega_4^2 \omega_1^3 \omega_2 - 12 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2 + 20\omega_3 cs^4 \omega_4^2 \omega_1^2 \omega_2^2 + 72\omega_3^2 cs^4 \omega_4 \omega_1 \omega_2^2 + 174 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2^2 + 48 v_1^2 \omega_3^2 \omega_4^2 \omega_2^3 + 144 v_1^2 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 +$$
$$216 v_2^4 \omega_3 \omega_4^2 \omega_1^2 \omega_2^2 + 60 v_2^2 \omega_3 \omega_4^2 \omega_1^3 \omega_2^2 + 48 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 + 16\omega_3^2 \omega_4^2 \omega_1 \omega_2^3 - 72 v_1^2 \omega_3 cs^2 \omega_4^2 \omega_1^2 \omega_2^3 + 40\omega_3 cs^4 \omega_4^2 \omega_1^2 \omega_2^2 - 72 v_2^2 \omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2 -$$
$$18\omega_3^2 cs^4 \omega_4 \omega_1^3 \omega_2^3 - 36 v_2^2 \omega_3^2 \omega_4 \omega_1^3 \omega_2^2 + 468 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2^3 - 492 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2 - 60 v_2^4 \omega_3 \omega_4^2 \omega_1^2 \omega_2 - 96 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 - 28\omega_3 cs^4 \omega_4^2 \omega_1^3 \omega_2 +$$
$$86\omega_3^2 cs^4 \omega_4^2 \omega_1^2 \omega_2^3 + 144 v_1^2 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2 + 36 v_2^2 \omega_4^2 \omega_1^3 \omega_2 - 40 v_2^2 cs^2 \omega_4^2 \omega_1^3 + 36 v_2^4 \omega_3 \omega_4^2 \omega_1^3 \omega_2 - 2\omega_3^2 cs^4 \omega_4^2 \omega_1^3 - 144 v_1^2 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2^3 +$$
$$24 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2^2 + 264 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2 - 117 v_2^4 \omega_3 \omega_4^2 \omega_1^3 \omega_2^2 - 288 v_1^2 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 + 72 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 + 288 v_2^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2^3 +$$
$$162 v_2^2 \omega_3^2 cs^2 \omega_4^3 \omega_1^3 \omega_2 + 96 v_2^4 \omega_3^2 \omega_4^2 \omega_1 \omega_2^2 + 72 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2^3 - 48 v_1^2 \omega_3^2 \omega_4^2 \omega_1 \omega_2^3 + 24 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 + 117 v_2^2 \omega_3 \omega_4^2 \omega_1^3 \omega_2^2 + 288 v_2^2 \omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2^2 +$$
$$48 v_1^2 \omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2 - 144 v_2^2 \omega_3^2 \omega_4^2 \omega_1 \omega_2^2 + 48\omega_3^2 cs^2 \omega_4^2 \omega_1 \omega_2^3 - 288 v_2^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2^3 - 108 v_2^4 \omega_3^2 \omega_1^2 \omega_2^3 + 72 v_1^2 \omega_3 cs^2 \omega_4^2 \omega_1^2 \omega_2^3 + 18\omega_3 cs^4 \omega_4^2 \omega_1^3 \omega_2^3 -$$
$$288 v_1^2 \omega_3^2 \omega_4^2 \omega_1 \omega_2^3 - 48 v_1^2 \omega_3^2 \omega_4^2 \omega_1 \omega_2^3 - 36 v_2^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2^3 - 56\omega_3^2 cs^4 \omega_4^2 \omega_1^2 \omega_2 + 264 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 - 16\omega_3 cs^2 \omega_4^2 \omega_1 \omega_2^3 - 432 v_1^2 v_2^2 \omega_3^2 \omega_4^2 \omega_2^3 +$$
$$108 v_2^2 \omega_3 \omega_4^2 \omega_1^3 \omega_2 - 12 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 + 168 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 + 12 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 - 288 v_1^2 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 - 6\omega_3 cs^4 \omega_4^2 \omega_1^3 \omega_2 + 72\omega_3^2 cs^2 \omega_4 \omega_1^2 \omega_2^3 +$$
$$36 v_2^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2^3 - 36\omega_3 cs^4 \omega_4^2 \omega_1^3 \omega_2^3 + 48 v_1^2 \omega_3 cs^2 \omega_4^2 \omega_1^2 \omega_2^3 - 297 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 - 32\omega_3^2 cs^2 \omega_4^2 \omega_1 \omega_2^3 + 96 v_2^2 \omega_3^2 \omega_4 \omega_1 \omega_2^3 + 32\omega_3^2 cs^4 \omega_4^2 \omega_1^3 -$$
$$108 v_2^2 \omega_3 \omega_4^2 \omega_1^3 \omega_2 - 108 v_2^4 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2 + 24 v_1^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 + 40 v_2^4 \omega_3^2 \omega_4^2 \omega_1^3 + 108 v_2^2 \omega_3 \omega_4 \omega_1^2 \omega_2^3 - 12 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_1 \omega_2^3 - 16\omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2 +$$
$$192 v_2^4 \omega_3^2 \omega_4^2 \omega_2^3 - 297 v_2^2 \omega_3^2 cs^2 \omega_4 \omega_1^3 \omega_2^3 + 144 v_1^2 v_2^2 \omega_3^2 \omega_4 \omega_1 \omega_2^2 - 54 v_2^2 \omega_3^2 \omega_1^3 \omega_2^3 + 36\omega_3 cs^2 \omega_4^2 \omega_1^2 \omega_2^3 - 12\omega_3^2 cs^2 \omega_4^2 \omega_1 \omega_2^3 + 8 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2^3 +$$
$$204 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2 - 108 v_2^2 \omega_3 cs^2 \omega_4 \omega_1^3 \omega_2^2 + 8\omega_3^2 cs^2 \omega_4^2 \omega_1^3 - 72\omega_3^2 cs^2 \omega_4 \omega_1 \omega_2^3 - 108 v_2^2 \omega_3 \omega_4 \omega_1^3 \omega_2^3 - 8\omega_3^2 \omega_4^2 \omega_1^2 \omega_2 + 54 v_2^4 \omega_4^2 \omega_1^3 \omega_2^3 - 216 v_2^2 cs^2 \omega_4^2 \omega_1^2 \omega_2^3 +$$
$$18\omega_3^2 cs^4 \omega_4 \omega_1^3 \omega_2^3 - 40\omega_3 cs^2 \omega_4^2 \omega_1^2 \omega_2^2 - 36 v_2^4 \omega_3 \omega_4 \omega_1^3 \omega_2^2 + 576 v_1^2 v_2^2 \omega_3^2 \omega_4 \omega_1 \omega_2^3 + 108 v_2^2 \omega_3^2 cs^2 \omega_4 \omega_1^3 \omega_2^2 + 48 v_1^2 \omega_3^2 cs^2 \omega_4 \omega_1 \omega_2^2 + 6 v_1^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2^3 -$$
$$16\omega_3^2 \omega_4^2 \omega_2^3 - 144 v_2^4 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 - 72 v_2^4 \omega_3^2 \omega_4 \omega_1 \omega_2^3 + 24 v_1^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2 - 96 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 + 36 v_2^2 \omega_3 \omega_4 \omega_1^3 \omega_2^2 - 24 v_1^2 \omega_3^2 \omega_4^2 \omega_1^3 - 36 v_2^4 \omega_4^2 \omega_1^3 \omega_2^2 +$$
$$2\omega_3^2 \omega_4^2 \omega_1^3 \omega_2^2 + 324 v_2^2 \omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2^2 + 36\omega_3^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 - 96 v_1^2 \omega_3 cs^2 \omega_4^2 \omega_1 \omega_2^3 + 72 v_2^2 \omega_3^2 \omega_4 \omega_1 \omega_2^3 + 240 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 - 36\omega_3 cs^2 \omega_4^2 \omega_1^2 \omega_2^3 -$$
$$2\omega_3^2 \omega_4^2 \omega_1^2 \omega_2^3 - 72 v_2^4 \omega_4^2 \omega_1^3 \omega_2^3 - 8\omega_3^2 \omega_4^2 \omega_1^3 \omega_2 + 180 v_2^2 \omega_3 \omega_4 \omega_1^2 \omega_2^3 + 144 v_1^2 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 + 432 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_2^3 + 72 v_2^2 \omega_3 cs^2 \omega_4^2 \omega_1 \omega_2^3 - 24 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2^3 -$$
$$144 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 - 172\omega_3^2 cs^4 \omega_4^2 \omega_1 \omega_2^3 + 648 v_2^2 \omega_3^2 cs^2 \omega_4 \omega_1^2 \omega_2^3 + 80\omega_3 cs^4 \omega_4^2 \omega_2^3 - 180 v_2^4 \omega_3 \omega_4 \omega_1^2 \omega_2^3 - 18\omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2^3 - 108 v_2^2 cs^2 \omega_4^2 \omega_2^3 +$$
$$108 v_2^2 \omega_3 \omega_4^2 \omega_1 \omega_2^3 + 336 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1 \omega_2^2 + 96 v_2^4 \omega_3^2 \omega_4^2 \omega_1 \omega_2 + 24 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2 - 6 v_1^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2^3 + 16\omega_3 cs^4 \omega_4^2 \omega_1 \omega_2^3 + 64\omega_3^2 cs^2 \omega_4^2 \omega_1^2 \omega_2 -$$
$$540 v_2^2 \omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2 - 86 v_2^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2^3 - 8\omega_3^2 \omega_4^2 \omega_1^2 \omega_2^2 + 24 v_2^2 \omega_3 \omega_4^2 \omega_1 \omega_2^3 + 38 v_2^4 \omega_3^2 \omega_4^2 \omega_1^3 \omega_2 + 24 v_1^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 + 36\omega_3 cs^2 \omega_4^2 \omega_1^3 \omega_2^3 - 24 v_2^4 \omega_3 \omega_4^2 \omega_1^3 \omega_2 -$$
$$72\omega_3^2 cs^4 \omega_4 \omega_1^3 \omega_2 + 162 v_2^2 cs^2 \omega_4^2 \omega_1^3 \omega_2 - 852 v_2^2 \omega_3^2 cs^2 \omega_4^2 \omega_1 \omega_2 - 108 v_2^2 \omega_3^2 cs^2 \omega_4 \omega_1^2 \omega_2 + 16\omega_3 cs^4 \omega_4^2 \omega_1 \omega_2 + 24 v_1^2 \omega_3^2 cs^2 \omega_4^2 \omega_2^3) \frac{\rho}{72\omega_3^2 \omega_4^2 \omega_1^3 \omega_2^3}$$

coefficient $C^{(2)}_{\text{D}_x\text{D}_y^3 v_2}$ at $\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3}$:

$$C^{(2),\text{SRT}}_{\text{D}_x\text{D}_y^3 v_2} = 0$$

$$C^{(2),\text{MRT1}}_{\text{D}_x\text{D}_y^3 v_2} =$$
$$(-28\omega_{15} v_2^2 \omega_{10}^3 + 48\omega_{15}^2 \omega_{10}\omega_5^2 - 28\omega_{15}\omega_{10}^3 \omega_5 + 48\omega_{15}^2 cs^2 \omega_5^2 - 16\omega_{10}^3 cs^2 \omega_5 - 16 v_2^2 \omega_{10}^2 \omega_5^2 - 20\omega_{15}\omega_{10}^3 cs^2 + 56\omega_{15}\omega_{10} cs^2 \omega_5^2 - 64\omega_{15} v_2^2 \omega_{10}\omega_5^2 -$$
$$32\omega_{15}^2 \omega_{10}^3 - 68\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5 - 40\omega_{15}\omega_{10}^3 \omega_5^2 - 16 v_2^2 \omega_{10}^3 \omega_5 - 12\omega_{15}^2 \omega_{10}^3 + 32\omega_{15}^2 \omega_{10} cs^2 \omega_5 + 16 v_2^2 \omega_{10}^3 \omega_5^2 - 72\omega_{15}^2 \omega_{10} cs^2 \omega_5^2 + 43\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_5^2 +$$
$$16\omega_{15}\omega_{10}^2 \omega_5^2 - 16\omega_{15}\omega_{10}^2 cs^2 \omega_5 + 17\omega_{15}\omega_{10}^3 \omega_5^2 - 24\omega_{15}^2 \omega_{10}\omega_5 + 16\omega_{10}^3 cs^2 \omega_5^2 + 25\omega_{15}^2 \omega_{10}^2 cs^2 \omega_5^2 + 20\omega_{15}^2 \omega_{10}^2 cs^2 + 28\omega_{15}^2 \omega_{10}\omega_5 - 43\omega_{15} v_2^2 \omega_{10}^3 \omega_5^2 -$$
$$8\omega_{10}^3 \omega_5^2 - 25\omega_{15}\omega_{10}^3 cs^2 \omega_5^2 - 48\omega_{15} v_2^2 \omega_{10}^3 \omega_5 - 120\omega_{15}^2 v_2^2 \omega_{10}\omega_5^2 + 104\omega_{15} v_2^2 \omega_{10}^2 \omega_5^2 + 8\omega_{10}^2 \omega_5^2 + 24\omega_{15}\omega_{10}\omega_5 - 16\omega_{10}^2 cs^2 \omega_5^2 + 64\omega_{15}^2 v_2^2 \omega_{10}\omega_5 -$$

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$$32\omega_{15}\omega_{10}cs^2\omega_5^2+44\omega_{15}\omega_{10}^3cs^2\omega_5-17\omega_{15}^2\omega_{10}^2\omega_5^2+28\omega_{15}^2v_2^2\omega_{10}^2+68\omega_{15}v_2^2\omega_{10}^3\omega_5+8\omega_{10}^3\omega_5-44\omega_{15}^2\omega_{10}^2cs^2\omega_5+12\omega_{15}\omega_{10}^3+80\omega_{15}^2v_2^2\omega_5^2)\frac{\rho v_1 v_2}{4\omega_{15}^2\omega_{10}^3\omega_5^2}$$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} =$

$(-28\omega_{15}v_2^2\omega_{10}^3+48\omega_{15}^2\omega_{10}\omega_5^2-28\omega_{15}\omega_{10}^3\omega_5-16v_2^2\omega_{10}^2\omega_5^2+25\omega_{15}^2cs^2\omega_{10}^2\omega_5^2-64\omega_{15}v_2^2\omega_{10}\omega_5^2-32\omega_{15}^2\omega_5^2-68\omega_{15}^2v_2^2\omega_{10}^2\omega_5^2-40\omega_{15}\omega_{10}^2\omega_5^2+$
$16cs^2\omega_{10}^3\omega_5^2-16v_2^2\omega_{10}^3\omega_5-12\omega_{15}^2\omega_{10}^2-20\omega_{15}cs^2\omega_{10}^3-16cs^2\omega_{10}^3\omega_5+16v_2^2\omega_{10}^3\omega_5^2-44\omega_{15}^2cs^2\omega_{10}^2\omega_5+43\omega_{15}^2v_2^2\omega_{10}^2\omega_5-32\omega_{15}cs^2\omega_{10}\omega_5^2+$
$16\omega_{15}\omega_{10}^2\omega_5-16cs^2\omega_{10}^2\omega_5^2+17\omega_{15}\omega_{10}^3\omega_5^2-24\omega_{15}^2\omega_{10}\omega_5+28\omega_{15}^2\omega_{10}^2\omega_5+44\omega_{15}cs^2\omega_{10}^3\omega_5-43\omega_{15}v_2^2\omega_{10}^3\omega_5-8\omega_{10}^3\omega_5^2-48\omega_{15}v_2^2\omega_{10}^2\omega_5+$
$32\omega_{15}^2cs^2\omega_{10}\omega_5+56\omega_{15}cs^2\omega_{10}^2\omega_5^2-120\omega_{15}^2v_2^2\omega_{10}\omega_5^2+104\omega_{15}v_2^2\omega_{10}^2\omega_5^2-72\omega_{15}^2cs^2\omega_{10}\omega_5^2+48\omega_{15}^2cs^2\omega_5^2+8\omega_{10}^3\omega_5^2+24\omega_{15}\omega_{10}\omega_5^2-16\omega_{15}cs^2\omega_{10}^2\omega_5^2+$
$64\omega_{15}^2v_2^2\omega_{10}\omega_5+20\omega_{15}^2cs^2\omega_{10}^2-25\omega_{15}cs^2\omega_{10}^3\omega_5^2-17\omega_{15}^2\omega_{10}\omega_5^2+28\omega_{15}^2v_2^2\omega_{10}^2+68\omega_{15}v_2^2\omega_{10}^3\omega_5+8\omega_{10}^3\omega_5+12\omega_{15}\omega_{10}^3+80\omega_{15}^2v_2^2\omega_5^2)\frac{\rho v_1 v_2}{4\omega_{15}^2\omega_{10}^3\omega_5^2}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^3 v_2} = (-18v_1^2\omega_3\omega_1^3\omega_2-5v_1^2\omega_3\omega_1^2\omega_2^3+84\omega_3cs^2\omega_1^3-12\omega_1\omega_2^3+27cs^2\omega_1^3\omega_2^2-54\omega_3cs^2\omega_1\omega_2^2-66v_2^2\omega_3\omega_1^3\omega_2-9v_1^2\omega_3\omega_1^2\omega_2^2+$
$132v_2^2\omega_3\omega_1^2\omega_2^2-36\omega_3\omega_1^3+27\omega_3cs^2\omega_1\omega_2^3+84v_2^2\omega_3\omega_2^3-12v_2^2\omega_3\omega_1^2\omega_2-18cs^2\omega_1^2\omega_2^2+12v_1^2\omega_1\omega_2^3+3\omega_3\omega_1\omega_2^3+6v_1^2\omega_3\omega_1^2\omega_2-18cs^2\omega_1^3\omega_2+$
$12v_1^2\omega_3\omega_1^3-27cs^2\omega_1^2\omega_2^3+5v_1^2\omega_3\omega_1^3\omega_2^2+42\omega_3\omega_1\omega_2^3+36cs^2\omega_1^2\omega_2^3-18\omega_3cs^2\omega_1^2\omega_2-12\omega_3\omega_2^3-6v_1^2\omega_1^2\omega_2-9\omega_1^3\omega_2^2-51\omega_3cs^2\omega_1^2\omega_2^2-12\omega_3cs^2\omega_2^3+$
$15\omega_3cs^2\omega_1^3\omega_2^2-6v_1^2\omega_1^3\omega_2+5\omega_3\omega_1^2\omega_2^3-9v_1^2\omega_1^2\omega_2^3+48\omega_3\omega_1^3\omega_2+6\omega_1^2\omega_2^2+9v_1^2\omega_1^3\omega_2^2-5\omega_3\omega_1^3\omega_2^2-24v_1^2\omega_3\omega_2^3+6v_1^2\omega_3\omega_1\omega_2^2-120v_2^2\omega_3\omega_1\omega_2^2-$
$15\omega_3cs^2\omega_1^2\omega_2^3-108\omega_3cs^2\omega_1^2\omega_2+27v_1^2\omega_3\omega_1\omega_2^3+6\omega_1^3\omega_2+48v_2^2\omega_3\omega_1^3+6\omega_3\omega_1^2\omega_2+9\omega_1^2\omega_2^3+81\omega_3cs^2\omega_1^2\omega_2^2-66v_2^2\omega_3\omega_1\omega_2^3)\frac{\rho v_1 v_2}{18\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\mathrm{D}_y^4\rho}$ at $\frac{\partial^4\rho}{\partial x_2^4}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y^4\rho} = (12-78cs^2\omega^2+8\omega^2+672v_2^2cs^2+90v_2^4\omega^2+6cs^2\omega^3+144v_2^4-9v_2^4\omega^3-\omega^3+144cs^4-216v_2^4\omega+198cs^2\omega-5cs^4\omega^3+10v_2^3\omega^3+$
$82cs^4\omega^2-1008v_2^2cs^2\omega-98v_2^4\omega^2-132cs^2+234v_2^2\omega-18\omega-216cs^4\omega+404v_2^2cs^2\omega^2-156v_2^2-34v_2^2cs^2\omega^3)\frac{v_2}{12\omega^3}$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y^4\rho} = (12-216v_2^4\omega_{10}-132cs^2-5\omega_{10}^3cs^4-34v_2^2\omega_{10}^3cs^2+144v_2^2-\omega_{10}^3-9v_2^4\omega_{10}^3+198\omega_{10}cs^2+90v_2^4\omega_{10}^2+8\omega_{10}^2-18\omega_{10}+82\omega_{10}^2cs^4+$
$404v_2^2\omega_{10}^2cs^2-1008v_2^2\omega_{10}cs^2-216\omega_{10}cs^4-78\omega_{10}^2cs^2+672v_2^2cs^2+234v_2^2\omega_{10}-98v_2^4\omega_{10}^2+144cs^4-156v_2^2+10v_2^3\omega_{10}^3+6\omega_{10}^3cs^2)\frac{v_2}{12\omega_{10}^3}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y^4\rho} = (12-216v_2^4\omega_{10}-1008cs^2v_2^2\omega_{10}-216cs^4\omega_{10}+144cs^4+144v_2^4-\omega_{10}^3-34cs^2v_2^2\omega_{10}^3-9v_2^4\omega_{10}^3+82cs^4\omega_{10}^2+90v_2^4\omega_{10}^2+$
$404cs^2v_2^2\omega_{10}^2+8\omega_{10}^2-18\omega_{10}-5cs^4\omega_{10}^3+672cs^2v_2^2+198cs^2\omega_{10}+234v_2^2\omega_{10}-98v_2^4\omega_{10}^2+6cs^2\omega_{10}^3-156v_2^2+10v_2^3\omega_{10}^3-78cs^2\omega_{10}^2-132cs^2)\frac{v_2}{12\omega_{10}^3}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y^4\rho} = (12+198\omega_{10}cs^2-216v_2^4\omega_{10}+144v_2^4+404v_2^2\omega_{10}^2cs^2+82\omega_{10}^2cs^4-\omega_{10}^3-9v_2^4\omega_{10}^3-132cs^2-34v_2^2\omega_{10}^3cs^2+90v_2^4\omega_{10}^2-5\omega_{10}^3cs^4+$
$8\omega_{10}^2-18\omega_{10}+144cs^4+6\omega_{10}^3cs^2+234v_2^2\omega_{10}-98v_2^4\omega_{10}^2-216\omega_{10}cs^4-1008v_2^2\omega_{10}cs^2-156v_2^2+10v_2^3\omega_{10}^3-78\omega_{10}^2cs^2+672v_2^2cs^2)\frac{v_2}{12\omega_{10}^3}$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y^4\rho} = (12-5\omega_{10}^3cs^4-34v_2^2\omega_{10}^3cs^2-216v_2^4\omega_{10}+144v_2^4-132cs^2-\omega_{10}^3-9v_2^4\omega_{10}^3+82\omega_{10}^2cs^4+404v_2^2\omega_{10}^2cs^2+90v_2^4\omega_{10}^2+198\omega_{10}cs^2+$
$8\omega_{10}^2-18\omega_{10}-78\omega_{10}^2cs^2+672v_2^2cs^2-1008v_2^2\omega_{10}cs^2+234v_2^2\omega_{10}-216\omega_{10}cs^4-98v_2^4\omega_{10}^2+6\omega_{10}^3cs^2-156v_2^2+144cs^4+10v_2^3\omega_{10}^3)\frac{v_2}{12\omega_{10}^3}$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y^4\rho} = (12-216v_2^4\omega_5+6cs^2\omega_5^3+144v_2^4-78cs^2\omega_5^2+144cs^4+198cs^2\omega_5-9v_2^4\omega_5^3-\omega_5^3+8\omega_5^2+90v_2^4\omega_5^2-132cs^2+82cs^4\omega_5^2+$
$672cs^2v_2^2+234v_2^2\omega_5-5cs^4\omega_5^3-1008cs^2v_2^2\omega_5+404cs^2v_2^2\omega_5^2-98v_2^4\omega_5^2-156v_2^2-18\omega_5-34cs^2v_2^2\omega_5^3-216cs^4\omega_5+10v_2^3\omega_5^3)\frac{v_2}{12\omega_5^3}$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y^4\rho} = (144v_2^4\omega_3\omega_2^3+216\omega_3cs^4\omega_2^3-52\omega_3cs^2\omega_1^3+760v_2^2\omega_3cs^2\omega_2^3-48cs^4\omega_1^2\omega_2^2-80\omega_3cs^2\omega_1\omega_2^2-196v_2^2\omega_3\omega_1^2\omega_2^3+94v_2^2\omega_3\omega_1^3\omega_2+$
$24cs^4\omega_1^3\omega_2+8v_2^2cs^2\omega_1\omega_2^3+280v_2^2\omega_3cs^2\omega_1\omega_2^2+4\omega_3\omega_1^3+320\omega_3cs^2\omega_1\omega_2^3+30v_2^2\omega_3\omega_1^3\omega_2^3+656v_2^2\omega_3cs^2\omega_1\omega_2^2-160v_2^2\omega_3\omega_2^3-104v_2^2\omega_3\omega_1^2\omega_2+$
$16cs^2\omega_1^2\omega_2^2-28\omega_3\omega_1\omega_2^3+72\omega_3cs^4\omega_1\omega_2^2+168v_2^4\omega_3\omega_1\omega_2^2-8cs^2\omega_1^3\omega_2-98v_2^2\omega_3\omega_1^3\omega_2^2-1472v_2^2\omega_3cs^2\omega_1\omega_2^3-300v_2^4\omega_3\omega_1\omega_2^3+8\omega_3\omega_1\omega_2^2-$
$372\omega_3cs^4\omega_1\omega_2^3-8cs^2\omega_1\omega_2^3+18\omega_3cs^2\omega_1^3\omega_2^3-80\omega_3cs^2\omega_1^2\omega_2+808v_2^2\omega_3cs^2\omega_1^2\omega_2^3-464v_2^2\omega_3cs^2\omega_1^3\omega_2+16\omega_3\omega_1\omega_2^3+180v_2^2\omega_3\omega_1^2\omega_2^3-84v_2^4\omega_3\omega_1^3\omega_2-$
$156\omega_3cs^4\omega_1^3\omega_2+164\omega_3cs^4\omega_1^2\omega_2^3-16\omega_3\omega_1^2\omega_2^3+160v_2^2\omega_3cs^2\omega_1^3-1088v_2^2\omega_3cs^2\omega_1^2\omega_2^2-184\omega_3cs^2\omega_2^3+72\omega_3cs^4\omega_1^3+24v_2^4\omega_3\omega_1^3-78\omega_3cs^2\omega_1^3\omega_2^2-$
$120\omega_3cs^4\omega_1^2\omega_2^3+16\omega_3\omega_1^2\omega_2^3-10\omega_3\omega_1^3\omega_2-264v_2^4\omega_3\omega_1^2\omega_2+72\omega_3cs^4\omega_1^2\omega_2+8\omega_3\omega_1^3\omega_2^2+24cs^4\omega_1\omega_2^3-15\omega_3cs^4\omega_1^3\omega_2^3-27v_2^4\omega_3\omega_1^3\omega_2^3+$
$8v_2^2cs^2\omega_1^3\omega_2+96v_2^4\omega_3\omega_1^2\omega_2^3-176v_2^2\omega_3\omega_1\omega_2^3-102v_2^2\omega_3cs^2\omega_1^3\omega_2^3+440v_2^2\omega_3cs^2\omega_1^2\omega_2-156\omega_3cs^2\omega_1^2\omega_2^3+122\omega_3cs^2\omega_1^3\omega_2-16v_2^2cs^2\omega_1^2\omega_2^2+$
$90v_2^4\omega_3\omega_1^3\omega_2^2-3\omega_3\omega_1^3\omega_2^3+82\omega_3cs^4\omega_1^3\omega_2^2-28v_2^2\omega_3\omega_1^3+8\omega_3\omega_1^2\omega_2+152\omega_3cs^2\omega_1^2\omega_2^2+328v_2^2\omega_3\omega_1\omega_2^3+404v_2^2\omega_3cs^2\omega_1^3\omega_2^2)\frac{v_2}{36\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\mathrm{D}_y^4 v_2}$ at $\frac{\partial^4 v_2}{\partial x_2^4}$:

$C^{(2),\text{SRT}}_{\text{D}^4_y v_2} = (12 - 22cs^2\omega^2 + 8\omega^2 + 432v_2^2cs^2 + 310v_2^4\omega^2 + 2cs^2\omega^3 + 504v_2^4 - 29v_2^4\omega^3 - \omega^3 + 24cs^4 - 756v_2^4\omega + 54cs^2\omega - cs^4\omega^3 + 14v_2^2\omega^3 + 14cs^4\omega^2 - 648v_2^2cs^2\omega - 154v_2^2\omega^2 - 36cs^2 + 378v_2^2\omega - 18\omega - 36cs^4\omega^2 + 252v_2^2cs^2\omega^2 - 252v_2^2 - 18v_2^2cs^2\omega^3)\frac{\rho}{12\omega^3}$

$C^{(2),\text{MRT1}}_{\text{D}^4_y v_2} = (12 - 756v_2^4\omega_{10} - 36cs^2 - \omega_{10}^3cs^4 - 18v_2^2\omega_{10}^3cs^2 + 504v_2^4 - \omega_{10}^3 - 29v_2^4\omega_{10} + 54\omega_{10}cs^2 + 310v_2^4\omega_{10}^2 + 8\omega_{10}^2 - 18\omega_{10} + 14\omega_{10}^2cs^4 + 252v_2^2\omega_{10}^2cs^2 - 648v_2^2\omega_{10}cs^2 - 36\omega_{10}cs^4 - 22\omega_{10}^2cs^2 + 432v_2^2cs^2 + 378v_2^2\omega_{10} - 154v_2^2\omega_{10}^2 + 24cs^4 - 252v_2^2 + 14v_2^2\omega_{10}^3 + 2\omega_{10}^3cs^2)\frac{\rho}{12\omega_{10}^3}$

$C^{(2),\text{MRT2}}_{\text{D}^4_y v_2} = (12 - 756v_2^4\omega_{10} - 648cs^2v_2^2\omega_{10} - 36cs^4\omega_{10} + 24cs^4 + 504v_2^4 - \omega_{10}^3 - 18cs^2v_2^2\omega_{10}^3 - 29v_2^4\omega_{10} + 14cs^4\omega_{10}^2 + 310v_2^4\omega_{10}^2 + 252cs^2v_2^2\omega_{10}^2 + 8\omega_{10}^2 - 18\omega_{10} - cs^4\omega_{10}^3 + 432cs^2v_2^2 + 54cs^2\omega_{10} + 378v_2^2\omega_{10} - 154v_2^2\omega_{10}^2 + 2cs^2\omega_{10}^3 - 252v_2^2 + 14v_2^2\omega_{10}^3 - 22cs^2\omega_{10}^2 - 36cs^2)\frac{\rho}{12\omega_{10}^3}$

$C^{(2),\text{CLBM1}}_{\text{D}^4_y v_2} = (12 + 54\omega_{10}cs^2 - 756v_2^4\omega_{10} + 504v_2^4 + 252v_2^2\omega_{10}^2cs^2 + 14\omega_{10}^2cs^4 - \omega_{10}^3 - 29v_2^4\omega_{10} - 36cs^2 - 18v_2^2\omega_{10}^3cs^2 + 310v_2^4\omega_{10}^2 - \omega_{10}^3cs^4 + 8\omega_{10}^2 - 18\omega_{10} + 24cs^4 + 2\omega_{10}^3cs^2 + 378v_2^2\omega_{10} - 154v_2^2\omega_{10}^2 - 36\omega_{10}cs^4 - 648v_2^2\omega_{10}cs^2 - 252v_2^2 + 14v_2^2\omega_{10}^3 - 22\omega_{10}^2cs^2 + 432v_2^2cs^2)\frac{\rho}{12\omega_{10}^3}$

$C^{(2),\text{CLBM2}}_{\text{D}^4_y v_2} = (12 - \omega_{10}^3cs^4 - 18v_2^2\omega_{10}^3cs^2 - 756v_2^4\omega_{10} + 504v_2^4 - 36cs^2 - \omega_{10}^3 - 29v_2^4\omega_{10} + 14\omega_{10}^2cs^4 + 252v_2^2\omega_{10}^2cs^2 + 310v_2^4\omega_{10}^2 + 54\omega_{10}cs^2 + 8\omega_{10}^2 - 18\omega_{10} - 22\omega_{10}^2cs^2 + 432v_2^2cs^2 - 648v_2^2\omega_{10}cs^2 + 378v_2^2\omega_{10} - 36\omega_{10}cs^4 - 154v_2^2\omega_{10}^2 + 2\omega_{10}^3cs^2 - 252v_2^2 + 24cs^4 + 14v_2^2\omega_{10}^3)\frac{\rho}{12\omega_{10}^3}$

$C^{(2),\text{CuLBM1}}_{\text{D}^4_y v_2} = (12 - 756v_2^4\omega_5 + 2cs^2\omega_5^3 + 504v_2^4 - 22cs^2\omega_5^2 + 24cs^4 + 54cs^2\omega_5 - 29v_2^4\omega_5 - \omega_5^3 + 8\omega_5^2 + 310v_2^4\omega_5^2 - 36cs^2 + 14cs^4\omega_5^2 + 432cs^2v_2^2 + 378v_2^2\omega_5 - cs^4\omega_5^3 - 648cs^2v_2^2\omega_5 + 252cs^2v_2^2\omega_5^2 - 154v_2^2\omega_5^2 - 252v_2^2 - 18\omega_5 - 18cs^2v_2^2\omega_5^3 - 36cs^4\omega_5 + 14v_2^2\omega_5^3)\frac{\rho}{12\omega_5^3}$

$C^{(2),\text{CuLBM2}}_{\text{D}^4_y v_2} = (528v_2^4\omega_3\omega_2^3 + 40\omega_3cs^4\omega_2^3 - 20\omega_3cs^2\omega_1^3 + 552v_2^2\omega_3cs^2\omega_2^3 - 16cs^4\omega_1^2\omega_2^2 - 16\omega_3cs^2\omega_1\omega_2^2 - 308v_2^2\omega_3\omega_1^2\omega_2^3 + 174v_2^2\omega_3\omega_1^3\omega_2 + 8cs^4\omega_1^3\omega_2 + 24v_2^2cs^2\omega_1\omega_2^3 + 408v_2^2\omega_3\omega_1^2\omega_2^2 + 4\omega_3\omega_1^3 + 96\omega_3cs^2\omega_1\omega_2^3 + 42v_2^2\omega_3\omega_1^3\omega_2^3 + 336v_2^2\omega_3cs^2\omega_1\omega_2^3 - 288v_2^2\omega_3\omega_2^3 - 168v_2^2\omega_3\omega_1^2\omega_2 + 16cs^2\omega_1^2\omega_2^2 - 28\omega_3\omega_1\omega_2^3 + 8\omega_3cs^4\omega_1\omega_2^3 + 552v_2^4\omega_3\omega_1\omega_2^2 - 8cs^2\omega_1^3\omega_2 - 154v_2^2\omega_3\omega_1^3\omega_2^2 - 1008v_2^2\omega_3cs^2\omega_1\omega_2^3 - 1068v_2^4\omega_3\omega_1\omega_2^3 + 8\omega_3\omega_1\omega_2^2 - 68\omega_3cs^4\omega_1\omega_2^3 - 8cs^2\omega_1\omega_2^3 + 6\omega_3cs^2\omega_1^3\omega_2^3 - 16\omega_3cs^2\omega_1^2\omega_2 + 504v_2^2\omega_3cs^2\omega_1^2\omega_2^3 - 360v_2^2\omega_3cs^2\omega_1^3\omega_2 + 16\omega_3\omega_2^3 + 620v_2^4\omega_3\omega_1^2\omega_2^3 - 312v_2^4\omega_3\omega_1^3\omega_2 - 32\omega_3cs^4\omega_1^3\omega_2 + 28\omega_3cs^4\omega_1^2\omega_2^3 - 16\omega_3\omega_1^2\omega_2^2 + 144v_2^2\omega_3cs^2\omega_1^3 - 576v_2^2\omega_3cs^2\omega_1^2\omega_2^2 - 56\omega_3cs^2\omega_2^3 + 16\omega_3cs^4\omega_2^3 + 96v_2^4\omega_3\omega_2^3 - 22\omega_3cs^2\omega_1^2\omega_2^2 - 8\omega_3cs^4\omega_1^2\omega_2^2 + 16\omega_3\omega_1^2\omega_2^3 - 10\omega_3\omega_1^3\omega_2 - 888v_2^4\omega_3\omega_1^2\omega_2^2 + 8\omega_3cs^4\omega_1^2\omega_2 + 8\omega_3\omega_1^3\omega_2^2 + 8cs^4\omega_1\omega_2^3 - 3\omega_3cs^4\omega_1^3\omega_2^3 - 87v_2^4\omega_3\omega_1^3\omega_2^3 + 24v_2^2cs^2\omega_1^3\omega_2 + 336v_2^4\omega_3\omega_1^2\omega_2 - 240v_2^2\omega_3\omega_1\omega_2^2 - 54v_2^2\omega_3cs^2\omega_1^3\omega_2^3 + 264v_2^2\omega_3cs^2\omega_1^2\omega_2 - 44\omega_3cs^2\omega_1^2\omega_2^3 + 42\omega_3cs^2\omega_1^3\omega_2 - 48v_2^2cs^2\omega_1^2\omega_2^2 + 310v_2^2\omega_3\omega_1^3\omega_2^2 - 3\omega_3\omega_1^3\omega_2^3 + 14\omega_3cs^4\omega_1^3\omega_2^2 - 60v_2^2\omega_3\omega_1^3 + 8\omega_3\omega_1^2\omega_2^3 + 24\omega_3cs^2\omega_1^2\omega_2^2 + 552v_2^2\omega_3\omega_1\omega_2^3 + 252v_2^2\omega_3cs^2\omega_1^3\omega_2^3)\frac{\rho}{36\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\text{D}^3_x \text{D}_z\rho}$ at $\frac{\partial^4\rho}{\partial x_1^3\partial x_3}$:

$C^{(2),\text{SRT}}_{\text{D}^3_x \text{D}_z\rho} = 0$

$C^{(2),\text{MRT1}}_{\text{D}^3_x \text{D}_z\rho} = (2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_5 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 - 2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_9\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5 - 2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 + 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8cs^2\omega_5^2 - 12\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8cs^2\omega_5^2 - 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 12\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 4v_1^2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8cs^2\omega_5^2 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 + 8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6\omega_{13}cs^2\omega_5^2 + 12\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2 + 12\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 + 24\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 + 4v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 6\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9^3\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_9\omega_{12}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 6\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 6\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 12\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 + 4\omega_9^3\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 12\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8cs^2\omega_5 - 12\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + 2v_1^2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}cs^2\omega_5^2 - 3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 + 4\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8cs^2\omega_5 + 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 + 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 3\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 - 24\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 + 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_9^2\omega_{12}\omega_7\omega_{14}\omega_8\omega_5^2 - 8v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5 + 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 12\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}cs^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8cs^2\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7cs^2\omega_5^2 - 2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 9\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 12\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}cs^2\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 4v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8cs^2\omega_5 - 4v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 3v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_5^2 + 12\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}cs^2\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7cs^2\omega_5 - 4v_1^2\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 - 6\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8cs^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - 4v_1^2\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 9\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 8v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14})\frac{v_1v_2v_3}{4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2}$

$C^{(2),\text{MRT2}}_{\text{D}^3_x \text{D}_z\rho} = (-12\omega_9cs^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_5 - $

$$4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 -$$
$$2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 +$$
$$8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 - 12\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 12\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 -$$
$$24\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9 cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 2v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 6\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 12\omega_9 cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 +$$
$$9\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2 - 6\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 -$$
$$3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 -$$
$$8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9 cs^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 -$$
$$12\omega_9^2 cs^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 3\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 12 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$$
$$4v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 - 12\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 +$$
$$2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 12\omega_9 cs^2\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 12\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 - 6\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 +$$
$$4v_1^2\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 - 8v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5 - 12\omega_9^2 cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 +$$
$$4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 6\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 9\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_9^2 cs^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 6\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 - 12\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2 +$$
$$4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 4v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + 12\omega_9 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_9^2 cs^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 + 3v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 + 12\omega_9^2 cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 24\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 12\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 -$$
$$4v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5 + 12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5 - 6 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$$
$$4v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 8v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2)\dfrac{v_1 v_2 v_3}{4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2}$$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x^3\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x^3\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x^3\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x^3\mathrm{D}_z\rho} = (3cs^2\omega_1 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\dfrac{v_1 v_2 v_3}{12\omega_1\omega_2}$

coefficient $C^{(2)}_{\mathrm{D}_x^3\mathrm{D}_z v_1}$ **at** $\dfrac{\partial^4 v_1}{\partial x_1^3 \partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x^3\mathrm{D}_z v_1} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x^3\mathrm{D}_z v_1} = (2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 +$
$12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 - 2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8 cs^2\omega_5^2 - 4\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8 cs^2\omega_5^2 -$
$12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 - 12v_1^2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8 cs^2\omega_5^2 -$
$2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 + 8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13} cs^2\omega_5^2 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2 +$
$4\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5 + 8\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5 + 12v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14} cs^2\omega_5^2 + 2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 -$
$4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 - 9v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 -$
$2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 - 6v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8 cs^2\omega_5 +$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8 cs^2\omega_5 -$
$4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 + 6v_1^2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5 - 4\omega_9^2\omega_{12}\omega_{14}\omega_8 cs^2\omega_5^2 -$
$3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 + 4\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8 cs^2\omega_5 +$
$12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 3\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 6v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 -$
$12v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 - 8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5 + 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 -$
$6v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 24v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5 +$
$12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14} cs^2\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14} cs^2\omega_5 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 cs^2\omega_5^2 -$
$2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 3\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14} cs^2\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13} cs^2\omega_5^2 +$
$4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 12v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8 cs^2\omega_5 - 12v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$
$4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 9v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 +$
$4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14} cs^2\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7 cs^2\omega_5 - 12v_1^2\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 - 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8 cs^2\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 +$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$
$3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 - 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 24v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2)\dfrac{\rho v_2 v_3}{4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x^3\mathrm{D}_z v_1} = (-4\omega_9 cs^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5 -$
$12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 -$

$2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 +$
$8\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 -$
$8\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 9v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 -$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 6v_1^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 2\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 +$
$3\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}\omega_7\omega_{14}\omega_9\omega_5 -$
$4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2 - 2\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_9\omega_5^2 -$
$3\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 -$
$8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9cs^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}^2\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 -$
$4\omega_9^2cs^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 3\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 6v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$
$12v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5 -$
$6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4\omega_9cs^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 +$
$12v_1^2\omega_9^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_5^2 - 24v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_5 - 4\omega_9^2cs^2\omega_{12}\omega_7\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 2\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 3\omega_9^2cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 -$
$4\omega_9^2cs^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_8\omega_5^2 - 2\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 - 4\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2 +$
$4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 12v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{14}\omega_8\omega_5^2 + 4\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$
$2\omega_9^2cs^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 12v_1^2\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5^2 + 4\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_5^2 + 9v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$
$6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_{14}\omega_8\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5^2 + 4\omega_9^2cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}^2\omega_{14}\omega_8\omega_5^2 +$
$4\omega_9^2cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 8\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 4\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 -$
$12v_1^2\omega_9\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_5 - 2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$
$12v_1^2\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_5 + 24v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_8\omega_5^2 + 4\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_5^2) \frac{\rho v_2 v_3}{4\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2}$

$C^{(2),\text{CLBM1}}_{\text{D}_x^3\text{D}_z v_1} = 0$

$C^{(2),\text{CLBM2}}_{\text{D}_x^3\text{D}_z v_1} = 0$

$C^{(2),\text{CuLBM1}}_{\text{D}_x^3\text{D}_z v_1} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}_x^3\text{D}_z v_1} = (3cs^2\omega_1 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{\rho v_2 v_3}{36\omega_1\omega_2}$

coefficient $C^{(2)}_{\text{D}_x^3\text{D}_z v_2}$ at $\frac{\partial^4 v_2}{\partial x_1^3 \partial x_3}$:

$C^{(2),\text{SRT}}_{\text{D}_x^3\text{D}_z v_2} = 0$

$C^{(2),\text{MRT1}}_{\text{D}_x^3\text{D}_z v_2} = (2\omega_{12}^2\omega_{14}\omega_8cs^2\omega_5^3 - 4\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + v_1^2\omega_{12}^2\omega_7\omega_8^2\omega_5^3 - v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}^2\omega_7\omega_8cs^2\omega_5^2 + 7\omega_{12}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{12}^2\omega_7^2\omega_8cs^2\omega_5^3 - 5\omega_{12}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 2v_1^2\omega_{12}^2\omega_7\omega_8^2\omega_5^2 + v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 + 2v_1^2\omega_{12}\omega_7\omega_8\omega_5^3 + \omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + \omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 -$
$2\omega_{12}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 4\omega_{12}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 + 2\omega_{12}^2\omega_7^2\omega_8^2\omega_5^2 - \omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_{12}^2\omega_7\omega_8\omega_5^2 - 2v_1^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{12}^2\omega_7\omega_{14}cs^2\omega_5^2 +$
$13\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 - 8\omega_{12}^2\omega_7\omega_{14}\omega_8^2cs^2 + \omega_{12}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^3 + \omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 - 6\omega_{12}^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + v_1^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^3 - \omega_{12}^2\omega_7^2\omega_8^2\omega_5^3 -$
$\omega_{12}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^3 + 2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5 - \omega_{12}^2\omega_7\omega_8cs^2\omega_5^3 - 2\omega_{12}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{12}^2\omega_7\omega_{14}cs^2\omega_5^2 + v_1^2\omega_7\omega_{14}\omega_8^2\omega_5^3 +$
$2\omega_{12}^2\omega_7\omega_8\omega_5^3 + v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_{12}^2\omega_7\omega_{14}\omega_8cs^2\omega_5 + 2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 - v_1^2\omega_{12}\omega_7^2\omega_8^2\omega_5^2 - 2v_1^2\omega_{12}\omega_7\omega_{14}\omega_8\omega_5^2 + \omega_{12}^2\omega_7\omega_8^2\omega_5^3 -$
$2v_1^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{12}^2\omega_7\omega_8^2\omega_5^2 - \omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2v_1^2\omega_{12}\omega_7\omega_8^2\omega_5^2 - v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 - \omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{12}^2\omega_7\omega_8cs^2\omega_5^3 +$
$5\omega_{12}^2\omega_7^2\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{12}^2\omega_7\omega_8^2cs^2\omega_5^2 - v_1^2\omega_{12}^2\omega_7\omega_8^2\omega_5^3 + 2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 2v_1^2\omega_{12}^2\omega_7\omega_8\omega_5^2 + 4v_1^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 + \omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 -$
$2\omega_{12}\omega_7^2\omega_8^2\omega_5^2 - \omega_{12}\omega_7^2\omega_8cs^2\omega_5^3 + 4\omega_{12}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^3 - 2\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{12}^2\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_7^2\omega_{14}\omega_8^3\omega_5^2 - v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 -$
$2v_1^2\omega_{12}^2\omega_7\omega_8\omega_5^3 + 2\omega_{12}^2\omega_7\omega_{14}cs^2\omega_5^3 + \omega_{12}^2\omega_7\omega_8cs^2\omega_5^2 - 11\omega_{12}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + \omega_7^2\omega_{14}\omega_8cs^2\omega_5^3 + \omega_{12}\omega_7^2\omega_8^2\omega_5^2 - 7\omega_{12}^2\omega_7\omega_{14}\omega_8cs^2\omega_5^3 +$
$2\omega_{12}\omega_7^2\omega_8cs^2\omega_5^2 - \omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3) \frac{\rho v_1 v_3}{2\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3}$

$C^{(2),\text{MRT2}}_{\text{D}_x^3\text{D}_z v_2} =$
$(-4\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + v_1^2\omega_{12}^2\omega_7\omega_8^2\omega_5^3 - v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2cs^2\omega_{12}^2\omega_7\omega_8^2\omega_5^2 - 2cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^3 - 7cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 -$
$cs^2\omega_{12}^2\omega_7\omega_8^2\omega_5^3 + 2cs^2\omega_{12}^2\omega_{14}\omega_8\omega_5^3 - 2v_1^2\omega_{12}^2\omega_7\omega_8^2\omega_5^2 + v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 + 2v_1^2\omega_{12}\omega_7\omega_8\omega_5^3 + \omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + \omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$4cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 2cs^2\omega_{12}^2\omega_7\omega_{14}\omega_5^2 - 2cs^2\omega_{12}^2\omega_7\omega_8\omega_5^3 + 13cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_{12}^2\omega_7^2\omega_8^2\omega_5^2 - \omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_{12}^2\omega_7\omega_8\omega_5^3 -$
$cs^2\omega_{12}\omega_7^2\omega_8^2\omega_5^3 - 2v_1^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 5cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + cs^2\omega_7^2\omega_{14}\omega_8^3\omega_5^2 + \omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 + v_1^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^3 +$
$2cs^2\omega_{12}\omega_7^2\omega_8^2\omega_5^2 - 8cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2 - \omega_{12}^2\omega_7\omega_8^2\omega_5^3 + 2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2cs^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 +$
$5cs^2\omega_{12}^2\omega_7^2\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_{12}^2\omega_7\omega_8\omega_5^3 + v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 - v_1^2\omega_{12}\omega_7^2\omega_8^2\omega_5^2 - 2v_1^2\omega_{12}\omega_7\omega_{14}\omega_8\omega_5^2 + \omega_{12}^2\omega_7\omega_8^2\omega_5^3 -$
$2v_1^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 6cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_{12}^2\omega_7\omega_8^2\omega_5^2 - \omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 11cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_{12}\omega_7\omega_8^2\omega_5^2 - v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 -$
$\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 - v_1^2\omega_{12}^2\omega_7\omega_8^2\omega_5^3 + cs^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 2v_1^2\omega_{12}^2\omega_7\omega_8\omega_5^2 + cs^2\omega_{12}^2\omega_7\omega_8^2\omega_5^3 + 4v_1^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2cs^2\omega_{12}^2\omega_7\omega_{14}\omega_5^3 +$
$7cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + \omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 6cs^2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_{12}\omega_7^2\omega_8^2\omega_5^2 - \omega_7^2\omega_{14}\omega_8^3\omega_5^2 - v_1^2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2v_1^2\omega_{12}\omega_7^2\omega_8^2\omega_5^3 -$
$2cs^2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2cs^2\omega_{12}^2\omega_{14}\omega_8^2\omega_5^2 + \omega_{12}\omega_7^2\omega_8^2\omega_5^2 + 2cs^2\omega_{12}^2\omega_7\omega_8\omega_5^3 - \omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 - v_1^2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 2cs^2\omega_{12}^2\omega_7\omega_8^2\omega_5^2) \frac{\rho v_1 v_3}{2\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3}$

$C^{(2),\text{CLBM1}}_{\text{D}_x^3\text{D}_z v_2} = 0$

$$C^{(2),\text{CLBM2}}_{\text{D}^3_x\text{D}_z v_2} = 0$$

$$C^{(2),\text{CuLBM1}}_{\text{D}^3_x\text{D}_z v_2} = 0$$

$$C^{(2),\text{CuLBM2}}_{\text{D}^3_x\text{D}_z v_2} = (-12\omega_3\omega_4 - 36cs^2\omega_4^2 - 18\omega_3cs^2\omega_4\omega_1 + 6v_3^2\omega_3\omega_4^2 + 36\omega_3cs^2\omega_4 + 18cs^2\omega_4^2\omega_1 + 18\omega_3cs^2\omega_4^2 + 12v_1^2\omega_3\omega_4 - 2v_3^2\omega_3\omega_4^2\omega_1 -$$
$$6v_1^2\omega_4^2\omega_3 - 6v_3^2\omega_4^2 + 2v_3^2\omega_3\omega_4\omega_1 + 6\omega_3\omega_4\omega_1 - 6\omega_3\omega_4^2 + 6\omega_3^2cs^2\omega_4\omega_1 - 6v_3^2\omega_3\omega_4 + 3v_1^2\omega_4^2\omega_1 + 2\omega_3\omega_4^2\omega_1 + 12\omega_4^2 + 3v_3^2\omega_4^2\omega_1 - 2\omega_3^2\omega_4\omega_1 +$$
$$6v_3^2\omega_3^2 - 6v_1^2\omega_3\omega_4\omega_1 - 6\omega_4^2 + 3v_1^2\omega_3^2\omega_1 - 3v_3^2\omega_3^2\omega_1 + 6\omega_3^2\omega_4 - 18\omega_3^2cs^2\omega_4 - 6v_1^2\omega_4^2 - 6\omega_3cs^2\omega_4^2\omega_1)\frac{\rho v_1 v_3}{8\omega_3^2\omega_4^2\omega_1}$$

coefficient $C^{(2)}_{\text{D}^3_x\text{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3}$:

$$C^{(2),\text{SRT}}_{\text{D}^3_x\text{D}_z v_3} = (2 + v_1^2\omega + 3cs^2\omega - 2v_1^2 - 6cs^2 - \omega)\frac{\rho v_1 v_2}{12\omega}$$

$$C^{(2),\text{MRT1}}_{\text{D}^3_x\text{D}_z v_3} = (12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 + 54\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$12\omega_9^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 36\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 - 24\omega_9^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 6v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2 +$$
$$6\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 42\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 - 42\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 +$$
$$6\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 36\omega_9^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2cs^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 -$$
$$36\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 36\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}cs^2\omega_5 + 12v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 -$$
$$9\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 + 12v_1^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 30\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2\omega_5^2 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 -$$
$$12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 + 9\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 + 18\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 24\omega_9^2\omega_{12}^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 - 12v_1^2\omega_9\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 -$$
$$4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 24\omega_9^2\omega_{12}^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$12\omega_9^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 6v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 18\omega_9^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2cs^2\omega_5 +$$
$$24\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2 + 54\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 - 54\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2\omega_5 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_9\omega_5^2 +$$
$$v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8^2cs^2\omega_5^2 -$$
$$12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 12\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 18\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 +$$
$$12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5 - 9v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8cs^2\omega_5^2 - 18\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 -$$
$$9\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 - 36\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 - 24\omega_9\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2 + 12\omega_9^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + 12\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 -$$
$$12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2 - 3v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8cs^2\omega_5 +$$
$$12\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2cs^2\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}cs^2\omega_5^2 + 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 6v_1\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$6\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8cs^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5 - 18v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 54\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^2 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2cs^2\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}cs^2\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 - 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$4v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 +$$
$$24\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 12\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8cs^2\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 - 12v_1^2\omega_9\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5 - 24\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5 +$$
$$3\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2\omega_5 + 18v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8cs^2\omega_5^2 +$$
$$6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2cs^2\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5 - 6\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5)\frac{\rho v_1 v_2}{12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{MRT2}}_{\text{D}^3_x\text{D}_z v_3} = (-12\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 42\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 24\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 -$$
$$12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5 - 12\omega_9cs^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2 +$$
$$12\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8\omega_5^2 - 36\omega_9^2cs^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 + 6v_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 36\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 54\omega_9cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 -$$
$$6\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2 + 12v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 - 12\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 + 12v_1^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 -$$
$$6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 + 9\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$18\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 -$$
$$24\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 4\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 24\omega_9cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 + 6v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 +$$
$$12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 6v_1^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_5 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 +$$
$$12\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 54\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 18\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 -$$
$$12\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 + 12\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 24\omega_9^2cs^2\omega_{12}^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 9v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$12\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 + 6\omega_9cs^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5 + 12\omega_9\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$6\omega_9cs^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 + 3\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 42\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 6\omega_9cs^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 -$$
$$12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 + 12\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5 -$$
$$12\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5 - 3v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 36cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 30\omega_9^2cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_9^2cs^2\omega_{12}^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5 + 24\omega_9^2cs^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$12\omega_9^2cs^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 6\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 - 36\omega_9^2cs^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 -$$
$$9\omega_9^2cs^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5 -$$
$$18v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 + 54\omega_9^2cs^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 -$$
$$12\omega_9^2cs^2\omega_{12}^2\omega_6\omega_{13}\omega_{14}\omega_8^2\omega_5^2 + 4v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 +$$

$$12\omega_9^2 cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + 12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 12\omega_9^2 cs^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - \omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2 -$$
$$12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_7\omega_{14}\omega_8^2\omega_5^2 + 18\omega_9^2 cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_8\omega_5 - 9\omega_9^2 cs^2\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_9^2 cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2 + 18v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 36\omega_9 cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 54\omega_9^2 cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 +$$
$$24\omega_9^2 cs^2\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 18 cs^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 6v_1^2\omega_9^2\omega_{12}^2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 12\omega_9^2 cs^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5 -$$
$$12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2 - 12\omega_9^2 cs^2\omega_{12}^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 6\omega_9\omega_{12}^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2)\frac{\rho v_1 v_2}{12\omega_9^2\omega_{12}^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_x^3\text{D}_z v_3} = (3\omega_9 + v_1^2\omega_{13} + 3\omega_9 cs^2\omega_{13} - \omega_{13} - 3v_1^2\omega_9 - \omega_9\omega_{13} - 9\omega_9 cs^2 + v_1^2\omega_9\omega_{13} + 3cs^2\omega_{13})\frac{\rho v_1 v_2}{12\omega_9\omega_{13}}$$

$$C^{(2),\text{CLBM2}}_{\text{D}_x^3\text{D}_z v_3} = (3\omega_{13} cs^2 + 3\omega_9 + v_1^2\omega_{13} - \omega_{13} - 3v_1^2\omega_9 - 9\omega_9 cs^2 + 3\omega_9\omega_{13} cs^2 - \omega_9\omega_{13} + v_1^2\omega_9\omega_{13})\frac{\rho v_1 v_2}{12\omega_9\omega_{13}}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}_x^3\text{D}_z v_3} = (-\omega_{12} + 3cs^2\omega_{12}\omega_4 - 3v_1^2\omega_4 + 3\omega_4 - \omega_{12}\omega_4 - 9cs^2\omega_4 + 3cs^2\omega_{12} + v_1^2\omega_{12}\omega_4 + v_1^2\omega_{12})\frac{\rho v_1 v_2}{12\omega_{12}\omega_4}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}_x^3\text{D}_z v_3} = (9\omega_3\omega_1\omega_2 - 18v_3^2\omega_3\omega_4\omega_2 + 12\omega_3 cs^2\omega_4\omega_1 - 9v_1^2\omega_4\omega_1\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 + 6v_1^2\omega_3\omega_4\omega_1\omega_2 - 27\omega_3 cs^2\omega_1\omega_2 + 4v_1^2\omega_3\omega_4\omega_2 -$$
$$8\omega_3\omega_4\omega_1 - 27cs^2\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 + 6\omega_3 cs^2\omega_4\omega_2 + 18v_3^2\omega_3\omega_4\omega_1 - 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 18\omega_3 cs^2\omega_4\omega_1\omega_2)\frac{\rho v_1 v_2}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(2)}_{\text{D}_x^2\text{D}_y\text{D}_z\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1^2\partial x_2\partial x_3}$:

$$C^{(2),\text{SRT}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = 0$$

$$C^{(2),\text{MRT1}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} =$$
$$(-2\omega_7\omega_8\omega_5^3 - \omega_7^2\omega_8^2\omega_5^2 + \omega_7\omega_5^3 + 3\omega_7^2\omega_8^2\omega_5 - \omega_8^2\omega_5^2 - \omega_7\omega_8^2\omega_5 + \omega_8\omega_5^3 + \omega_7^2\omega_5^2 - \omega_7^2\omega_5^3 + \omega_7^2\omega_8\omega_5 - 2\omega_7^2\omega_8^2 - 2\omega_7^2\omega_8\omega_5^2 + 2\omega_7\omega_8\omega_5^2 + \omega_7^2\omega_8\omega_5^2)\frac{2v_3 cs^4}{\omega_7^2\omega_8^2\omega_5^3}$$

$$C^{(2),\text{MRT2}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} =$$
$$(-2\omega_7\omega_8\omega_5^3 - \omega_7^2\omega_8^2\omega_5^2 + \omega_7\omega_5^3 + 3\omega_7^2\omega_8^2\omega_5 - \omega_8^2\omega_5^2 - \omega_7\omega_8^2\omega_5 + \omega_8\omega_5^3 + \omega_7^2\omega_5^2 - \omega_7^2\omega_5^3 + \omega_7^2\omega_8\omega_5 - 2\omega_7^2\omega_8^2 - 2\omega_7^2\omega_8\omega_5^2 + 2\omega_7\omega_8\omega_5^2 + \omega_7^2\omega_8\omega_5^2)\frac{2cs^4 v_3}{\omega_7^2\omega_8^2\omega_5^3}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = 0$$

$$C^{(2),\text{CLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = 0$$

$$C^{(2),\text{CuLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = 0$$

$$C^{(2),\text{CuLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = (-24\omega_3 cs^4\omega_4^2\omega_1^3\omega_2 + 324\omega_3 cs^4\omega_4^2\omega_1^2\omega_2^3 + 324\omega_3 cs^4\omega_1^2\omega_2^3 + 8v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 + 72v_1^2 v_3^2\omega_3^2\omega_4^2\omega_2^3 +$$
$$32v_3^2\omega_3^2 cs^2\omega_4^2\omega_2^3 - 72cs^4\omega_4^2\omega_1^3\omega_2 + 192\omega_3 cs^4\omega_4^2\omega_1^2\omega_2^2 + 54\omega_3^2 cs^2\omega_1^3\omega_2^3 + 27v_3^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2 - 24v_3 cs^2\omega_4^2\omega_1^3\omega_2 - 96v_1^2\omega_3^2\omega_4^2\omega_2^3 +$$
$$162cs^4\omega_4^2\omega_1^3\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_3^3 + 192\omega_3 cs^4\omega_4^2\omega_1^2\omega_2^2 - 27\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^3 + 54v_3^2 cs^2\omega_4^2\omega_1^3\omega_3^3 - 432v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 - 168\omega_3^2 cs^4\omega_4^2\omega_1^3\omega_2 -$$
$$30\omega_3^2 cs^4\omega_4^2\omega_1^2\omega_2^3 + 48v_1^4\omega_3^2\omega_4^2\omega_1^3 - 104\omega_3^2 cs^2\omega_4^2\omega_1^3 - 108\omega_3^2 cs^2\omega_4^2\omega_1^3 + 30\omega_3^2 cs^4\omega_4^2\omega_1^3\omega_2^2 - 56v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 - 96v_1^2 v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 +$$
$$864v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^2 - 108v_3^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_3^3 + 96v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 432v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^3 - 36v_1^4\omega_3^2\omega_4^2\omega_1\omega_3^3 + 64\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 - 56v_3^2\omega_3 cs^2\omega_4^2\omega_1\omega_2^3 +$$
$$8v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 162\omega_3^2 cs^4\omega_4^3\omega_1\omega_3^3 - 81\omega_3 cs^4\omega_4^2\omega_1^3\omega_3^3 + 96v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 8v_3^2\omega_3^2\omega_4^2\omega_2^3 - 72\omega_3^2 cs^4\omega_4^2\omega_1^2\omega_2 + 56\omega_3 cs^2\omega_4^2\omega_1\omega_2^3 -$$
$$432v_1^2\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 84v_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 60v_1^2 v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 + 108\omega_3^2 cs^2\omega_4\omega_1^2\omega_3^3 + 128\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 - 16v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 -$$
$$252cs^4\omega_4^2\omega_1^3\omega_2^2 + 144\omega_3^2 cs^4\omega_4^2\omega_1^3 - 54v_3^2\omega_3^2 cs^2\omega_1^3\omega_3^3 - 192v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 24cs^2\omega_4^2\omega_1^3\omega_2^2 - 432v_1^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 + 8\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 -$$
$$10v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 - 40v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 60v_1^2 v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 108\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^3 - 176\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^2 + 8v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 72v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^2 +$$
$$64v_3^2\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^2 + 24v_1^4\omega_3^2\omega_4^2\omega_2^3 - 104\omega_3^2 cs^2\omega_4^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2 + 81\omega_3^2 cs^4\omega_4\omega_1^3\omega_2 - 64\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^2 + 32v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^3 +$$
$$48v_1^2 v_3^2\omega_3^2\omega_4^2\omega_1 + 32v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^2 + 120v_1^2 v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 432v_1^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 + 8\omega_3^2\omega_4^2\omega_2^3 - 54cs^2\omega_4^2\omega_1^3\omega_3^3 + 96v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 -$$
$$96v_1^2\omega_3^2\omega_4^2\omega_1^3 + 108v_3^2\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^3 + 112\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 36v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 10\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^2 - 8v_3^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 -$$
$$8\omega_3^2\omega_4^2\omega_1\omega_2 - 8v_3^2\omega_3^2\omega_4^2\omega_1^3 - 10\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 - 24\omega_3^2 cs^4\omega_4^2\omega_2^3 + 144\omega_3^2 cs^4\omega_4^2\omega_2^3 + 27\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^3 - 24v_1^2 v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 -$$
$$8v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 + 108v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 - 72v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 168\omega_3 cs^4\omega_4^2\omega_1\omega_2^3 + 80\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 - 27v_3^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_3^3 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2^2 +$$
$$84cs^2\omega_4^2\omega_1^3\omega_2^3 + 96v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 324\omega_3 cs^4\omega_4\omega_1^2\omega_2^3 + 10v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 - 216\omega_3^2 cs^4\omega_4^2\omega_1\omega_2^3 + 432v_1^2\omega_3^2 cs^2\omega_4^2\omega_2^3)\frac{v_3}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(2)}_{\text{D}_x^2\text{D}_y\text{D}_z v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3}$:

$$C^{(2),\text{SRT}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = 0$$

$$C^{(2),\text{MRT1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = (-4\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + \omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - \omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{12}^2\omega_7^2\omega_8^2\omega_5^2 + 5\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{12}^2\omega_7\omega_8\omega_5^3 + 2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$\omega_{12}^2\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 + \omega_{12}^2\omega_7\omega_{14}\omega_5^3 - \omega_{12}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5 + \omega_{12}^2\omega_7^2\omega_{14}\omega_5^3 + 2\omega_{12}^2\omega_7\omega_8^2\omega_5^3 + \omega_{12}^2\omega_{14}\omega_8\omega_5^3 +$$
$$2\omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^2 + \omega_{12}^2\omega_7\omega_8^2\omega_5^3 + 3\omega_{12}^2\omega_7^2\omega_{14}\omega_8\omega_5 - 2\omega_{12}^2\omega_7\omega_8^2\omega_5^2 - \omega_{12}^2\omega_7\omega_{14}\omega_5^3 + 2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - \omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 -$$

$4\omega_{12}^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - 4\omega_{12}^2\omega_7^2\omega_{14}\omega_8 - 2\omega_{12}\omega_7^2\omega_8^2\omega_5 - 3\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5 - \omega_7^2\omega_{14}\omega_8^2\omega_5^3 + \omega_{12}\omega_7^2\omega_8^2\omega_5^3 + \omega_{12}^2\omega_7^2\omega_{14}\omega_8\omega_5^3)\frac{\rho v_1 v_3 cs^2}{\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3}$

$C^{(2),\text{MRT2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = (-4\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + \omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - \omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{12}^2\omega_7^2\omega_8^2\omega_5^2 + 5\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{12}^2\omega_7\omega_8^2\omega_5 + 2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5 - \omega_{12}^2\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{12}^2\omega_7\omega_{14}\omega_8\omega_5^3 + \omega_{12}^2\omega_7^2\omega_{14}\omega_5^3 - \omega_{12}^2\omega_7^2\omega_8^3\omega_5^3 + 2\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + \omega_{12}^2\omega_7^2\omega_{14}\omega_5^3 + 2\omega_{12}^2\omega_7^2\omega_8^2\omega_5^3 + \omega_{12}^2\omega_{14}\omega_8^2\omega_5^3 + 2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + \omega_{12}^2\omega_7^2\omega_8^3\omega_5^3 + 3\omega_{12}^2\omega_7^2\omega_{14}\omega_8\omega_5 - 2\omega_{12}^2\omega_7^2\omega_8^2\omega_5^2 - \omega_{12}^2\omega_7^2\omega_{14}\omega_5^3 + 2\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - \omega_{12}\omega_7\omega_{14}\omega_8^2\omega_5^3 + 2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 -$
$4\omega_{12}^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - 4\omega_{12}^2\omega_7^2\omega_{14}\omega_8 - 2\omega_{12}\omega_7^2\omega_8^2\omega_5 - 3\omega_{12}^2\omega_7\omega_{14}\omega_8^2\omega_5 - \omega_7^2\omega_{14}\omega_8^2\omega_5^3 + \omega_{12}\omega_7^2\omega_8^2\omega_5^3 + \omega_{12}^2\omega_7^2\omega_{14}\omega_8\omega_5^3)\frac{\rho v_1 cs^2 v_3}{\omega_{12}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3}$

$C^{(2),\text{CLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = 0$

$C^{(2),\text{CLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = 0$

$C^{(2),\text{CuLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = (-13v_1^2\omega_3\omega_1^3\omega_2 + 28\omega_3 cs^2\omega_1^3 + 2\omega_1\omega_2^3 - 24\omega_3 cs^2\omega_1\omega_2^2 - 4v_3^2\omega_3\omega_1^2\omega_2 + 26v_1^2\omega_3\omega_1^2\omega_2^2 - 12\omega_3\omega_1^3 - 24\omega_3 cs^2\omega_1^3 +$
$12cs^2\omega_1^3\omega_2^2 + 6v_3^2\omega_3\omega_1^2\omega_2^2 + 10\omega_3\omega_1\omega_2^3 + 4v_3^2\omega_3\omega_1^3 - 22v_1^2\omega_3\omega_1^2\omega_2 - 6cs^2\omega_1^3\omega_2 + 16v_1^2\omega_3\omega_1^3 - 2v_3^2\omega_1\omega_2^3 + 8\omega_3\omega_1\omega_2^3 - 3v_3^2\omega_3\omega_1^3\omega_2 -$
$6cs^2\omega_1\omega_2^3 - 30\omega_3 cs^2\omega_1^2\omega_2 - 2v_3^2\omega_3\omega_1^3\omega_2 - 10\omega_3\omega_2^3 - 3v_3^2\omega_3\omega_1\omega_2^3 - 20\omega_3\omega_1^2\omega_2^2 + 26\omega_3 cs^2\omega_2^3 + 4v_3^2\omega_1^2\omega_2 - 4v_3^2\omega_3\omega_1\omega_2 + 10\omega_3\omega_1^3\omega_2 - 4\omega_1^2\omega_2^2 +$
$10v_1^2\omega_3\omega_2^3 - 4v_1^2\omega_3\omega_1\omega_2^2 - 24\omega_3 cs^2\omega_1^3\omega_2 - 13v_1^2\omega_3\omega_1\omega_2^3 + 2\omega_1^3\omega_2 + 14\omega_3\omega_1^2\omega_2 + 48\omega_3 cs^2\omega_1^2\omega_2^2 + 4v_3^2\omega_3\omega_2^3)\frac{\rho v_1 v_3}{6\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\text{D}_x^2\text{D}_y\text{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3}$:

$C^{(2),\text{SRT}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = 0$

$C^{(2),\text{MRT1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = (-8\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 + 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 -$
$8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 +$
$4\omega_{15}\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5^3 + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 +$
$4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 -$
$4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^3 - 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$
$2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3 - 10\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 -$
$2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_5^3 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 -$
$5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 +$
$4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_5^3 + 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}\omega_7^2\omega_8^2\omega_5^3 -$
$4\omega_{15}^2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 -$
$4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5^3 +$
$12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5)\frac{\rho v_2 v_3 cs^2}{2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3}$

$C^{(2),\text{MRT2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = (-8\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2 + 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 -$
$8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 +$
$4\omega_{15}\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5^3 + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 4\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 +$
$4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 -$
$4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^3 - 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$
$2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3 - 10\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 -$
$2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_5^3 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 -$
$5\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5^2 +$
$4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^3 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3 + 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}\omega_7^2\omega_8^2\omega_5^3 -$
$4\omega_{15}^2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 8\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^3 + 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 -$
$4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{10}^2\omega_7\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5^3 +$
$12\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5)\frac{\rho cs^2 v_2 v_3}{2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3}$

$C^{(2),\text{CLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = 0$

$C^{(2),\text{CLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = 0$

$C^{(2),\text{CuLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = (-9\omega_3\omega_1\omega_2 - 2v_3^2\omega_3\omega_4\omega_2 + 6\omega_3 cs^2\omega_4\omega_1 - 9v_3^2\omega_4\omega_1\omega_2 + 27\omega_3 cs^2\omega_1\omega_2 - 2\omega_3\omega_4\omega_1 - 27cs^2\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 -$

$$6\omega_3 cs^2\omega_4\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 + 9v_3^2\omega_3\omega_1\omega_2 + 2\omega_3\omega_4\omega_2)\frac{\rho v_2 v_3}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3} = (-36 - 16\omega^2 - \omega^3 + 54\omega)\frac{\rho cs^4}{12\omega^3}$$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3} = (-12\omega_{15}\omega_{12}\omega_6^2\omega_{10}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{12}v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^3 - \omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 18\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 36\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{12}\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8\omega_5^3 - 24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{15}v_1^2\omega_6^3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 10\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 2\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^2 - 12\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^2 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 + 12\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 24\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5 + 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2 cs^2\omega_5^2 - 12\omega_{12}\omega_6^2\omega_{16}\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^2 - 12\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}\omega_6^3\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2 cs^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 - 6\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5 - 24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 48\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^3 + 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 12\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 12\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8 cs^2\omega_5^2 - 18\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 6\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 18\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 - 36\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^2 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 + 6\omega_{15}v_1^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3 - 48\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^2 - 24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 - 24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 6\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 + 18\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 30\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}v_1^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^3 - 18\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 6\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8 cs^2\omega_5^3 - 24\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8 cs^2\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5 + 24\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 36\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 + 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2\omega_5 - 12\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6^2\omega_7^3\omega_{14}\omega_8^2 cs^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8 cs^2\omega_5^2 - 12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8 cs^2\omega_5^2)\frac{\rho cs^2}{12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3} = (-12\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{12}v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^2 - 12\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{15}v_1^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 + 10\omega_{15}cs^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 36\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_6\omega_{16}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 6\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 - 24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{15}v_1^2\omega_6^3\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 18\omega_{15}cs^2\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}cs^2\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^2 - 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 + 12\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}cs^2\omega_{12}\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 6\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 12cs^2\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 6\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 - 6\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^3 - 24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 - 48\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 12cs^2\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 -

$$18\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_5^3 - 6\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - \omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^3\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8^3\omega_5^3 -$$
$$36\omega_{15}v_2^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 6v_1^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^3\omega_5^3 - 48\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8^3\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 - 24\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 6v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 -$$
$$6\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_5^2 +$$
$$24\omega_{15}v_1^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^2 +$$
$$18\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 30\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 -$$
$$12\omega_{15}v_1^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 - 18\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5^3 -$$
$$18\omega_{15}cs^2\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 6\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^3\omega_5^3 - 12cs^2\omega_{12}\omega_6^2\omega_{16}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - 6v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^2 + 24\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5 + 24\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{15}v_1^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 36\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^3 + 12cs^2\omega_{12}\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}\omega_{12}v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_{12}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}\omega_{12}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}cs^2\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{14}\omega_8\omega_5^3) \frac{\rho cs^2}{12\omega_{15}\omega_{12}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_{14}\omega_8^2\omega_5^3}$$

$C^{(2),CLBM1}_{D_x^2 D_y D_z v_3} = (-12\omega_{15}\omega_{12}\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_{14}\omega_8\omega_5^3 + 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 2\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^2 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 -$
$12\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 18\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{12}\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 -$
$\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_5^3 -$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_5^2 + 24\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_5^3 + 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 12\omega_{15}\omega_{12}\omega_6\omega_{10}\omega_7\omega_{14}\omega_8\omega_5^3 -$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^3 + 12\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}\omega_{12}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_7\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{14}\omega_5^3 - 18\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 24\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8 -$
$12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{14}\omega_8\omega_5^3 - 12\omega_{12}\omega_6\omega_{16}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8\omega_5^3 -$
$18\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^2 - 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 +$
$10\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_7^2\omega_{14}\omega_8\omega_5^3) \frac{\rho cs^4}{12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3}$

$C^{(2),CLBM2}_{D_x^2 D_y D_z v_3} = (-12\omega_{15}\omega_{12}\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_{14}\omega_8\omega_5^3 + 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 2\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^2 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 -$
$12\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 18\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{12}\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^2 -$
$\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_5^3 -$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_5^2 + 24\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_5^3 + 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 12\omega_{15}\omega_{12}\omega_6\omega_{10}\omega_7\omega_{14}\omega_8\omega_5^3 -$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^3 + 12\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^2 + 12\omega_{15}\omega_{12}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 12\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_7\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{14}\omega_5^3 - 18\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 +$
$12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^3 - 12\omega_{15}\omega_{12}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 - 24\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8 -$
$12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{14}\omega_8\omega_5^3 - 12\omega_{12}\omega_6\omega_{16}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 12\omega_{15}\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8\omega_5^3 -$
$18\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_5^2 - 6\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 +$
$10\omega_{15}\omega_{12}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5^3 + 12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_7^2\omega_{14}\omega_8\omega_5^3) \frac{\rho cs^4}{12\omega_{15}\omega_{12}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_{14}\omega_8\omega_5^3}$

$C^{(2),CuLBM1}_{D_x^2 D_y D_z v_3} = (12\omega_3\omega_{13}\omega_1\omega_2 + 12\omega_3^2\omega_1^2\omega_2 + 12\omega_3^2\omega_{13}\omega_1 - \omega_3^2\omega_{13}\omega_1^3\omega_2 - 12\omega_3\omega_1^3 - 6\omega_3^2\omega_{13}\omega_1^2 - 2\omega_3^2\omega_{13}\omega_1^2\omega_2 - 12\omega_3^2\omega_1^3\omega_2 - 2\omega_3^2\omega_{13}\omega_1^3 +$
$24\omega_3^2\omega_{13}\omega_1\omega_2 - 24\omega_3^2\omega_{13}\omega_2 - 6\omega_3\omega_{13}\omega_1^3 + 24\omega_3\omega_1^3\omega_2 + 12\omega_3^2\omega_1^3 - 12\omega_1^3\omega_2 + 12\omega_{13}\omega_1^3 - 12\omega_3\omega_1^2\omega_2 - 12\omega_3^2\omega_1^2 - 6\omega_3\omega_{13}\omega_1^2\omega_2) \frac{\rho cs^4}{12\omega_3^2\omega_{13}\omega_1^3\omega_2}$

$C^{(2),CuLBM2}_{D_x^2 D_y D_z v_3} = (-36v_1^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^3 + 12v_1^4\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 36v_1^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 - 108v_1^2\omega_3cs^2\omega_4\omega_1^2\omega_5\omega_2^2 -$
$28\omega_3^2cs^4\omega_4^2\omega_1^2\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2 + 32\omega_3^2cs^4\omega_4^2\omega_1\omega_3^3\omega_5 - 468v_3^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 180v_1^2\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2^3 + 36v_1^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 -$
$54v_1^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 - 18v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 84v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 4\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 72\omega_3^2cs^4\omega_4\omega_1^3\omega_5\omega_2^2 +$
$60v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 648v_3^2\omega_3^2cs^2\omega_4\omega_1\omega_5\omega_2^2 + 56\omega_3^2cs^4\omega_4^2\omega_1^2\omega_5\omega_2^2 - 216v_1^2\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^2 + 36v_1^4\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 - 12v_1^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 -$
$36v_1^4\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2 - 72v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 96v_3^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 - 72\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 + 24v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2 +$
$72\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2 - 72v_1^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 36v_1^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 + 54v_1^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 + 8\omega_3^2\omega_4^2\omega_5\omega_2 + 18v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2 + 288\omega_3^2cs^4\omega_4^2\omega_1^2\omega_2^3 -$
$36v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 324v_1^2\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 264v_3^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2 + 180v_1^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 108v_1^2\omega_3cs^2\omega_4\omega_1^2\omega_5\omega_2^3 +$
$112\omega_3cs^4\omega_4^2\omega_1^2\omega_5\omega_2 + 64\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2\omega_2 + 24v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 9v_1^4\omega_3\omega_4\omega_1^3\omega_5\omega_2 + 54v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 88\omega_3^2cs^2\omega_4^2\omega_5\omega_2 +$
$288\omega_3^2cs^2\omega_4\omega_1\omega_5\omega_2 - 96v_1^4\omega_3^2\omega_4^2\omega_5\omega_2 + 264v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5 + 36v_1^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 36v_1^4\omega_4^2\omega_1^3\omega_5\omega_2^2 - 54v_1^4\omega_3^3\omega_1^3\omega_5\omega_2 - 112\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2 -$
$56\omega_3^2cs^4\omega_4^2\omega_1^2\omega_5\omega_2 - 348v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 216v_1^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 + 36v_1^2\omega_4^2\omega_1^2\omega_5\omega_2 - 6v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 - 162v_3^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2 +$
$24v_1^2\omega_3^2\omega_4^2\omega_5\omega_2 + 360v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 132v_3^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 - 288\omega_3^2cs^4\omega_4\omega_1\omega_5\omega_2 - 24v_1^2\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2 + 54v_1^4\omega_4^2\omega_1^3\omega_5\omega_2 -$

$$36v_1^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 9v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 2v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 108v_1^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 72\omega_3^2cs^4\omega_4^3\omega_1^3\omega_2^3 - 216\omega_3cs^4\omega_4^2\omega_1^2\omega_5\omega_2^3 + 300v_1^2\omega_3^2\omega_4^2cs^2\omega_4\omega_1\omega_5\omega_2^3 + 27v_2^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2^3 - 6v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 54v_1^2\omega_4^3\omega_1^3\omega_5\omega_2^3 + 216\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 24v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_5 + 216v_1^2v_3^2\omega_3^2\omega_4^2\omega_5\omega_2^3 + 240v_3^2\omega_3cs^2\omega_4^2\omega_5\omega_2^3 - 162v_1^2\omega_3cs^2\omega_1^3\omega_5\omega_2^3 + 18v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 36v_1^2\omega_3^2\omega_4\omega_4^2\omega_5\omega_2^2 - 144v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 288\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^3 - 4\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 16\omega_3cs^4\omega_4^3\omega_1^3\omega_5\omega_2 - 96v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 180v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 27v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 4\omega_3^2cs^4\omega_4^2\omega_1^3\omega_5\omega_2^2 - 16\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 108v_1^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2^3 + 288\omega_3^2cs^4\omega_4\omega_1^2\omega_5\omega_2^3 - 288v_1^2v_3^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 - 168v_3^2\omega_3^2cs^2\omega_4\omega_1\omega_5\omega_2^2 + 48v_1^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2^2 - 216v_1^2\omega_3cs^2\omega_4^2\omega_5\omega_2^3 - 12v_3\omega_3^3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 180v_1^2v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_5\omega_2 + 48v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5 - 36v_1^2\omega_3\omega_4\omega_1^2\omega_5\omega_2^3 - 54v_1^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 - 72v_1^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 - 40\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5 + 162v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 160\omega_3cs^4\omega_4^2\omega_1\omega_5\omega_2^3 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5 + 24v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5 - 18v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 36v_1^4\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^2 - 24v_3^2\omega_3^2\omega_4^2\omega_5\omega_2^3 + 144v_1^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^2 + 36v_1^4\omega_3\omega_4\omega_1^2\omega_5\omega_2^3 + 54v_1^2\omega_3\omega_4^3\omega_1^3\omega_5\omega_2^3 + 72v_1^4\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 - 160\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 108v_1^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2^2 - 6\omega_3^2cs^4\omega_4^2\omega_1^3\omega_5\omega_2^2 - 60v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 180v_1^2v_3^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 120v_3^2\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2^3 - 24v_1^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 + 72v_1^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 9v_2^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 + 152\omega_3cs^4\omega_4^2\omega_1^3\omega_5\omega_2^3 + 6v_2^2\omega_3cs^2\omega_4\omega_1^3\omega_5\omega_2^3 + 8\omega_3cs^4\omega_4^2\omega_1\omega_5\omega_2^3 - 12v_1^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 + 16\omega_3^2\omega_4^2\omega_5\omega_2^3 - 108v_1^2cs^2\omega_4^2\omega_1\omega_5\omega_2^2 - 72\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 288\omega_3^2cs^4\omega_4^2\omega_4\omega_1^3 + 36\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^3 - 72v_1^4\omega_4^2\omega_1^2\omega_5\omega_2^3 + 108v_1^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 72v_1^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 + 72\omega_3cs^4\omega_4^2\omega_1^3\omega_5\omega_2^2 - 108v_1^2\omega_3cs^2\omega_4\omega_1^3\omega_5\omega_2^2 + 336v_3^2\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2^3 - 72v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 132v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 24v_1^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 + 162v_1^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3\omega_5 - 28\omega_3cs^4\omega_4^2\omega_1^3\omega_5\omega_2 + 72\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 12v_1^4\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 + 108v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 6v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 56\omega_3cs^4\omega_4^2\omega_1\omega_5\omega_2^2 + 648v_3^2\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^3 - 108v_1^2\omega_3cs^2\omega_4\omega_1\omega_5\omega_2^3 + 24v_1^2\omega_3\omega_4\omega_4^3\omega_1^3\omega_5\omega_2 - 9v_2^4\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 + 2v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 72v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 108v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 36\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 72\omega_3cs^4\omega_4^2\omega_1^3\omega_5\omega_2^3 + 108v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 48v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 24v_1^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 64\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^2 - 48v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 48v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3}$$

coefficient $C^{(2)}_{D_xD_y^2D_z\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3}$:

$C^{(2),\text{SRT}}_{D_xD_y^2D_z\rho} = 0$

$C^{(2),\text{MRT1}}_{D_xD_y^2D_z\rho} = (3\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8cs^2\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_5 - 6\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 - 3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5 - v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5 - \omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 +$
$\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5^2 + 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8cs^2\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8cs^2\omega_5 + 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 +$
$\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 + 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 +$
$2\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2 + 3\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + \omega_{15}^2v_2^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 +$
$3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8cs^2\omega_5 + 3\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8cs^2\omega_5 - \omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 -$
$3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_{17}\omega_8cs^2\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 - 3\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8cs^2\omega_5 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 -$
$3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}cs^2\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 9\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8cs^2\omega_5^2 - \omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 -$
$2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2\omega_{16}^3\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8cs^2\omega_5^2 +$
$6\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 - 3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8cs^2\omega_5 + 3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7cs^2\omega_5^2 - 2\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2 + \omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2 - 2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8cs^2\omega_5 -$
$\omega_{15}\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 + 6\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 6\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5^2 +$
$v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 + 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_{17}\omega_8cs^2\omega_5^2 - 2\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$
$2\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 - 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5 - 3\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 - \omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_5^2 - 3\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 - 3\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5^2 -$
$3\omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5 - 2\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5 +$
$6\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8cs^2\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2 - 3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7cs^2\omega_5^2 - v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}cs^2\omega_5^2 +$
$3\omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 +$
$3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8cs^2\omega_5 - \omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2 + 3\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8cs^2\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - 3\omega_{15}^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 -$
$3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2 + 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_8cs^2\omega_5^2 - 2\omega_{15}^2\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}^2\omega_{16}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2 + 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_5 -$
$2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8cs^2\omega_5 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_{17}\omega_8\omega_5^2 +$
$\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_8\omega_5^2 + 2\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 +$
$6\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2\omega_5^2 + 3\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_8cs^2\omega_5^2 - \omega_{15}^2v_2^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2)\frac{v_1v_2v_3}{\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2}$

$C^{(2),\text{MRT2}}_{D_xD_y^2D_z\rho} = (-3\omega_{15}cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_5 - 3\omega_{15}cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_5 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$\omega_{15}^2v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2 - \omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2v_2^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - 3cs^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2cs^2\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5^2 + 2\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 -$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 +$
$2\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - 3\omega_{15}cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - 6\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 -$
$\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5 + \omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 +$

$$\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + \omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 +$$
$$6\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5 - \omega_{15}v_2^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 + \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2cs^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2cs^2\omega_{16}\omega_{10}^3\omega_7^2\omega_8\omega_5 -$$
$$2\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5^2 + \omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 +$$
$$3\omega_{15}^2cs^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^2 - 2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_5^2 +$$
$$2\omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5 + v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_5^2 +$$
$$6\omega_{15}^2cs^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 - 2\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 +$$
$$3\omega_{15}cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5^2 + 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 + 3\omega_{15}cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 - 9\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 -$$
$$\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_5^2 + 6\omega_{15}cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 + 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 -$$
$$\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^2 - 2\omega_{15}\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 +$$
$$3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 -$$
$$3\omega_{15}^2cs^2\omega_{16}\omega_{10}^3\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2cs^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2 + \omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 3cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2 +$$
$$\omega_{15}^2\omega_{16}\omega_{10}^3\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5^2 + 6\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2 + 6\omega_{15}^2cs^2\omega_{16}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$3cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2\omega_{16}\omega_7^2\omega_{17}\omega_8\omega_5 + \omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2 +$$
$$\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2cs^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2 - 6\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 -$$
$$\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}cs^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2 -$$
$$\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 + 3\omega_{15}^2cs^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2cs^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + \omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_5 + \omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 +$$
$$\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_8\omega_5^2 + \omega_{15}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 +$$
$$\omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2 - 3\omega_{15}^2cs^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$3\omega_{15}^2cs^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2v_2^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2) \dfrac{v_1v_2v_3}{\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2}$$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = (6\omega_1\omega_2^3 + 2v_1^2\omega_2^3 + 4v_3^2\omega_1^3 - 12\omega_1\omega_2^2 - 72cs^2\omega_1^2\omega_2 + 36cs^2\omega_1^2\omega_2^2 - 3v_1^2\omega_1\omega_2^3 + 36cs^2\omega_1^3 - 18cs^2\omega_1^3\omega_2 - 12v_2^2\omega_1^2\omega_2 -$
$3v_3^2\omega_1\omega_2^3 + 4v_2^2\omega_1^3 - 18cs^2\omega_1\omega_2^3 + 2v_2^2\omega_2^3 - 3v_3^2\omega_1^3\omega_2 + 6v_1^2\omega_1^2\omega_2^2 + 6v_3^2\omega_1^2\omega_2^2 + 36cs^2\omega_1\omega_2^2 - 3v_1^2\omega_1^3\omega_2 + 24\omega_1^2\omega_2 + 4v_1^2\omega_1^3 - 12\omega_1^2\omega_2^2 - 12\omega_1^3 -$
$4v_2^2\omega_2^3 - 6v_3^2\omega_1^2\omega_2 + 6\omega_1^3\omega_2 - 6v_1^2\omega_1^2\omega_2 + 12v_2^2\omega_1\omega_2^2) \dfrac{v_1v_2v_3}{6\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1}$ **at** $\dfrac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3}$ **:**

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1} = (-2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8cs^2\omega_5^3 +$
$\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^3\omega_{17}\omega_8^2\omega_5^3 - 2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 -$
$3\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2cs^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2cs^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_8^2\omega_5^2 +$
$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 + 11\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 + 2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_{17}\omega_8^2cs^2\omega_5^2 +$
$2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - \omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 +$
$2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^2 - 8\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 - \omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^3 -$
$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2cs^2\omega_5^3 + \omega_{15}^2v_2^2\omega_6\omega_{16}^3\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 +$
$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}^2v_2^2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^3\omega_5^3 - \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 +$
$4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 - 6\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 +$
$2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2cs^2\omega_5^3 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}cs^2\omega_5^2 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 +$
$2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^2 - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 8\omega_{15}^2\omega_6\omega_{16}^3\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2 +$
$3\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3 + 15\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 +$
$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_{17}\omega_8^2cs^2\omega_5^3 +$
$2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 +$
$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}cs^2\omega_5 - \omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 -$
$4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2cs^2\omega_5^3 + 9\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3 +$
$\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8cs^2\omega_5^2 + 12\omega_{15}^2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^3 -$
$9\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2cs^2\omega_5^3 + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + \omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 -$
$2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^3\omega_5^3 + 2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3 -$
$2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + 8\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2cs^2\omega_5^3 -$
$\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^3 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 -$
$2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3 - 3\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 3\omega_{15}^2v_2^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 -$
$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2cs^2\omega_5^3 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^3 -$

$$\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8 cs^2\omega_5^2 + \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^3 + 3\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3 -$$
$$2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^2 - 5\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_7\omega_8\omega_5^3 - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3 -$$
$$\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8 cs^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2 cs^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_7\omega_8^2 cs^2\omega_5^3 -$$
$$6\omega_{15}^2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^3 - 3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3 + 8\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^3 - 2\omega_{15} v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 15\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3 +$$
$$\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 6\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8^2 cs^2\omega_5^3 + 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^2 -$$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8^2\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8\omega_5^3 - 4\omega_{15}^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 +$$
$$2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17} cs^2\omega_5^3 + \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2 cs^2\omega_5^3 + 2\omega_{15} v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 -$$
$$13\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 - 3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^2 -$$
$$4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5 + 3\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2 cs^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_8^2 cs^2\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_8 cs^2\omega_5^3 +$$
$$5\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5^3 + 9\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_2\omega_8\omega_5^2 -$$
$$2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 cs^2\omega_5^3 -$$
$$11\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8 cs^2\omega_5^3 - \omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2)\frac{\rho v_2 v_3}{2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3}$$

$C_{D_x D_y^2 D_z v_1}^{(2),\text{MRT2}} =$

$$(-2\omega_{15}\omega_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8^2\omega_5^3 - 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8^2\omega_5^2 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15}^2 cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^3 -$$
$$2\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_{17}\omega_8^2\omega_5^3 -$$
$$2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5^2 - 3\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 -$$
$$4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8^2\omega_5^2 - 2\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 6\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 +$$
$$2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15} v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - \omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 +$$
$$4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15} v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5^3 +$$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 3\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 -$$
$$\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 8\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2 -$$
$$2\omega_{15}^2 cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 +$$
$$4\omega_{15} v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 - 11\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 +$$
$$3\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^3 - 6\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 +$$
$$2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 + 4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5^3 - 9\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 +$$
$$2\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15} v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 +$$
$$2\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5^3 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 +$$
$$2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 15\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2 cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$2\omega_{15}^2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 -$$
$$2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 +$$
$$11\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8\omega_5^2 +$$
$$2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 9\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 +$$
$$2\omega_{15}^2 cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 -$$
$$6\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 3\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 - 6\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 5\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 +$$
$$2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^3 + 8\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 +$$
$$2\omega_{15}^2 cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 - 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 -$$
$$15\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^3 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 +$$
$$8\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 -$$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^3 - 4\omega_{15}^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5^3 + 9\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 -$$
$$2\omega_{15}^2 v_2^2\omega_6\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15} v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3 -$$
$$2\omega_{15} cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^3 + 2\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_8\omega_5^3 -$$
$$3\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 + 3\omega_{15}^2 v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8^2\omega_5^3 -$$
$$13\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 5\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5^3 + 4\omega_{15}^2 cs^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5^3 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^3 - 2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}^2 v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^3 +$$
$$6\omega_{15}^2 cs^2\omega_6\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^3 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^3 - \omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^3 + 3\omega_{15}^2 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^3)\frac{\rho v_2 v_3}{2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^3}$$

$C_{D_x D_y^2 D_z v_1}^{(2),\text{CLBM1}} = 0$

$C_{D_x D_y^2 D_z v_1}^{(2),\text{CLBM2}} = 0$

$C_{D_x D_y^2 D_z v_1}^{(2),\text{CuLBM1}} = 0$

$C_{D_x D_y^2 D_z v_1}^{(2),\text{CuLBM2}} = (48 v_2^2\omega_3^2\omega_4^2\omega_2^3 + 63\omega_3\omega_4^2\omega_1^3\omega_2^2 + 24 v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 216\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 - 144\omega_3^2\omega_4^2\omega_1^3 - 36 v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 24\omega_3^2\omega_4^2\omega_1\omega_2^2 -$

$24 v_2^2\omega_3\omega_4^2\omega_1^3\omega_2 + 144\omega_3^2\omega_4\omega_1^2\omega_2^2 - 36 v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 54 v_2^2\omega_4^2\omega_1^3\omega_2^2 - 324\omega_3 cs^2\omega_4\omega_1^3\omega_2^3 + 72 v_1^2\omega_3^2\omega_4^2\omega_2 - 72\omega_3^2\omega_4\omega_1^2\omega_2^2 + 12 v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 -$

$24v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 - 36\omega_3^2\omega_4^2\omega_1\omega_2^3 + 189\omega_3^2cs^2\omega_4\omega_1^3\omega_2^3 - 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^3 - 72v_2^2\omega_4^2\omega_1^2\omega_2^3 + 20v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 - 108\omega_3\omega_4^2\omega_1^3\omega_2^2 + 216\omega_3cs^2\omega_4\omega_1^3\omega_2^2 -$
$36v_2^2\omega_3\omega_4^2\omega_1^3\omega_2 + 336\omega_3cs^2\omega_4^2\omega_1^3 + 432\omega_3cs^2\omega_4\omega_1^2\omega_2^3 - 72v_2^2\omega_4^2\omega_1^2\omega_2^3 - 108v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 108\omega_3\omega_4^2\omega_1^2\omega_2^3 - 20v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 -$
$48v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 180\omega_3^2cs^2\omega_4\omega_1\omega_2^3 + 36\omega_3^2\omega_4\omega_1^3\omega_2^3 + 48\omega_3\omega_4^2\omega_1^3\omega_2 + 216\omega_3^2cs^2\omega_4\omega_1^2\omega_2 - 36v_3^2\omega_3^2\omega_4^3\omega_2 - 72v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 - 96v_3^2\omega_3^2\omega_4^2\omega_2^3 -$
$36\omega_3cs^2\omega_4^2\omega_1\omega_2^3 + 54v_3^2\omega_3^2\omega_4^3\omega_2^3 - 432\omega_3^2cs^2\omega_4\omega_1^2\omega_2^3 + 72v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 36v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 48\omega_3\omega_4^2\omega_1^3\omega_2^2 - 72v_3^2cs^2\omega_4\omega_1\omega_2^2 - 36v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 -$
$36v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 36v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 72\omega_3^2\omega_4\omega_1^3\omega_2^2 + 36v_2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 216v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 216cs^2\omega_4^2\omega_1^3\omega_2^2 - 144\omega_3cs^2\omega_4^2\omega_1\omega_2 +$
$54v_2^2\omega_3^2\omega_3^3\omega_2^2 + 324\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 + 180\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 + 24v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 72\omega_4^2\omega_1^3\omega_2 - 144\omega_3\omega_4^2\omega_1^2\omega_2^3 - 36v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 120\omega_3^2cs^2\omega_4^2\omega_2^3 +$
$108\omega_3^2cs^2\omega_4\omega_1\omega_2^3 - 180v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 63v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 - 108v_2^2\omega_3\omega_4\omega_1^3\omega_2^3 + 96\omega_3^2\omega_4^2\omega_1\omega_2^3 - 144\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 + 24\omega_3^2\omega_4^3\omega_2^3 + 324cs^2\omega_4^2\omega_1^3\omega_2^3 -$
$108v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 48v_2^2\omega_3^2\omega_4^2\omega_1^3 + 108v_3^2\omega_3^2\omega_4^2\omega_1^3 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 144v_1^2\omega_3^2\omega_4^2\omega_1^3 + 72v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 20\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 360\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 +$
$36v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 36v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 72v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 108v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 108\omega_4^2\omega_1^3\omega_2^3 - 60\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^3 + 12\omega_3\omega_4^2\omega_1\omega_2^3 + 20\omega_3^2\omega_4^2\omega_1^2\omega_2^3 +$
$144v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 144\omega_3^2\omega_4^2\omega_1^3\omega_2 + 180v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 24v_3^2\omega_3\omega_4\omega_1^3\omega_2 + 48v_3^2\omega_3^2\omega_4^2\omega_1^3 + 60\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^2 + 63v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 - 48v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 +$
$108\omega_3\omega_4\omega_1^3\omega_2^3 - 189\omega_3cs^2\omega_4^2\omega_1^3\omega_2^3 - 108v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 36v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 - 144\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 72\omega_3\omega_4\omega_1^3\omega_2^2 + 144\omega_4^2\omega_1^3\omega_2^3 - 54v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 -$
$36\omega_3^2\omega_4\omega_1\omega_2^3 - 108\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 12v_2^2\omega_3\omega_4^2\omega_1\omega_2^3 - 60v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 432cs^2\omega_4^2\omega_1^2\omega_2^3 - 216v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 324\omega_3cs^2\omega_4^2\omega_1^3\omega_2^3)\frac{\bar{\rho}v_2v_3}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{D_xD_y^2D_zv_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3}$ **:**

$C^{(2),\mathrm{SRT}}_{D_xD_y^2D_zv_2} = 0$

$C^{(2),\mathrm{MRT1}}_{D_xD_y^2D_zv_2} = (\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8 cs^2\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_5 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 3v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5 - 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8 cs^2\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 6\omega_{15}^2v_2^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_5 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 + 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5 +$
$6\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 9\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 - 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5^2 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_{17}\omega_8 cs^2\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - \omega_{15}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 +$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 +$
$3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 - \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 cs^2\omega_5 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 + \omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}cs^2\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - 3\omega_{15}^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 - 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 -$
$2\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^3\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 +$
$2\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 cs^2\omega_5 - \omega_{15}^2\omega_{16}^3\omega_{10}\omega_7^2\omega_8 cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7 cs^2\omega_5^2 - 6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_{10}\omega_{17}\omega_8\omega_5^2 +$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5^2 + \omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5^2 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^3\omega_{10}^3\omega_7\omega_8 cs^2\omega_5 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 2\omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + 6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 +$
$3v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_{17}\omega_8 cs^2\omega_5^2 - 6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 +$
$6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2 + 3\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 cs^2 - \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - \omega_{15}^2\omega_{16}^3\omega_{10}^3\omega_7\omega_5^2 - \omega_{15}^2\omega_{16}^3\omega_{10}^3\omega_7\omega_8 cs^2\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}\omega_7\omega_{17}cs^2\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}^2 - \omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 -$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2 cs^2\omega_5^2 - 3v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}cs^2\omega_5^2 + \omega_{15}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8 cs^2\omega_5 -$
$3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8 cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2 +$
$2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8 cs^2\omega_5^2 - 2\omega_{15}^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5 +$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 cs^2\omega_5 - 2\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8 cs^2\omega_5^2 - 2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 -$
$3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_5 + \omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_{10}^2\omega_7^2\omega_8\omega_5^2 + 6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 +$
$2\omega_{15}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8 cs^2\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2)\frac{\bar{\rho}v_1v_3}{\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2}$

$C^{(2),\mathrm{MRT2}}_{D_xD_y^2D_zv_2} = (-\omega_{15}cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_5 - \omega_{15}cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + \omega_{15}cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_5 + \omega_{15}\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 3v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 + 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}^2v_2^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2cs^2\omega_{16}^3\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2cs^2\omega_{16}^3\omega_{10}^3\omega_7^2\omega_8\omega_5^2 + 2\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 -$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - \omega_{15}^2cs^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5^2 + \omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 -$
$9\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_{10}\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 +$
$6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - \omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - 2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 -$
$\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - \omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 + \omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 - 3\omega_{15}^2v_2^2\omega_{16}^3\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 +$
$2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + \omega_{15}^2cs^2\omega_{16}^3\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 -$
$6\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - 3\omega_{15}^2v_2^2\omega_{16}\omega_{10}^3\omega_{10}\omega_{17}\omega_8\omega_5^2 + 3\omega_{15}^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_5 + \omega_{15}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_5^2 +$
$\omega_{15}^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5^2 + \omega_{15}^2cs^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2 - 2\omega_{15}\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 + \omega_{15}cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 - \omega_{15}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5^2 -$

$$\omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_7^3 \omega_7^2 \omega_5^2 + 6\omega_{15}^2 v_2^2 \omega_{16} \omega_{10}^2 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - \omega_{15} \omega_{16} \omega_{10} \omega_7^2 \omega_8 \omega_5^2 + 3v_2^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_5^2 +$$
$$3\omega_{15}^2 v_2^2 \omega_{16}^2 \omega_{10} \omega_7^3 \omega_5^2 + 2\omega_{15}^2 cs^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5^2 - 3\omega_{15}^2 v_2^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_8 \omega_5 - 6\omega_{15} v_2^2 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5^2 + 6\omega_{15} v_2^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 +$$
$$3\omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 + \omega_{15} cs^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_8 \omega_5^2 + \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_5^2 - \omega_{15}^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 + \omega_{15} cs^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_8 \omega_5 -$$
$$3\omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - \omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_5^2 + 2\omega_{15} cs^2 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5 - 3\omega_{15}^2 v_2^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_5^2 + \omega_{15} \omega_{16} \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 +$$
$$\omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 - 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10}^2 \omega_7^2 \omega_8 \omega_5^2 - 2\omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5^2 - 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10} \omega_7 \omega_{17} \omega_5^2 -$$
$$3v_2^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 + \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - \omega_{15} cs^2 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5^2 + \omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 + 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10} \omega_7^2 \omega_8 \omega_5^2 +$$
$$\omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5 - \omega_{15}^2 cs^2 \omega_{16} \omega_{10}^3 \omega_{17} \omega_8 \omega_5^2 - \omega_{15}^2 cs^2 \omega_{16} \omega_{10}^2 \omega_7 \omega_{17} \omega_8 \omega_5 + \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_5^2 + 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5^2 -$$
$$cs^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5 - 3\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5 - \omega_{15}^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - 3\omega_{15} v_2^2 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5^2 - 3\omega_{15}^2 v_2^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5^2 -$$
$$\omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_5^2 + \omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_{17} \omega_8 \omega_5^2 - \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_5 + 2\omega_{15}^2 cs^2 \omega_{16} \omega_{10}^2 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10}^3 \omega_7^2 \omega_8 \omega_5^2 +$$
$$2\omega_{15}^2 cs^2 \omega_{16}^2 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 + cs^2 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5^2 + 2\omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5 - 2\omega_{15}^2 cs^2 \omega_{16} \omega_{10}^2 \omega_7 \omega_{17} \omega_8 \omega_5^2 + 3\omega_{15} v_2^2 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5^2 +$$
$$\omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_5 + 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5 + \omega_{15}^2 cs^2 \omega_{16} \omega_{10}^2 \omega_7^2 \omega_8 \omega_5^2 - 2\omega_{15}^2 cs^2 \omega_{16} \omega_{10}^2 \omega_7^2 \omega_{17} \omega_8 \omega_5 - 2\omega_{15} \omega_{16} \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5 -$$
$$2\omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - \omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_8 \omega_5^2 - \omega_{15}^2 \omega_{16}^2 \omega_{10} \omega_{17} \omega_8 \omega_5^2 - \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_8 \omega_5^2 + \omega_{16}^2 \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - \omega_{15} cs^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_8 \omega_5^2 -$$
$$3\omega_{15} v_2^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 + \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5 - \omega_{15} cs^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5 + 3\omega_{15}^2 v_2^2 \omega_{16} \omega_{10}^3 \omega_7^2 \omega_2 \omega_5 + \omega_{15}^2 \omega_{16} \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5^2 + 3v_2^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 +$$
$$\omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5^2 + \omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_8 \omega_5^2 + \omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 + \omega_{15}^2 cs^2 \omega_{16}^2 \omega_{10} \omega_{17} \omega_8 \omega_5^2 - \omega_{15}^2 cs^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5^2 +$$
$$3\omega_{15}^2 v_2^2 \omega_{16}^2 \omega_{10} \omega_{10}^3 \omega_7^2 \omega_8 \omega_5^2 - \omega_{15}^2 cs^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8 \omega_5 + 6\omega_{15}^2 v_2^2 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5 - \omega_{15}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5 - \omega_{15}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8 \omega_5 +$$
$$\omega_{15}^2 cs^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5^2 - 3\omega_{15}^2 v_2^2 \omega_{10}^2 \omega_7^2 \omega_{17} \omega_8 \omega_5^2) \frac{\rho v_1 v_3}{\omega_{15}^2 \omega_{16}^2 \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8 \omega_5^2}$$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_2} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_2}$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_2} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_2} = (-36v_2^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2 - 3v_1^2 \omega_3 \omega_1^2 \omega_2^3 + 6\omega_3^2 \omega_1^3 \omega_2^2 + 3v_3^2 \omega_3 \omega_1^3 \omega_2^2 + 6\omega_3^2 \omega_4 \omega_1^3 \omega_2 - 2v_3^2 \omega_3 \omega_4 \omega_1^3 \omega_2 - 3v_3^2 \omega_3 \omega_4 \omega_1^2 \omega_2^3 + v_1^2 \omega_3 \omega_4 \omega_1 \omega_2^3 -$
$12\omega_3^2 \omega_4 \omega_1^2 \omega_2^2 + v_3^2 \omega_3 \omega_4 \omega_1^2 \omega_2^2 - 6\omega_4 \omega_1^2 \omega_2^3 + 4v_3^2 \omega_3^2 \omega_4 \omega_1^3 - 3v_1^2 \omega_3^2 \omega_1 \omega_2^3 - 36\omega_3^2 cs^2 \omega_4 \omega_1^2 \omega_2 + 18\omega_3 cs^2 \omega_4 \omega_1^3 \omega_2 - 18\omega_3^2 cs^2 \omega_1^3 \omega_2 -$
$4v_1^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2 + 18 cs^2 \omega_4 \omega_1^2 \omega_2^3 + 18\omega_3^3 cs^2 \omega_1^2 \omega_2^2 - 18\omega_3 cs^2 \omega_4 \omega_1^2 \omega_2^3 - 12\omega_3 cs^2 \omega_4 \omega_1^3 \omega_2 + 6v_1^2 \omega_3 \omega_4 \omega_1^2 \omega_2^2 + 12v_2^2 \omega_3^2 \omega_4 \omega_1^3 - 18 cs^2 \omega_4 \omega_1^3 \omega_2^2 -$
$4\omega_3^2 \omega_4 \omega_2^3 + 20\omega_3^2 \omega_4 \omega_1^2 \omega_2 - 6\omega_3^2 \omega_1^2 \omega_2^3 - 3v_3^2 \omega_3^2 \omega_1 \omega_2^3 + 4v_1^2 \omega_3^2 \omega_4 \omega_1^3 - 4v_3^2 \omega_3^2 \omega_4 \omega_1 \omega_2^2 + 6\omega_4 \omega_1^3 \omega_2^2 + 36\omega_3^2 cs^2 \omega_4 \omega_1^2 \omega_2 - 3v_1^2 \omega_3^2 \omega_4 \omega_1^3 \omega_2 +$
$18\omega_3^2 cs^2 \omega_1^2 \omega_2^2 + 6\omega_3 cs^2 \omega_4 \omega_1 \omega_2^3 + 3v_1^2 \omega_3 \omega_1^3 \omega_2^2 + 20\omega_3^2 cs^2 \omega_4 \omega_1^3 - 3v_3^2 \omega_3^2 \omega_4 \omega_2^3 - 2\omega_3 \omega_4 \omega_1 \omega_2^3 - 18\omega_3^2 cs^2 \omega_4 \omega_1^3 \omega_2 + 3v_3^2 \omega_3 \omega_4 \omega_1^2 \omega_2 +$
$6\omega_3^2 \omega_1^2 \omega_2^3 - 3v_3^2 \omega_3 \omega_3 \omega_1^3 \omega_2^3 + 4v_3^2 \omega_3^2 \omega_4 \omega_2^3 - 3v_1^2 \omega_3^2 \omega_4 \omega_1 \omega_2^3 + 3v_1^2 \omega_3^2 \omega_1^3 \omega_2 + 4\omega_3 \omega_4 \omega_1^3 \omega_2 - 3v_3^2 \omega_3 \omega_4 \omega_1^3 \omega_2 - 3v_3^2 \omega_3 \omega_4 \omega_1^3 \omega_2 + 6\omega_3 \omega_4 \omega_1^2 \omega_2^3 -$
$18\omega_3^2 cs^2 \omega_4 \omega_1 \omega_2^3 + 36\omega_3^2 \omega_3 \omega_4 \omega_1 \omega_2^2 + 6\omega_3^2 \omega_1 \omega_2^3 + 3v_3^2 \omega_3^2 \omega_1^2 \omega_2^2 + 3v_1^2 \omega_4 \omega_1^2 \omega_2^3 + 6\omega_3 cs^2 \omega_4 \omega_1 \omega_2^3 - 18\omega_3^2 cs^2 \omega_1 \omega_2^3 - 4v_1^2 \omega_3^2 \omega_4 \omega_1 \omega_2^2 +$
$18\omega_3 cs^2 \omega_1^3 \omega_2^2 + 6\omega_3 \omega_1^2 \omega_2^3 + 3v_3^2 \omega_3^2 \omega_1^2 \omega_2^3 - 2\omega_3 \omega_4 \omega_1^2 \omega_2^2 + 6v_3^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2^2 - 12\omega_3^2 cs^2 \omega_4 \omega_1 \omega_2^3 - 3v_1^2 \omega_3^2 \omega_1^3 \omega_2^2 - 6\omega_3 \omega_1^3 \omega_2^2 - 3v_3^2 \omega_3^3 \omega_1^3 \omega_2^2 -$
$4\omega_3^2 \omega_4 \omega_1 \omega_2^3 - 4v_3^2 \omega_3^2 \omega_4 \omega_1^2 \omega_2 + 3v_1^2 \omega_3^2 \omega_1^2 \omega_2^3 + v_1^2 \omega_3 \omega_4 \omega_1^2 \omega_2^2 - 18\omega_3 cs^2 \omega_4 \omega_1^2 \omega_2^3 + 28\omega_3^2 cs^2 \omega_4 \omega_1^3 - 12\omega_3^2 \omega_4 \omega_1^3 - 6\omega_3 \omega_4 \omega_1^3 \omega_2^2 + 3v_1^2 \omega_3^2 \omega_1^2 \omega_2^2 +$
$3v_3^2 \omega_3 \omega_4 \omega_1^3 \omega_2^2 - 12v_2^2 \omega_3^2 \omega_4 \omega_2^3 - 3v_1^2 \omega_4 \omega_1^3 \omega_2^2 + v_3^2 \omega_3 \omega_4 \omega_1 \omega_2^3 + 6\omega_3^2 \omega_4 \omega_1 \omega_2^3 - 2v_1^2 \omega_3 \omega_4 \omega_1^3 \omega_2 + 4v_1^2 \omega_3^2 \omega_4 \omega_2^3 - 3v_1^2 \omega_3 \omega_4 \omega_1^2 \omega_2^3) \frac{\rho v_1 v_3}{6\omega_3^2 \omega_4 \omega_1^3 \omega_2^2}$

coefficient $C^{(2)}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_3} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_3} = (-4\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7^3 \omega_7^2 \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15}^2 v_2^2 \omega_6 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 - 6\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_{10}^3 \omega_7 \omega_8^2 cs^2 \omega_5^2 +$
$\omega_{15}^2 v_2^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 - 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_8^2 \omega_5 + 2\omega_{15}^2 \omega_6 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_8^2 cs^2 \omega_5 -$
$2v_2^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_8^2 \omega_5 - 3\omega_{15} \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5^2 + 2\omega_{15} \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_8^2 cs^2 \omega_5 + 4\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5^2 +$
$2\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7^2 \omega_8^2 \omega_5 + 15\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8^2 \omega_5 - 8\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_{10} \omega_{17} \omega_8^2 cs^2 \omega_5^2 -$
$15\omega_{15}^2 \omega_6 \omega_{16} \omega_{10} \omega_7^3 \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_{10} \omega_7^3 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 +$
$2\omega_{15}^2 v_2^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_{10} \omega_7^3 \omega_{17} \omega_8 - 8\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5^2 - 2\omega_{15} \omega_6 \omega_{16} \omega_{10}^3 \omega_7^2 \omega_8^2 \omega_5^2 - 9\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 -$
$6\omega_6 \omega_{16}^2 \omega_{10} \omega_{10} \omega_7^3 \omega_{17} \omega_8^2 cs^2 \omega_5^2 + \omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7^2 \omega_{17} \omega_8^2 \omega_5 + 2\omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 \omega_5 - \omega_{15}^2 v_2^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15} \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} cs^2 \omega_5 +$
$8\omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5^2 + 2\omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15} \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 + 4\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 -$
$2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 - 2\omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_8 \omega_8^2 \omega_5 + 3\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - \omega_{15}^2 \omega_6 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8^2 \omega_5 -$
$11\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5 + 2\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} cs^2 \omega_5 + 3\omega_{15} v_2^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5^2 +$
$2\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 + 2\omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 - 4\omega_{15}^2 \omega_6 \omega_{16} \omega_{10} \omega_7^2 \omega_{17} \omega_8^2 \omega_5^2 + 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10} \omega_7 \omega_8^2 \omega_5 +$
$2\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} cs^2 \omega_5^2 + 4\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 cs^2 \omega_5^2 + 6\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 4\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 cs^2 -$
$2\omega_{15}^2 \omega_6 \omega_{16} \omega_{10} \omega_7 \omega_{17} cs^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7^3 \omega_8^2 cs^2 \omega_5^2 + 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 + 11\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5 +$
$2v_2^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 - 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_8^2 \omega_5 - 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 - 4\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 +$
$9\omega_{15} \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15}^2 v_2^2 \omega_6 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 +$
$4\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_8^2 cs^2 \omega_5^2 + 12\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5 - \omega_{15}^2 v_2^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 \omega_5 -$
$2\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_8^2 cs^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7^3 \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 + 2\omega_{15}^2 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5^2 -$
$\omega_{15}^2 v_2^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 \omega_5 - \omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8^2 \omega_5 + 6\omega_6 \omega_{16}^2 \omega_{10} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 -$
$2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_8^2 cs^2 \omega_5 + 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 + 4\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 cs^2 \omega_5^2 - 4\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 cs^2 \omega_5 +$
$2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10} \omega_7 \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10} \omega_7 \omega_{17} \omega_8 + 2\omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8 cs^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 \omega_5 -$
$2\omega_{15}^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_{17} \omega_8^2 cs^2 \omega_5 - 4\omega_{15}^2 \omega_6 \omega_{16}^2 \omega_7^3 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} \omega_6 \omega_{16}^2 \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 - 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10} \omega_7 \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15}^2 v_2^2 \omega_6 \omega_{16} \omega_{10}^3 \omega_7 \omega_8^2 \omega_5 -$

$$2\omega_{15}v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5^2 + 8\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2cs^2 - $$
$$2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2cs^2\omega_5 + 9\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - $$
$$2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8cs^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_8^2cs^2\omega_5 + 5\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2cs^2\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5 - 2v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5 - $$
$$3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 3\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_8^2\omega_5 + $$
$$2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2cs^2\omega_5 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8\omega_5 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8cs^2 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5^2 - $$
$$2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2 + 6\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8cs^2\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 + $$
$$2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_8\omega_5 - $$
$$3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2cs^2\omega_5 + \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5^2 - 13\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8cs^2\omega_5^2 - $$
$$2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + 3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - $$
$$8\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{17}\omega_8^2cs^2\omega_5 + $$
$$6\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{17}\omega_8^2cs^2 - 6\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2cs^2\omega_5 + 3\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5^2 + $$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2cs^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^3\omega_8^2\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5^2 - $$
$$5\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{17}\omega_8cs^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2cs^2\omega_5) \frac{\rho v_1 v_2}{2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{MRT2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = (-2\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5^2 + 2\omega_{15}^2v_2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - $$
$$2\omega_{15}^2cs^2\omega_{16}^3\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2 - 8\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_8^2\omega_5 + $$
$$6cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8\omega_5^2 - 2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5 - 3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + $$
$$2\omega_{15}^2cs^2\omega_6\omega_{16}^3\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2 + 4\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 + $$
$$2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8\omega_5 - 2\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5^2 + $$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2 + 2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2 + 4\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_8^2\omega_5 + $$
$$2\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_8^2\omega_5 + 4\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 + \omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + $$
$$9\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}^2v_2\omega_6\omega_{16}^3\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8\omega_5 - $$
$$\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 3\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 3\omega_{15}v_2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{17}\omega_8^2\omega_5 - $$
$$4\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 + 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 + 2\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$4\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - $$
$$2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - 6cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2 + $$
$$4\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + $$
$$2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 11\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5 - \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + $$
$$8\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - \omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2\omega_5 - $$
$$2\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5 + 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5 - 15\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 + $$
$$4\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8 + 15\omega_{15}^2cs^2\omega_6\omega_{16}^3\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_6\omega_{16}^3\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8 + $$
$$9\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5 + 2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2cs^2\omega_6\omega_{16}^3\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - $$
$$\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2 - 6\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{17}\omega_8^2\omega_5 - 8\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - $$
$$2\omega_{15}^2\omega_6\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - $$
$$8\omega_{15}^2cs^2\omega_6\omega_{16}^3\omega_{10}^3\omega_{17}\omega_8^2\omega_5 + 5\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2v_2^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$2\omega_{15}^2cs^2\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 3\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - 3\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - \omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 + $$
$$3\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_8^2\omega_5 + $$
$$2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{10}^3\omega_7^2\omega_{17}\omega_8^2\omega_5 - 6cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 + \omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - 9\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 8\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8 + 2\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - $$
$$2\omega_{15}^2cs^2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_8^2\omega_5 + $$
$$4\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + \omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5 - $$
$$4\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 3\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - 4\omega_{15}^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - $$
$$2\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 + $$
$$2\omega_{15}^2cs^2\omega_6\omega_{16}\omega_{10}^3\omega_7^3\omega_8^2\omega_5 - 13\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8\omega_5 - 11\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_3\omega_{17}\omega_8\omega_5 + 3\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + $$
$$\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^3\omega_7^2\omega_8^2\omega_5 + 2\omega_{15}v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_8^2\omega_5 - $$
$$5\omega_{15}^2v_2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}^2cs^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7\omega_{17}\omega_8^2\omega_5) \frac{\rho v_1 v_2}{2\omega_{15}^2\omega_6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = 0$$

$$C^{(2),\text{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = (48v_2^2\omega_3^2\omega_4^2\omega_2^3 + 63\omega_3\omega_4^2\omega_1^3\omega_2 - 216v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 216\omega_3^2cs^2\omega_4\omega_1^3\omega_2 - 144\omega_3^2\omega_4^2\omega_1^3 + 54v_1^2\omega_4^2\omega_1^3\omega_2^2 - 36v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^3 +$$

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$$24\omega_4^2\omega_4^2\omega_1\omega_2^2 - 24v_2^2\omega_3\omega_4^2\omega_3^3\omega_2 + 144\omega_3^3\omega_4\omega_1^2\omega_2^3 - 36v_1^2\omega_3^2\omega_4\omega_3^3\omega_2^2 + 54v_2^2\omega_4^2\omega_1^3\omega_2^2 - 324\omega_3 cs^2\omega_4\omega_1^3\omega_2^3 - 60v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 96v_1^2\omega_3^2\omega_4^2\omega_2^3 -$$
$$72\omega_3^3\omega_4\omega_1^2\omega_2^2 + 12v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 36v_1^2\omega_4^2\omega_3^3\omega_2^2 - 36\omega_3^2\omega_4^2\omega_1\omega_2^3 + 189\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^3 - 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 - 108\omega_3\omega_4^2\omega_1^3\omega_2^2 + 144v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^3 -$$
$$24v_1^2\omega_3\omega_4^2\omega_1^3\omega_2 + 216\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 - 36v_2^2\omega_4^2\omega_1^3\omega_2^2 + 336\omega_3^2 cs^2\omega_4^2\omega_1^3 + 63v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 432\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 + 72v_1^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 36v_1^2\omega_3\omega_4\omega_1^2\omega_2^2 -$$
$$72v_2^2\omega_4^2\omega_1^3\omega_2^3 + 108v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 72v_1^2\omega_4^2\omega_1^3\omega_2^3 - 63\omega_3^2\omega_4\omega_1^3\omega_2^3 - 108\omega_3\omega_4^2\omega_1^2\omega_2^3 - 48v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 + 180\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 + 36v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^3 +$$
$$48\omega_3\omega_4^2\omega_1^3\omega_2 + 216\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^2 - 108v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2 + 24v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 + 72v_3^2\omega_3^2\omega_4^2\omega_2^3 - 180v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 36 cs^2\omega_4^2\omega_1\omega_2^3 - 63v_1^2\omega_3\omega_4^2\omega_1^3\omega_2^3 -$$
$$432\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^3 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 48\omega_3\omega_4^2\omega_1^3\omega_2^2 - 72\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 - 36v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 216v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 72\omega_3\omega_4\omega_1^3\omega_2^2 + 36v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^2 +$$
$$72v_1^2\omega_3\omega_4\omega_1\omega_2^3 - 36v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 216 cs^2\omega_4^2\omega_1^3\omega_2^2 - 144\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 + 36v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 + 54v_2^2\omega_3\omega_1^3\omega_2^3 + 324\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^2 +$$
$$180\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^2 + 72\omega_4^2\omega_1^3\omega_2^2 - 54v_1^2\omega_3^2\omega_1^3\omega_2^3 - 144\omega_3\omega_4\omega_1^3\omega_2^3 - 36v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 120\omega_3^2 cs^2\omega_4^2\omega_2^3 + 108\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 - 108v_2^2\omega_3\omega_4\omega_1^3\omega_2^3 +$$
$$96\omega_3^2\omega_4^2\omega_1^3\omega_2 - 144\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^2 - 20v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 24\omega_3^3\omega_4^2\omega_2^3 + 324 cs^2\omega_4^2\omega_1^3\omega_2^3 - 72v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 + 48v_2^2\omega_3^2\omega_4^2\omega_1^3 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 +$$
$$48v_1^2\omega_3^2\omega_4^2\omega_1^3 - 20\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 360\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 36v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 72v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 108v_3^2\omega_3^3\omega_4\omega_1\omega_2^3 - 108\omega_4^2\omega_1^3\omega_2^3 - 60\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^3 +$$
$$12\omega_3^3\omega_4\omega_1\omega_2^3 + 20\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 144\omega_3^2\omega_4\omega_1^3\omega_2 + 180v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 + 144v_3^2\omega_3^2\omega_4^2\omega_1^3 + 108v_1^2\omega_3^2\omega_4^2\omega_2^3 + 60\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 - 48v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 +$$
$$108\omega_3\omega_4\omega_1^3\omega_2^2 - 189\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^3 - 108v_2^2\omega_3^2\omega_1\omega_2^3 - 24v_1^2\omega_3\omega_4^2\omega_1\omega_2^2 + 20v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 144\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 - 72\omega_3\omega_4^2\omega_1^3\omega_2^2 + 144\omega_4^2\omega_1^3\omega_2^3 -$$
$$36\omega_3^2\omega_4\omega_1\omega_2^3 - 108\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 12v_2^2\omega_3\omega_4^2\omega_1\omega_2^3 - 432 cs^2\omega_4^2\omega_1^3\omega_2^2 + 24v_1^2\omega_3^3\omega_4^2\omega_1^2\omega_2 + 324\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 - 36v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 \big) \frac{\rho v_1 v_2}{72\omega_3^3\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(2)}_{\mathrm{D}_y^3\mathrm{D}_z\rho}$ **at** $\frac{\partial^4\rho}{\partial x_2^3\partial x_3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = (-32v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 4\omega_{10}^2\omega_7^2 cs^2 + 4v_2^2\omega_{10}^3\omega_7 - 36v_2^2\omega_{16}\omega_{10}^3 cs^2 - 8\omega_{16}^2\omega_{10}^2\omega_7 cs^4 + 4\omega_{16}\omega_{10}^3\omega_7 cs^2 - 48v_2^2\omega_{16}\omega_{10}^2\omega_7 cs^2 -$
$24v_2^2\omega_{16}^2\omega_7^2 - 4\omega_{16}^2\omega_{10}\omega_7 cs^2 + 24v_2^2\omega_{10}^3\omega_7 cs^2 - 12\omega_{16}^2\omega_{10}\omega_7 cs^4 + 8\omega_{16}\omega_{10}^3\omega_7 cs^4 + 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 20v_2^2\omega_{16}\omega_{10}^3\omega_7 + 4v_2^2\omega_{10}^2\omega_7^2 + 4v_2^4\omega_{10}^3\omega_7 -$
$4\omega_{16}^2\omega_{10}^2 cs^2 - 8v_2^2\omega_{16}^2\omega_{10} - 20v_2^4\omega_{16}\omega_{10}^2\omega_7 - 72v_2^2\omega_{16}\omega_{10}\omega_7^2 cs^2 - 4\omega_{16}^2\omega_{10}^2\omega_7 cs^2 - 4v_2^4\omega_{10}^3\omega_7 - 51v_2^2\omega_{16}\omega_{10}^3\omega_7 cs^2 + 13v_2^4\omega_{16}^2\omega_{10}\omega_7^2 +$
$72v_2^2\omega_{16}^2\omega_{10}\omega_7 cs^2 + 4\omega_{10}^3\omega_7 cs^2 + 24v_2^4\omega_{16}^2\omega_7^2 + 13v_2^2\omega_{16}\omega_{10}^3\omega_7 - 20v_2^2\omega_{16}\omega_{10}\omega_7 + 4\omega_{10}^3\omega_7^2 cs^4 + 4\omega_{16}\omega_{10}\omega_7^2 cs^2 - 4v_2^4\omega_{10}^2\omega_7 + 51v_2^2\omega_{16}\omega_{10}\omega_7^2 cs^2 -$
$20v_2^4\omega_{16}\omega_{10}\omega_7 + 16v_2^2\omega_{16}\omega_{10}^2\omega_7 - 4\omega_{16}\omega_{10}^3 cs^4 + 8v_2^4\omega_{16}^2\omega_{10} - 4v_2^2\omega_{10}^3\omega_7 + 8\omega_{16}\omega_{10}^2\omega_7 cs^4 - 8\omega_{16}^2\omega_7^2 cs^2 - 4\omega_{10}^3\omega_7 cs^4 + 32v_2^4\omega_{16}\omega_{10}^2\omega_7 -$
$84v_2^2\omega_{16}^2\omega_{10}\omega_7 cs^2 + 36v_2^2\omega_{16}^2\omega_{10} cs^2 + 20v_2^4\omega_{16}\omega_{10}^3\omega_7 - 144v_2^2\omega_{16}\omega_{10}\omega_7^2 cs^2 + 4\omega_{16}\omega_{10}^3 cs^2 - 36v_2^4\omega_{16}^2\omega_{10}\omega_7 + 84v_2^2\omega_{16}\omega_{10}^3\omega_7 cs^2 -$
$8\omega_{16}\omega_{10}^2\omega_7^2 cs^2 - 24v_2^2\omega_{10}^3\omega_7^2 cs^2 + 8v_2^4\omega_{16}^2\omega_7 cs^4 - 4\omega_{10}^3\omega_7^2 cs^2 - 4\omega_{16}\omega_{10}\omega_7^2 cs^4 - 8v_2^4\omega_{16}^2\omega_{10} + 20v_2^2\omega_{16}\omega_{10}^3\omega_7 - 4\omega_{16}\omega_{10}\omega_7^2 cs^4 + 4\omega_{16}^2\omega_{10}\omega_7 cs^4 -$
$13v_2^2\omega_{16}^2\omega_{10}\omega_7 + 20v_2^4\omega_{16}\omega_{10}\omega_7 - 13v_2^4\omega_{16}\omega_{10}^3\omega_7 - 4\omega_{10}^2\omega_7^2 cs^4 + 96v_2^2\omega_{16}^2\omega_7^2 cs^2 + 8\omega_{16}^2\omega_{10}\omega_7 cs^2 + 20v_2^2\omega_{16}\omega_{10}\omega_7^2 + 4\omega_{16}^2\omega_{10} cs^4 +$
$4\omega_{16}^2\omega_{10}\omega_7 cs^4 + 12\omega_{16}\omega_{10}\omega_7^2 cs^2 - 8\omega_{16}\omega_{10}^3\omega_7 cs^2 + 120v_2^2\omega_{16}\omega_{10}^2\omega_7^2 cs^2 - 16v_2^2\omega_{16}\omega_{10}^2\omega_7 + 8v_2^2\omega_{16}\omega_{10}^3 - 24v_2^2\omega_{10}^3\omega_7 cs^2) \frac{v_3}{4\omega_{16}^2\omega_{10}^3\omega_7^2}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = (-84 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7 - 32v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 4v_2^2\omega_{10}^3\omega_7 + 4 cs^4\omega_{16}^2\omega_{10} - 4 cs^2\omega_{10}^3\omega_7 - 4 cs^4\omega_{10}^2\omega_7 + 4 cs^2\omega_{16}\omega_{10}\omega_7 - 24 cs^2\omega_{16}^2\omega_7 -$
$4 cs^4\omega_{16}\omega_{10}^3\omega_7 + 4 cs^4\omega_{16}\omega_{10}\omega_7 + 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 20v_2^2\omega_{16}\omega_{10}^3\omega_7 + 24 cs^2 v_2^2\omega_{10}^3\omega_7 + 8 cs^4\omega_{16}^2\omega_7 + 4v_2^2\omega_{10}^2\omega_7^2 + 4v_2^4\omega_{10}^3\omega_7 - 8v_2^2\omega_{16}^2\omega_{10} -$
$20v_2^4\omega_{16}\omega_{10}^2\omega_7 - 4 cs^2\omega_{16}^2\omega_{10}\omega_7 - 4v_2^4\omega_{10}^3\omega_7 + 13v_2^4\omega_{16}^2\omega_{10}\omega_7^2 + 4 cs^4\omega_{10}^3\omega_7 + 8 cs^2\omega_{16}^2\omega_{10}\omega_7 + 96 cs^2 v_2^2\omega_{16}^2\omega_7^2 - 4 cs^2\omega_{16}\omega_{10}^3 +$
$4 cs^2\omega_{10}^2\omega_7^2 - 12 cs^4\omega_{16}\omega_{10}\omega_7 + 24v_2^4\omega_{16}^2\omega_7^2 + 8 cs^4\omega_{16}\omega_{10}\omega_7 + 13v_2^2\omega_{16}\omega_{10}^3\omega_7 - 24 cs^2 v_2^4\omega_{10}\omega_7 - 20v_2^2\omega_{16}\omega_{10}\omega_7 - 72 cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 -$
$8 cs^2\omega_{16}^2\omega_7^2 + 36 cs^2 v_2^2\omega_{16}^2\omega_{10} - 4v_2^4\omega_{10}^2\omega_7^2 - 20v_2^4\omega_{16}\omega_{10}\omega_7 - 24 cs^2 v_2^2\omega_{10}^2\omega_7 + 16v_2^2\omega_{16}\omega_{10}^2\omega_7 + 51v_2^2\omega_{16}\omega_{10}^2\omega_7 + 8v_2^4\omega_{16}^2\omega_{10} - 4v_2^2\omega_{10}^3\omega_7 +$
$4 cs^2\omega_{10}^3\omega_7 + 8 cs^4\omega_{16}\omega_{10}^2\omega_7 + 4 cs^2\omega_{16}\omega_{10}^3 + 32v_2^4\omega_{16}\omega_{10}^2\omega_7 + 84 cs^2 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 144 cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^2 - 4 cs^4\omega_{16}\omega_{10}\omega_7 + 20v_2^4\omega_{16}\omega_{10}^3\omega_7 -$
$36 cs^2 v_2^2\omega_{16}\omega_{10}^3 - 36v_2^4\omega_{16}^2\omega_{10}\omega_7 - 4 cs^2\omega_{16}^2\omega_{10}\omega_7 + 4 cs^2\omega_{16}\omega_{10}^3\omega_7 + 4 cs^4\omega_{16}^2\omega_{10}\omega_7 - 8v_2^4\omega_{16}\omega_{10}^3 + 20v_2^2\omega_{16}^2\omega_{10}\omega_7 + 120 cs^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 -$
$8 cs^4\omega_{16}^2\omega_{10}\omega_7 - 4 cs^4\omega_{16}\omega_{10}^3 - 48 cs^2 v_2^2\omega_{16}\omega_{10}^2\omega_7 - 13v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 20v_2^4\omega_{16}\omega_{10}\omega_7 - 13v_2^4\omega_{16}\omega_{10}^3\omega_7 - 8 cs^2\omega_{16}\omega_{10}^3\omega_7 + 12 cs^2\omega_{16}^2\omega_{10}\omega_7^2 +$
$72 cs^2 v_2^2\omega_{16}^2\omega_{10}\omega_7 + 20v_2^2\omega_{16}\omega_{10}\omega_7^2 - 51 cs^2 v_2^2\omega_{16}\omega_{10}^3\omega_7 - 8 cs^2\omega_{16}\omega_{10}^2\omega_7^2 - 16v_2^4\omega_{16}\omega_{10}^2\omega_7 + 8v_2^2\omega_{16}\omega_{10}^3) \frac{v_3}{4\omega_{16}^2\omega_{10}^3\omega_7^2}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y^3\mathrm{D}_z\rho} = (-84\omega_3^2 cs^4\omega_1^3\omega_2 + 96v_2^2 v_3^2\omega_3^2\omega_1\omega_2^3 - 6\omega_3^2 cs^4\omega_1^2\omega_2 + \omega_3^2\omega_1^3\omega_2^2 + 16v_3^2\omega_3^2 cs^2\omega_1^3 - 48v_2^2\omega_3^2\omega_1^3 + 8v_3^2\omega_3^3 cs^2\omega_1\omega_2^2 -$
$72v_2^2\omega_3^2 cs^2\omega_1^2\omega_2^3 + 8v_3^2\omega_3^3\omega_2^3 + 12 cs^2\omega_1^3\omega_2^2 - 324v_2^2\omega_3^2 cs^2\omega_1^3\omega_2 + 24v_2^2 v_3^2\omega_3^3\omega_1^3 + 48v_2^2\omega_3^2\omega_1\omega_2^3 + 40\omega_3^2 cs^2\omega_1^3\omega_2 - 4\omega_3^3\omega_1^3\omega_2 + 36 cs^4\omega_1^3\omega_2^2 +$
$42\omega_3^2 cs^4\omega_1^3\omega_2^2 + 24v_3^2\omega_3^3\omega_1\omega_2^2 - 60v_2^2\omega_3^3\omega_1\omega_2^3 + 18v_3^2\omega_3 cs^2\omega_1^3\omega_2^2 - 5\omega_3^2 cs^2\omega_1^3\omega_2^2 + 216v_2^2\omega_3^2 cs^2\omega_1^2\omega_2^3 + 22v_3^2\omega_3^2 cs^2\omega_1\omega_2^3 - 8\omega_3 cs^2\omega_1\omega_2^3 +$
$5\omega_3^2 cs^2\omega_1^2\omega_2^3 - 18v_3^2\omega_3 cs^2\omega_1^2\omega_2^3 + 56\omega_3^2 cs^2\omega_1^3\omega_2 - 4v_2^2\omega_3 cs^2\omega_1^3\omega_2 + 24v_4^2\omega_3^3\omega_1^3 - 4\omega_3^2 cs^2\omega_1^2\omega_2 - 8v_3^2\omega_3^3\omega_1\omega_2^3 - 36 cs^4\omega_1^3\omega_2 - 36v_4^2\omega_3^2\omega_1^3\omega_2 -$
$36\omega_3^2 cs^4\omega_1^2\omega_2 + 72\omega_3^2 cs^4\omega_1^3 - 12 cs^2\omega_1^3\omega_2^3 + 72v_2^2\omega_3^2 cs^4\omega_1^2\omega_2 + 20\omega_3^2\omega_2^3 - 34\omega_3^2 cs^2\omega_1^2\omega_2^2 - 4v_3^2\omega_3 cs^2\omega_1^2\omega_2^3 + 216v_2^2\omega_3^2 cs^2\omega_1^3 + 72v_2^4\omega_3^2\omega_1^2\omega_2^2 +$
$6\omega_3^2 cs^4\omega_1^3\omega_2^2 - 8\omega_3^2\omega_2^3 - 8v_3^2\omega_3^3\omega_1\omega_2^2 + 24\omega_3 cs^4\omega_1\omega_2^3 - 4\omega_3^2\omega_1^3\omega_2 - \omega_3^2\omega_1^3\omega_2^3 - 4v_3^2\omega_3^2 cs^2\omega_1^2\omega_2 - 24v_2^2\omega_3^2\omega_1\omega_2^2 - 8\omega_3^2 cs^2\omega_1\omega_2^2 + 24v_2^2 v_3^2\omega_3^2\omega_3^2\omega_2 -$
$72v_4^2\omega_3^2\omega_1\omega_2^2 + 8\omega_3^3\omega_1\omega_2^3 - 12\omega_3 cs^4\omega_1^3\omega_2 - 54\omega_3 cs^4\omega_1^3\omega_2^3 + 4v_2^2\omega_3^2\omega_1^2\omega_2^2 - 24v_2^2\omega_3^3\omega_1^3\omega_2 + 24v_2^2\omega_3^2\omega_2^3 - 20v_3^2\omega_3^2 cs^2\omega_2^3 + 8v_3^2\omega_3\omega_3 cs^2\omega_1\omega_2^3 -$
$22\omega_3^2 cs^2\omega_1\omega_2^3 + 12v_3^2 cs^2\omega_1^2\omega_2^3 + 2v_3^2\omega_3^2 cs^2\omega_1^3\omega_2 - 18\omega_3 cs^2\omega_1^3\omega_2^2 - 12\omega_3 cs^4\omega_1^2\omega_2 + v_3^2\omega_3^2\omega_1^2\omega_2^3 + 8\omega_3^2\omega_1\omega_2^3 + 4v_2^2\omega_3^2\omega_1^3\omega_2 - 72v_2^2 v_3^2\omega_3^3\omega_2^3 -$
$36v_4^2\omega_3^2\omega_1\omega_2^3 + 24v_2^2 v_3^2\omega_3^2\omega_1^2\omega_2 - 4v_3^2\omega_3^2\omega_1^3 - v_3^2\omega_3^2\omega_1^2\omega_2^2 - 52\omega_3^2 cs^2\omega_1^3 - 36\omega_3^2 cs^4\omega_1^3 - 48v_2^2 v_3^2\omega_3^2\omega_1^2\omega_2^2 + 84v_2^2\omega_3^2\omega_1^3\omega_2 + 24v_2^2\omega_3^2\omega_1^2\omega_2^3 + 4\omega_3^2\omega_1^3 +$
$18\omega_3 cs^2\omega_1^3\omega_2^3 - 2v_3^2\omega_3^2 cs^2\omega_1^2\omega_2^3 - 216v_2^2\omega_3^2 cs^2\omega_1\omega_2^2 + 4\omega_3 cs^2\omega_1^3\omega_2 - 12v_3^2\omega_3^2 cs^2\omega_1^2\omega_2 - 20v_3^2\omega_3^2 cs^2\omega_1^3\omega_2 - 24v_2^2 v_3^2\omega_3^2\omega_1\omega_2^3 + 42\omega_3^2 cs^4\omega_1\omega_2^3 -$
$48v_2^2 v_3^2\omega_3^2\omega_1\omega_2^3 + 48v_4^2\omega_3^2\omega_2^3 + 54\omega_3 cs^4\omega_1^3\omega_2 + 4v_3^2\omega_3^2\omega_1^2\omega_2 + 4\omega_3 cs^2\omega_1^3\omega_2^2 + 108v_2^2\omega_3^2 cs^2\omega_1\omega_2^3 - 2v_3^2\omega_3^2 cs^2\omega_1^3\omega_2 - 24v_2^2\omega_3^2\omega_1^3\omega_2) \frac{v_3}{36\omega_3^3\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\mathrm{D}_y^3\mathrm{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_2^3\partial x_3}$:

$$C^{(2),\text{SRT}}_{\text{D}_y^3\text{D}_z v_2} = 0$$

$$C^{(2),\text{MRT1}}_{\text{D}_y^3\text{D}_z v_2} = (104v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 16\omega_{10}^2\omega_7^2cs^2 - 16v_2^2\omega_{10}^3\omega_7 - 25\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 80v_2^2\omega_{16}^2\omega_7^2 + 28\omega_{16}^2\omega_{10}^2\omega_7 + 32\omega_{16}^2\omega_{10}\omega_7cs^2 + 12\omega_{16}\omega_{10}^3 - $$
$$120v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 68v_2^2\omega_{16}\omega_{10}^3\omega_7 - 16v_2^2\omega_{10}^4\omega_7 + 20\omega_{16}^2\omega_{10}^2cs^2 + 28v_2^2\omega_{16}^2\omega_{10} + 25\omega_{16}^2\omega_{10}^2\omega_7cs^2 - 16\omega_{16}\omega_{10}^2\omega_7cs^2 + 24\omega_{16}\omega_{10}\omega_7^2 - 16\omega_{10}^3\omega_7cs^2 - $$
$$43v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 64v_2^2\omega_{16}^2\omega_{10}\omega_7 - 17\omega_{16}^2\omega_{10}^2\omega_7^2 - 32\omega_{16}\omega_{10}\omega_7^2cs^2 - 48v_2^2\omega_{16}^2\omega_{10}^2 + 16v_2^2\omega_{10}^4\omega_7^2 + 48\omega_{16}^2\omega_7^2cs^2 + 48\omega_{16}^2\omega_{10}\omega_7^2 - 28\omega_{16}\omega_{10}^2\omega_7 - $$
$$8\omega_{10}^4\omega_7 - 20\omega_{16}\omega_{10}^2cs^2 + 56\omega_{16}\omega_{10}^2\omega_7cs^2 - 40\omega_{16}\omega_{10}^2\omega_7 + 16\omega_{10}^3\omega_7cs^2 - 68v_2^2\omega_{16}^2\omega_{10}\omega_7 - 32\omega_{16}^2\omega_7^2 + 43v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 8\omega_{10}^3\omega_7 + 16\omega_{16}\omega_{10}^2\omega_7 - $$
$$44\omega_{16}^2\omega_{10}\omega_7cs^2 - 12\omega_{16}^2\omega_{10} - 64v_2^2\omega_{16}\omega_{10}\omega_7^2 + 17\omega_{16}\omega_{10}^3\omega_7^2 - 72\omega_{16}^2\omega_{10}\omega_7^2cs^2 - 24\omega_{16}^2\omega_{10}\omega_7 + 44\omega_{16}\omega_{10}^3\omega_7cs^2 + 8\omega_{10}^3\omega_7^2 - 28v_2^2\omega_{16}\omega_{10}^3)\frac{\rho v_2 v_3}{4\omega_{16}^2\omega_{10}^3\omega_7^2}$$

$$C^{(2),\text{MRT2}}_{\text{D}_y^3\text{D}_z v_2} = $$
$$(104v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 16v_2^2\omega_{10}^3\omega_7 + 16cs^2\omega_{10}^3\omega_7^2 - 32cs^2\omega_{16}\omega_{10}\omega_7^2 + 80v_2^2\omega_{16}^2\omega_7^2 + 28\omega_{16}^2\omega_{10}^2\omega_7 + 12\omega_{16}\omega_{10}^3 - 120v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 68v_2^2\omega_{16}\omega_{10}^3\omega_7 - $$
$$16v_2^2\omega_{10}^4\omega_7 + 28v_2^2\omega_{16}^2\omega_{10} + 25cs^2\omega_{16}^2\omega_{10}^2\omega_7 - 44cs^2\omega_{16}^2\omega_{10}\omega_7 + 20cs^2\omega_{16}^2\omega_{10} + 24\omega_{16}\omega_{10}\omega_7^2 - 16cs^2\omega_{10}^3\omega_7 - 43v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 64v_2^2\omega_{16}^2\omega_{10}\omega_7 - $$
$$17\omega_{16}^2\omega_{10}^2\omega_7^2 + 48cs^2\omega_{16}^2\omega_7^2 - 48\omega_{16}\omega_{10}^2\omega_7^2 + 16v_2^2\omega_{10}^4\omega_7^2 - 16cs^2\omega_{10}^3\omega_7 + 48\omega_{16}^2\omega_{10}\omega_7^2 - 28\omega_{16}\omega_{10}^3\omega_7 - 20cs^2\omega_{16}\omega_{10}^3 - 16cs^2\omega_{16}\omega_{10}^2\omega_7 - 8\omega_{10}^4\omega_7 - $$
$$40\omega_{16}\omega_{10}^2\omega_7 + 32cs^2\omega_{16}^2\omega_{10}\omega_7 - 25cs^2\omega_{16}\omega_{10}^3\omega_7^2 - 68v_2^2\omega_{16}^2\omega_{10}\omega_7 - 32\omega_{16}^2\omega_7^2 + 43v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 8\omega_{10}^3\omega_7 + 16\omega_{16}\omega_{10}^2\omega_7 + 44cs^2\omega_{16}\omega_{10}^3\omega_7 - $$
$$72cs^2\omega_{16}^2\omega_{10}\omega_7^2 - 12\omega_{16}^2\omega_{10} - 64v_2^2\omega_{16}\omega_{10}\omega_7^2 + 17\omega_{16}\omega_{10}^3\omega_7^2 - 24\omega_{16}^2\omega_{10}\omega_7 + 56cs^2\omega_{16}\omega_{10}^2\omega_7^2 + 8\omega_{10}^3\omega_7^2 - 28v_2^2\omega_{16}\omega_{10}^3)\frac{\rho v_2 v_3}{4\omega_{16}^2\omega_{10}\omega_7^2}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_y^3\text{D}_z v_2} = 0$$

$$C^{(2),\text{CLBM2}}_{\text{D}_y^3\text{D}_z v_2} = 0$$

$$C^{(2),\text{CuLBM1}}_{\text{D}_y^3\text{D}_z v_2} = 0$$

$$C^{(2),\text{CuLBM2}}_{\text{D}_y^3\text{D}_z v_2} = (5v_3^2\omega_3\omega_1^3\omega_2^2 + 84\omega_3cs^2\omega_1^3 - 12\omega_1\omega_2^3 + 27cs^2\omega_1^3\omega_2^2 - 54\omega_3cs^2\omega_1\omega_2^2 - 66v_2^2\omega_3\omega_1^3\omega_2 + 6v_3^2\omega_3\omega_1^2\omega_2 + 132v_2^2\omega_3\omega_1^2\omega_2^2 - 36\omega_3\omega_1^3 + $$
$$27\omega_3cs^2\omega_1\omega_2^3 + 84v_2^2\omega_3\omega_2^3 - 12v_2^2\omega_3\omega_1^2\omega_2 - 18cs^2\omega_1^2\omega_2^2 - 9v_3^2\omega_3\omega_1\omega_2^2 + 3\omega_3\omega_1\omega_2^3 + 12v_3^2\omega_3\omega_1^3 - 18cs^2\omega_1^3\omega_2 - 27cs^2\omega_1^2\omega_2^3 + 12v_3^2\omega_1\omega_2^3 + $$
$$42\omega_3\omega_1\omega_2^3 - 18v_3^2\omega_3\omega_1^3\omega_2 - 5v_3^2\omega_3\omega_1^2\omega_2^2 + 36cs^2\omega_1\omega_2^3 - 18cs^2\omega_1^2\omega_2 - 9v_3^2\omega_1\omega_2^3 - 6v_3^2\omega_1^3\omega_2 - 12\omega_3\omega_2^3 + 27v_3^2\omega_3\omega_1\omega_2^3 - 9\omega_1^3\omega_2^2 - $$
$$51\omega_3\omega_1^3\omega_2^2 - 12\omega_3cs^2\omega_2^3 - 6v_3^2\omega_1^3\omega_2^2 + 15\omega_3cs^2\omega_1^3\omega_2^2 + 5\omega_3\omega_1^3\omega_2^2 + 6v_3^2\omega_3\omega_1\omega_2^2 + 48\omega_3\omega_1^3\omega_2 + 6\omega_1^2\omega_2^2 - 5\omega_3\omega_1^3\omega_2^2 - 120v_2^2\omega_3\omega_1\omega_2^2 - $$
$$15\omega_3cs^2\omega_1^2\omega_2^2 - 108\omega_3cs^2\omega_1^3\omega_2 + 6\omega_1^3\omega_2^2 + 48v_2^2\omega_3\omega_1^3 + 6\omega_3\omega_1^2\omega_2 + 9\omega_1^2\omega_2^3 + 81\omega_3cs^2\omega_1^2\omega_2^3 - 24v_3^2\omega_3\omega_2^3 - 66v_2^2\omega_3\omega_1\omega_2^3 + 9v_3^2\omega_1^3\omega_2^2)\frac{\rho v_2 v_3}{18\omega_3\omega_1^3\omega_2^3}$$

coefficient $C^{(2)}_{\text{D}_y^3\text{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3}$**:**

$$C^{(2),\text{SRT}}_{\text{D}_y^3\text{D}_z v_3} = (-12cs^2\omega^2 - 36v_2^2cs^2 - 26v_2^4\omega^2 - 36v_2^4 + 4v_2^4\omega^3 + 36cs^4 + 54v_2^4\omega + 36cs^2\omega - cs^4\omega^3 - 4v_2^4\omega^3 + 20cs^4\omega^2 + 54v_2^2cs^2\omega + 26v_2^2\omega^2 - $$
$$24cs^2 - 54v_2^2\omega - 54cs^4\omega - 42v_2^2cs^2\omega^2 + 36v_2^2 + 12v_2^2cs^2\omega^3)\frac{\rho}{12\omega^3}$$

$$C^{(2),\text{MRT1}}_{\text{D}_y^3\text{D}_z v_3} = (-\omega_{16}^2\omega_{10}^3\omega_7^3cs^4 + 12v_2^2\omega_{10}^3\omega_7^3 + 24v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 90v_2^2\omega_{16}\omega_{10}\omega_7^3 + 18\omega_{16}\omega_{10}^3\omega_7^2cs^2 - 21v_2^2\omega_{16}\omega_{10}^3\omega_7^3cs^2 - 12v_2^2\omega_{10}^3\omega_7^2cs^2 + $$
$$12v_2^4\omega_{10}^3\omega_7^3 - 18v_2^4\omega_{16}\omega_{10}^3\omega_7^2 - 12\omega_{16}\omega_{10}\omega_7^2cs^4 + 12\omega_{16}\omega_{10}^3\omega_7cs^4 - 12\omega_{16}^2\omega_7^3cs^2 + 24v_2^2\omega_{16}\omega_{10}^3\omega_7 - 60v_2^2\omega_{16}\omega_{10}^2\omega_7^3 - 6\omega_{16}\omega_{10}^2\omega_7^3cs^4 - $$
$$12v_2^4\omega_{10}^3\omega_7^2 + 4v_2^4\omega_{16}^2\omega_{10}^3\omega_7^3 + 60v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 + 102v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 6\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 - 72v_2^2\omega_{16}^3\omega_7^3 + 12v_2^2\omega_{10}^3\omega_7^3cs^2 + 30v_2^2\omega_{16}\omega_{10}\omega_7^3cs^2 - $$
$$36v_2^4\omega_{16}\omega_{10}\omega_7^3 + 12v_2^4\omega_{16}^2\omega_{10}^2\omega_7^2 - 12v_2^4\omega_{10}^3\omega_7^3 - 6\omega_{16}\omega_{10}^3\omega_7^3cs^2 - 48v_2^2\omega_{16}\omega_{10}\omega_7^2 - 12v_2^2\omega_{10}^3\omega_7^3 + 13\omega_{16}^2\omega_{10}^3\omega_7^2cs^4 - 36v_2^2\omega_{16}\omega_{10}\omega_7^3cs^2 - $$
$$\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 19v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 + 6\omega_{16}\omega_{10}^3\omega_7cs^2 + 12v_2^4\omega_{16}^2\omega_{10}\omega_7 + 162v_2^2\omega_{16}^2\omega_{10}\omega_7^2cs^2 + 12v_2^2\omega_{10}^3\omega_7^2 + 12\omega_{16}\omega_{10}^2\omega_7cs^4 + 27v_2^2\omega_{16}\omega_{10}^3\omega_7^3 - $$
$$12\omega_{16}^2\omega_{10}\omega_7^3cs^4 + 72v_2^4\omega_{16}^2\omega_7^3 + 12v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 - 24v_2^4\omega_{16}\omega_{10}^2\omega_7^2 - 5\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 - 48v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 90v_2^4\omega_{16}^2\omega_{10}\omega_7^3 + 252v_2^2\omega_{16}^2\omega_7^3cs^2 + $$
$$18v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 + 6\omega_{16}\omega_{10}^3\omega_7cs^4 - 24v_2^2\omega_{16}\omega_{10}^3\omega_7 - 108v_2^2\omega_{16}^2\omega_{10}\omega_7^2cs^2 - 12v_2^2\omega_{16}\omega_{10}^3\omega_7cs^2 + 60v_2^4\omega_{16}\omega_{10}^2\omega_7^3 - 12\omega_{16}\omega_{10}^2\omega_7cs^2 + $$
$$12\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 54v_2^2\omega_{16}\omega_{10}^2\omega_7^3cs^2 + \omega_{16}^2\omega_{10}^3\omega_7^3cs^4 - 4v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12\omega_{16}^3\omega_{10}cs^4 - 24\omega_{16}^2\omega_{10}\omega_7cs^4 - 18\omega_{16}\omega_{10}^3\omega_7^2cs^4 - 48v_2^2\omega_{16}^2\omega_{10}cs^2 + $$
$$36v_2^2\omega_{16}\omega_{10}\omega_7^3 - 12v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 + 48v_2^4\omega_{16}\omega_{10}^3\omega_7^2 - 81v_2^2\omega_{16}^2\omega_{10}\omega_7^2cs^2 - 19v_2^2\omega_{16}^2\omega_{10}\omega_7^3 - 12v_2^2\omega_{16}\omega_{10}^3\omega_7 + 6v_2^2\omega_{10}^3\omega_7cs^4 + 12\omega_{16}\omega_{10}\omega_7^2cs^2 - $$
$$12\omega_{16}\omega_{10}^3\omega_7cs^2 - 12v_2^2\omega_{16}\omega_{10}^2\omega_7^2cs^2 - 12v_2^2\omega_{10}^3\omega_7^2cs^2 + 12\omega_{16}^2\omega_7cs^4 - 306v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 6\omega_{16}\omega_{10}^3\omega_7^2cs^2 - 27v_2^4\omega_{16}\omega_{10}^3\omega_7)\frac{\rho}{12\omega_{16}^2\omega_{10}^3\omega_7^3}$$

$$C^{(2),\text{MRT2}}_{\text{D}_y^3\text{D}_z v_3} = (12cs^4\omega_{16}^2\omega_7^3 - 48cs^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + 12v_2^2\omega_{10}^2\omega_7^3 + 24v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 90v_2^2\omega_{16}\omega_{10}\omega_7^3 + 12cs^2v_2^2\omega_{10}^3\omega_7^3 + 12cs^2v_2^2\omega_{16}\omega_{10}^3\omega_7^3 + $$
$$6cs^4\omega_{16}\omega_{10}^3\omega_7 + 6cs^2\omega_{16}^2\omega_{10}\omega_7 - cs^2\omega_{16}^2\omega_{10}^2\omega_7 + 12v_2^4\omega_{10}^3\omega_7 - 18v_2^4\omega_{16}^2\omega_{10}^3\omega_7 - 18cs^4\omega_{16}\omega_{10}^3\omega_7 + 12cs^4\omega_{16}^3\omega_{10} - 81cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^3 + $$
$$24v_2^2\omega_{16}\omega_{10}^3\omega_7 - 12cs^2v_2^2\omega_{10}^3\omega_7^2 - 60v_2^2\omega_{16}\omega_{10}^2\omega_7^3 - 12v_2^4\omega_{10}^3\omega_7^3 + 4v_2^4\omega_{16}^2\omega_{10}^3\omega_7^3 - 6cs^2\omega_{16}^2\omega_{10}^2\omega_7^2 - 72v_2^2\omega_{16}^3\omega_7^3 - 36v_2^4\omega_{16}\omega_{10}\omega_7^3 - $$
$$48cs^2v_2^2\omega_{16}^2\omega_{10} + 12v_2^4\omega_{16}^2\omega_{10}^2\omega_7^2 - 12cs^2\omega_{16}^2\omega_7^3 - 12v_2^4\omega_{10}^3\omega_7^3 - 6cs^4\omega_{16}\omega_{10}^2\omega_7^3 - 12cs^4\omega_{16}^2\omega_{10}\omega_7^3 + 12cs^4\omega_{16}\omega_{10}^3\omega_7 - 48v_2^2\omega_{16}\omega_{10}\omega_7^2 + $$
$$102cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7 - 12v_2^2\omega_{10}^3\omega_7^3 + 60cs^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3 - 12cs^2v_2^2\omega_{10}^3\omega_7 + 252cs^2v_2^2\omega_{16}^2\omega_7^3 - 5cs^2\omega_{16}^2\omega_{10}^3\omega_7 + 19v_2^4\omega_{16}^2\omega_{10}^3\omega_7 + 12v_2^2\omega_{16}^3\omega_{10}\omega_7 + $$
$$162cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 12v_2^2\omega_{10}^3\omega_7^2 + 27v_2^2\omega_{16}\omega_{10}^3\omega_7^3 - 36cs^2v_2^2\omega_{16}\omega_{10}^3\omega_7 - 12cs^4\omega_{16}^2\omega_{10}\omega_7 + 72v_2^4\omega_{16}^2\omega_7^3 + 12cs^4\omega_{16}\omega_{10}^2\omega_7 - 6cs^2\omega_{16}\omega_{10}^3\omega_7 - $$
$$24v_2^4\omega_{16}\omega_{10}^2\omega_7^2 - 90v_2^4\omega_{16}^2\omega_{10}\omega_7^3 + 54cs^2v_2^2\omega_{16}\omega_{10}^2\omega_7^3 + 18v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 12cs^2v_2^2\omega_{16}\omega_{10}^3\omega_7 - 108cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 24cs^4\omega_{16}^2\omega_{10}\omega_7 + $$
$$cs^4\omega_{16}^2\omega_{10}\omega_7^3 - 24v_2^4\omega_{16}\omega_{10}^3\omega_7 + 60v_2^4\omega_{16}\omega_{10}^2\omega_7^3 + 18cs^2\omega_{16}\omega_{10}^3\omega_7^2 + 6cs^4\omega_{16}^2\omega_{10}\omega_7^2 - 4v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3 - 306cs^2v_2^2\omega_{16}^2\omega_{10}\omega_7^3 - 12cs^2v_2^2\omega_{16}\omega_{10}\omega_7^2 - $$
$$cs^4\omega_{16}^2\omega_{10}^3\omega_7 + 36v_2^2\omega_{16}\omega_{10}\omega_7^3 - 21cs^2v_2^2\omega_{16}\omega_{10}^3\omega_7 - 12v_2^2\omega_{16}\omega_{10}^2\omega_7 + 48v_2^4\omega_{16}\omega_{10}^3\omega_7 + 6cs^2\omega_{16}^2\omega_{10}\omega_7^2 - 12cs^2\omega_{16}\omega_{10}^3\omega_7 + 12cs^2\omega_{16}\omega_{10}\omega_7^2 - $$
$$19v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3 + 30cs^2v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 12v_2^2\omega_{16}^2\omega_{10}\omega_7 + 13cs^4\omega_{16}^2\omega_{10}^3\omega_7 + 12cs^2\omega_{16}\omega_{10}\omega_7^3 - 12cs^2\omega_{16}\omega_{10}^2\omega_7 - 27v_2^4\omega_{16}\omega_{10}^3\omega_7)\frac{\rho}{12\omega_{16}^2\omega_{10}^3\omega_7^3}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_y^3\text{D}_z v_3} = (36v_2^2\omega_{10}^2\omega_7 + 90v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_3^3 - 12\omega_{16}^2\omega_{10}cs^4\omega_7^3 - 99v_2^2\omega_{16}\omega_{10}^3cs^2\omega_3^3 + 18v_2^2\omega_{16}^2\omega_{10}^2cs^2\omega_7 - 12\omega_{16}\omega_{10}^3cs^2\omega_7 + 36v_2^4\omega_{10}^3\omega_3^3 - $$

$$6v_2^4\omega_{16}^2\omega_{10}^3\omega_7^2 - 24\omega_{16}^2\omega_{10}^3cs^4\omega_7 - 12\omega_{16}^2\omega_{10}cs^4\omega_7^2 - 12\omega_{16}^2cs^2\omega_7^3 - 72v_2^2\omega_{16}\omega_{10}^2\omega_7^3 - 36v_2^4\omega_{10}^3\omega_7^2 + 4v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 54v_2^2\omega_{16}\omega_{10}^3cs^2\omega_7^2 +$$
$$60v_2^2\omega_{16}^2\omega_{10}cs^2\omega_7^3 - 72v_2^2\omega_{16}^2\omega_7^3 - 36v_2^4\omega_{16}\omega_{10}\omega_7^3 - 6\omega_{16}\omega_{10}^3cs^2\omega_7^3 - 6\omega_{16}^2\omega_{10}cs^2\omega_7^3 - 36v_2^4\omega_{10}\omega_7^3 + 36v_2^2\omega_{16}\omega_{10}^3cs^2\omega_7 + 108v_2^2\omega_{10}^3cs^2\omega_7^3 -$$
$$6\omega_{16}\omega_{10}^2cs^4\omega_7^3 + 13\omega_{16}^3\omega_{10}cs^4\omega_7^2 - 36v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 36v_2^2\omega_{10}^3\omega_7^3 - 108v_2^2\omega_{10}^3cs^2\omega_7^2 + 19v_2^4\omega_{16}^2\omega_{10}^3\omega_7 + 18\omega_{16}\omega_{10}^3cs^2\omega_7^2 - \omega_{16}^2\omega_{10}^2cs^2\omega_7^3 -$$
$$108v_2^2\omega_{16}\omega_{10}cs^2\omega_7^3 + 36v_2^2\omega_{10}^3\omega_7^2 + 39v_2^2\omega_{16}\omega_{10}^3\omega_7^3 + 72v_2^4\omega_{16}^2\omega_7^3 + 12\omega_{16}\omega_{10}^2cs^4\omega_7^2 - \omega_{16}^2\omega_{10}cs^4\omega_7^3 + 6\omega_{16}\omega_{10}^3cs^2\omega_7 + 252v_2^2\omega_{16}^2cs^2\omega_7^3 +$$
$$12\omega_{16}^2cs^4\omega_7^3 + 12\omega_{16}\omega_{10}cs^2\omega_7^2 + 12v_2^2\omega_{16}\omega_{10}^3cs^2\omega_7^3 - 90v_2^4\omega_{16}^2\omega_{10}\omega_7^3 + 36v_2^2\omega_{16}\omega_{10}^2cs^2\omega_7^2 + 6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 3v_2^2\omega_{16}^2\omega_{10}^3cs^2\omega_7^2 +$$
$$198v_2^2\omega_{16}\omega_{10}^2cs^2\omega_7^3 + 72v_2^4\omega_{16}\omega_{10}^2\omega_7^3 + 12\omega_{10}^2\omega_{10}cs^2\omega_7^2 + 12\omega_{16}\omega_{10}^3cs^4\omega_7 - 4v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 36v_2^2\omega_{16}\omega_{10}\omega_7^3 + \omega_{16}^2\omega_{10}cs^4\omega_7^3 -$$
$$18\omega_{16}\omega_{10}^3cs^4\omega_7^2 + 36v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 18v_2^2\omega_{16}^2\omega_{10}cs^2\omega_7 - 36v_2^2\omega_{16}^2\omega_{10}cs^2\omega_7^2 - 12\omega_{16}^2\omega_{10}cs^2\omega_7^2 - 19v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 6v_2^2\omega_{16}\omega_{10}^3cs^4\omega_7^2 +$$
$$6\omega_{16}\omega_{10}^3cs^4\omega_7^3 - 5v_2^2\omega_{16}^2\omega_{10}cs^2\omega_7^2 + 6\omega_{16}\omega_{10}^2cs^2\omega_7^3 - 306v_2^2\omega_{16}^2\omega_{10}cs^2\omega_7^3 + 12\omega_{16}^2\omega_{10}^3cs^4 - 108v_2^2\omega_{10}^2cs^2\omega_7^3 - 39v_2^4\omega_{16}\omega_{10}^3\omega_7^3)\frac{\rho}{12\omega_{16}^2\omega_{10}^3\omega_7^3}$$

$C^{(2),\text{CLBM2}}_{\text{D}_y^3\text{D}_z v_3} = (36v_2^2\omega_{10}^2\omega_7^3 + 90v_2^2\omega_{16}\omega_{10}\omega_7^3 - 6\omega_{16}\omega_{10}^2\omega_7^3cs^4 - 12\omega_{16}\omega_{10}\omega_7^2cs^4 - 12\omega_{16}\omega_7^2cs^2 + 12\omega_{16}\omega_{10}\omega_7cs^4 - 6v_2^2\omega_{16}\omega_{10}\omega_7^2cs^2 -$

$18v_2^2\omega_{16}\omega_{10}^3\omega_7cs^2 + 36v_2^4\omega_{10}^3\omega_7^3 + 60v_2^2\omega_{16}\omega_{10}\omega_7^3cs^2 - 6v_2^4\omega_{16}\omega_{10}^3\omega_7^2 - \omega_{16}\omega_{10}^3\omega_7^3cs^4 - 72v_2^2\omega_{16}\omega_{10}^3\omega_7^3 - 108v_2^2\omega_{10}^3\omega_7^2cs^2 - 36v_2^4\omega_{10}^3\omega_7^2 +$

$4v_2^4\omega_{16}^2\omega_{10}^3\omega_7^3 - 99v_2^2\omega_{16}\omega_{10}^3\omega_7^3cs^2 + 18\omega_{16}\omega_{10}^3\omega_7^2cs^2 - 72v_2^2\omega_{16}^2\omega_7^3 - 36v_2^4\omega_{16}\omega_{10}^2\omega_7^3 + 18v_2^2\omega_{16}^2\omega_{10}\omega_7^2cs^2 + 6\omega_{16}\omega_{10}^3\omega_7cs^2 - 36v_2^4\omega_{10}^2\omega_7^3 -$

$108v_2^2\omega_{16}\omega_{10}\omega_7^3cs^2 - \omega_{16}^2\omega_{10}\omega_7^3cs^2 - 12\omega_{16}^2\omega_{10}\omega_7^3cs^4 - 36v_2^2\omega_{16}\omega_{10}^3\omega_7^2 - 36v_2^2\omega_{10}^3\omega_7^3 + 12\omega_{16}\omega_{10}^2\omega_7^3cs^4 - 6\omega_{16}\omega_{10}^3\omega_7^3cs^2 + 19v_2^4\omega_{16}^2\omega_{10}^3\omega_7 +$

$54v_2^2\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 108v_2^2\omega_{10}^3\omega_7^3cs^2 + 13\omega_{16}^2\omega_{10}^3\omega_7cs^4 + 36v_2^2\omega_{10}^3\omega_7^2 + 39v_2^2\omega_{16}\omega_{10}^3\omega_7^3 + 72v_2^4\omega_{16}^2\omega_7^3 + 12\omega_{16}\omega_{10}\omega_7^3cs^2 + 198v_2^2\omega_{16}\omega_{10}^2\omega_7^3cs^2 -$

$36v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 90v_2^4\omega_{16}^2\omega_{10}\omega_7^3 - 12\omega_{16}\omega_{10}^2\omega_7^3cs^2 + 36v_2^2\omega_{16}\omega_{10}^3\omega_7^3cs^2 + 6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 + 12\omega_{16}^2\omega_{10}^3cs^4 - 24\omega_{16}^2\omega_{10}\omega_7cs^4 +$

$\omega_{16}^2\omega_{10}^3\omega_7cs^4 - 5\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 + 252v_2^2\omega_{16}^2cs^2\omega_7^3 + 72v_2^4\omega_{16}\omega_{10}^2\omega_7^3 + 12v_2^2\omega_{16}\omega_{10}^3\omega_7^3cs^2 + 6\omega_{16}\omega_{10}^3\omega_7cs^4 - 4v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 6\omega_{16}\omega_{10}^2\omega_7^3cs^4 +$

$36v_2^2\omega_{16}\omega_{10}\omega_7^3 - 306v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 36v_2^2\omega_{16}\omega_{10}^3\omega_7^2 + 6\omega_{16}\omega_{10}^2\omega_7^3cs^2 + 12\omega_{16}\omega_{10}\omega_7^2cs^2 + 12\omega_{16}^2\omega_7^3cs^4 - 108v_2^2\omega_{10}^2\omega_7^3cs^2 +$

$36v_2^2\omega_{16}\omega_{10}\omega_7^3cs^2 - 12\omega_{16}\omega_{10}\omega_7^3cs^2 - 19v_2^2\omega_{16}\omega_{10}^3\omega_7^3 - 18\omega_{16}\omega_{10}\omega_7^3cs^4 - 3v_2^2\omega_{16}\omega_{10}^3\omega_7^2cs^2 - 39v_2^2\omega_{16}\omega_{10}^3\omega_7^3)\frac{\rho}{12\omega_{16}^2\omega_{10}^3\omega_7^3}$

$C^{(2),\text{CuLBM1}}_{\text{D}_y^3\text{D}_z v_3} =$

$(72v_2^4\omega_3^2\omega_{11}^3 - 6v_2^2\omega_3^2\omega_{11}^2\omega_5^3 - 36v_2^4\omega_3^3\omega_{11}\omega_5 - 5cs^2\omega_3^2\omega_{11}^2\omega_5^3 - 18cs^2v_2^2\omega_3\omega_{11}^2\omega_5^3 + 36cs^2v_2^2\omega_3^2\omega_{11}\omega_5^3 - 19v_2^2\omega_3^3\omega_{11}^2\omega_5^2 + cs^4\omega_3^3\omega_{11}^2\omega_5^2 -$

$6cs^2\omega_3^2\omega_{11}^2\omega_5^3 - 12cs^2\omega_3\omega_{11}\omega_5^3 - cs^4\omega_3^3\omega_{11}^2\omega_5 - 306cs^2v_2^2\omega_3^2\omega_{11}^2\omega_5 + 54cs^2v_2^2\omega_3^2\omega_{11}\omega_5^3 - 4v_2^2\omega_3^3\omega_{11}^2\omega_5 - 72v_2^2\omega_3^3\omega_{11}^2 + 60cs^2v_2^2\omega_3^2\omega_{11}\omega_5^2 -$

$24cs^4\omega_3\omega_{11}^2\omega_5^3 + 12cs^4\omega_3^3\omega_{11}\omega_5^2 + 12cs^2\omega_3^2\omega_{11}^2\omega_5 - 39v_2^4\omega_3^3\omega_{11}\omega_5 - 6cs^2\omega_3^3\omega_{11}\omega_5^3 - 18cs^4\omega_3^3\omega_{11}\omega_5^3 + 90v_2^2\omega_3^3\omega_{11}^2\omega_5 + 12cs^2v_2^2\omega_3^3\omega_{11}\omega_5^3 -$

$36v_2^2\omega_3^3\omega_{11}\omega_5^3 + 252cs^2v_2^2\omega_3^2\omega_{11}^3 - 12cs^4\omega_3^3\omega_{11}^2\omega_5 + 6cs^2\omega_3^3\omega_{11}\omega_5^2 + 72v_2^4\omega_3^3\omega_{11}\omega_5 - 36cs^2v_2^2\omega_3^2\omega_5^3 + 36v_2^2\omega_3^3\omega_{11}\omega_5 - 12cs^2\omega_3^3\omega_{11}^2 +$

$36v_2^2\omega_3^2\omega_5^3 + 13cs^4\omega_3^3\omega_{11}^2\omega_5 + 6v_2^2\omega_3^2\omega_{11}^3\omega_5 - 99cs^2v_2^2\omega_3^3\omega_{11}\omega_5 - cs^2\omega_3^3\omega_{11}^2\omega_5 + 36v_2^4\omega_3^3\omega_5^3 + 19v_2^4\omega_3^3\omega_{11}^2\omega_5 + 198cs^2v_2^2\omega_3^2\omega_{11}\omega_5^2 + 6cs^4\omega_3^2\omega_{11}^2\omega_5^2 -$

$108cs^2v_2^2\omega_3^2\omega_5^3 + 12cs^4\omega_3\omega_{11}\omega_5^3 + 4v_2^2\omega_3^3\omega_{11}^2\omega_5 - 36v_2^4\omega_3^3\omega_5^2 + 6cs^2\omega_3\omega_{11}^2\omega_5^3 - 36v_2^4\omega_3^2\omega_5^3 + 12cs^4\omega_3^2\omega_{11}^2 - 12cs^2\omega_3\omega_{11}\omega_5^3 - 108cs^2v_2^2\omega_3^3\omega_{11}\omega_5 +$

$6cs^4\omega_3^3\omega_{11}\omega_5^3 - 12cs^4\omega_3^2\omega_{11}\omega_5^3 - 108cs^2v_2^2\omega_3^3\omega_5^3 + 39v_2^2\omega_3^3\omega_{11}\omega_5^3 - 36v_2^2\omega_3^3\omega_5^3 - 3cs^2v_2^2\omega_3^3\omega_{11}^2\omega_5 + 36v_2^4\omega_3^3\omega_{11}^2\omega_5 + 12cs^2\omega_3^3\omega_{11}^2\omega_5 + 12cs^4\omega_{11}^2\omega_5^3 +$

$18cs^2\omega_3^3\omega_{11}\omega_5^3 - 90v_2^4\omega_3^3\omega_{11}^2\omega_5 - 72v_2^2\omega_3^3\omega_{11}\omega_5^2 + 18cs^2v_2^2\omega_3^3\omega_{11}^2\omega_5^2 + 36v_2^2\omega_3^3\omega_5^2 + 36cs^2v_2^2\omega_3\omega_{11}\omega_5^3 + 108cs^2v_2^2\omega_3^3\omega_5^3 - 6cs^4\omega_3^3\omega_{11}\omega_5^3)\frac{\rho}{12\omega_3^3\omega_{11}^2\omega_5^3}$

$C^{(2),\text{CuLBM2}}_{\text{D}_y^3\text{D}_z v_3} = (-48v_2^2\omega_3^2\omega_4^2\omega_2^3 + 16\omega_3cs^4\omega_4^3\omega_1\omega_2 - 108v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2 - 36\omega_3cs^4\omega_4^2\omega_1^2\omega_2^3 + 24v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 54v_2^4\omega_3^2\omega_1^3\omega_2^3 +$

$117v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3 - 216v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1\omega_2^3 + 24v_2^2\omega_3\omega_4^3\omega_1\omega_2 + 24v_3^2\omega_3cs^2\omega_4^2\omega_1\omega_2 - 324v_2^2\omega_3cs^2\omega_1^2\omega_2^3 - 117v_2^4\omega_3\omega_4\omega_1^3\omega_2^3 -$

$54v_2^2\omega_4^2\omega_1^3\omega_2^3 - 492v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 24v_2^4\omega_3\omega_4^3\omega_1^3\omega_2 + 20v_3^2cs^4\omega_4^2\omega_1^2\omega_2^3 + 72\omega_3^2cs^4\omega_4\omega_1\omega_2^3 + 174v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 + 576v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 +$

$216v_2^4\omega_3\omega_4^2\omega_1^2\omega_2^3 + 60v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 48v_2^4\omega_3^2\omega_4^2\omega_1^3 + 16\omega_3^2\omega_4^2\omega_1\omega_2^3 + 40\omega_3cs^4\omega_4^2\omega_1^2\omega_2 - 72v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 18\omega_3^2cs^2\omega_4\omega_1^3\omega_2^3 -$

$36v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 6v_3^2\omega_3^2cs^2\omega_4\omega_1^3\omega_2^2 + 468v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 + 144v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 492v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 - 60v_2^4\omega_3\omega_4^2\omega_1^2\omega_2^2 - 28\omega_3^2cs^4\omega_4\omega_1^3\omega_2 -$

$432v_2^2v_3^2\omega_3^2\omega_4^2\omega_2^3 + 86\omega_3^2cs^4\omega_4^2\omega_1^2\omega_2^3 + 36v_2^2\omega_4^2\omega_1^3\omega_2^2 - 40\omega_3cs^2\omega_4^2\omega_4^3 + 36v_2^4\omega_3^2\omega_4\omega_1^3\omega_2^2 - 2\omega_3cs^4\omega_4^2\omega_1^3\omega_2^2 + 48v_3^2\omega_3cs^2\omega_4^2\omega_1\omega_2^2 +$

$264v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 117v_2^4\omega_3\omega_4^2\omega_4^2\omega_1^3\omega_2 + 72v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 288v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 + 162v_2^2\omega_3cs^2\omega_1^2\omega_2^3 + 96v_2^4\omega_3^2\omega_4\omega_1\omega_2^2 + 72v_2^2\omega_3^2\omega_1^2\omega_2^3 +$

$117v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 288v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 6v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 144v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 + 48\omega_3cs^2\omega_4^2\omega_1\omega_2^3 - 288v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 108v_2^4\omega_3^2\omega_1^3\omega_2^2 -$

$96v_3^2\omega_3cs^2\omega_4^2\omega_1\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 18\omega_3cs^4\omega_4^2\omega_1^3\omega_2^3 - 288v_2^2\omega_3\omega_4^2\omega_4\omega_1\omega_2^3 + 48v_3^2\omega_3^2\omega_4^2\omega_2^3 - 36v_2^4\omega_3^2\omega_4\omega_1^2\omega_2^3 - 56\omega_3cs^4\omega_4^2\omega_1^2\omega_2 +$

$264v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3 - 16\omega_3cs^2\omega_4^2\omega_1\omega_2^3 + 108v_2^4\omega_3\omega_4^2\omega_1^3\omega_2^3 + 168v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^2 - 12v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 - 6\omega_3cs^4\omega_4^2\omega_1^3\omega_2^2 + 72v_2^2\omega_3cs^2\omega_4\omega_1^2\omega_2^3 +$

$36v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 36\omega_3cs^4\omega_4^2\omega_1^3\omega_2^2 - 297v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2^3 - 32\omega_3^2cs^2\omega_4^2\omega_1\omega_2^2 + 96v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 32\omega_3^2cs^4\omega_4^2\omega_1^3 -$

$108v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 108v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 40v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 108v_2^4\omega_3\omega_4\omega_1^3\omega_2^3 - 16\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 192v_2^4\omega_3^2\omega_4^2\omega_2^3 - 297v_2^2\omega_3^2cs^2\omega_4\omega_1^3\omega_2^3 +$

$12v_3^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^3 + 144v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 54v_2^2\omega_3^2\omega_1^3\omega_2^3 - 12v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 36\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 - 12\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^2 - 48v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 +$

$8v_2^2\omega_3^2\omega_4^2\omega_4^2\omega_1^3\omega_2^3 + 204v_2^2\omega_3^2\omega_4^2\omega_4^2\omega_1^3\omega_2 + 48v_3^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 - 108v_2^2\omega_3cs^2\omega_4\omega_1^3\omega_2^2 + 8\omega_3^2cs^2\omega_4^2\omega_2^3 - 72\omega_3^2cs^2\omega_4\omega_1\omega_2^3 + 144v_2^2v_3^2\omega_3^2\omega_4^3\omega_1 -$

$108v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1^3\omega_2 + 54v_2^4\omega_4^2\omega_1^3\omega_2^3 - 216v_2^2cs^2\omega_4^2\omega_1^2\omega_2^3 + 18\omega_3^2cs^4\omega_4\omega_1^3\omega_2^3 - 40\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 + 24v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3 +$

$144v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 36v_2^4\omega_3\omega_4\omega_1^3\omega_2^2 + 24v_3^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^2 + 108v_2^2\omega_3cs^2\omega_4\omega_1^3\omega_2 - 16\omega_3^2\omega_4^2\omega_2^3 - 144v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 72v_2^4\omega_3^2\omega_4\omega_1\omega_2^3 -$

$96v_2^2\omega_3^2\omega_4^2\omega_1^3 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 - 36v_2^2\omega_4^2\omega_1^3\omega_2^3 + 2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 324v_2^2\omega_3cs^2\omega_4\omega_1^3\omega_2^3 + 72v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2^3 + 36\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 72v_2^2\omega_3\omega_4\omega_1\omega_2^3 +$

$240v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 48v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 36\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^3 + 48v_3^2\omega_3cs^2\omega_4^2\omega_1\omega_2 - 2\omega_3^2\omega_4^2\omega_4^3 - 72v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 180v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 +$

$432v_2^2\omega_3^2cs^2\omega_4^2\omega_2^3 + 72v_2^2\omega_3cs^2\omega_4^2\omega_1\omega_2 - 24v_2^2\omega_3^2\omega_4^2\omega_1^3 - 24v_2^2\omega_3^2\omega_4^2\omega_1^3 - 144v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 72v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 172v_2^2cs^4\omega_4\omega_1^3\omega_2 +$

$648v_2^2\omega_3^2cs^2\omega_4\omega_1^3\omega_2 + 80\omega_3cs^4\omega_4^2\omega_2^3 - 180v_2^4\omega_3\omega_4\omega_1^3\omega_2 - 18\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 96v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2 - 288v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 108v_2^2cs^2\omega_4^2\omega_1^3\omega_2 +$

$108v_2^2\omega_3^2\omega_1^3\omega_2^3 + 336v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 + 96v_2^4\omega_3^2\omega_4^2\omega_1\omega_2 + 24v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 16\omega_3cs^4\omega_4^2\omega_1\omega_2^3 + 64\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 540v_2^2\omega_3cs^2\omega_4\omega_1^2\omega_2^3 -$

$86v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2 + 24v_2^2\omega_3\omega_4^2\omega_1\omega_2^3 + 38v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 36\omega_3cs^2\omega_4^2\omega_1^3\omega_2^3 - 24v_2^4\omega_3\omega_4^2\omega_1\omega_2^3 - 72\omega_3^2cs^4\omega_4\omega_1^2\omega_2^3 + 162v_2^2cs^2\omega_4^2\omega_1^3\omega_2^3 -$

$852v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 - 144v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 108v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2 - 12v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 16\omega_3cs^4\omega_4^2\omega_1\omega_2 - 288v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\text{D}_x^2\text{D}_z^2\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2}$ **:**

$C^{(2),\text{SRT}}_{\text{D}_x^2\text{D}_z^2\rho} = (-42v_1v_2^2v_3^2\omega^2 - 108v_2v_3^2cs^2\omega + 108v_1v_3^2cs^2\omega + 3v_1v_2^2v_3^2\omega^3 - 108v_1^2v_2v_3\omega - 42v_1v_3^2cs^2\omega^2 + 42v_2^2v_3^2\omega^2 + 72v_2v_3^2cs^2 +$

$42v_2v_3^2cs^2\omega^2 - 3v_1^2v_2v_3^2\omega^3 + 108v_1v_2^2v_3\omega + 3v_1v_3^2cs^2\omega^3 - 3v_2v_3^2cs^2\omega^3 + 108v_1v_2^2cs^2\omega - 72v_1v_2^2cs^2 - 3v_1^2v_2cs^2\omega^3 + 2v_2cs^4\omega^3 +$

$42v_1^2v_2cs^2\omega^2 + 72v_1^2v_2cs^2 - 4v_2cs^4\omega^2 - 108v_1^2v_2cs^2\omega + 72v_1^2v_2v_3 - 72v_1v_3^2cs^2 + 3v_1v_2^2cs^2\omega^3 - 72v_1v_2^2v_3 - 42v_1v_2^2cs^2\omega^2)\frac{1}{12\omega^3}$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 - 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 -$$
$$12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5^2 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 6v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 -$$
$$12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 + 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 +$$
$$24\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^2 + 12v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 -$$
$$12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_6cs^2\omega_5 - 6v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 -$$
$$12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5^2 - 3v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 6v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 - 6v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 -$$
$$12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 24\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}cs^4\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 48\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5 +$$
$$6v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 6\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 3v_1^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 6v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 +$$
$$48\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2 + 6v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5 + 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 6v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 - 3v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 -$$
$$12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5 - 6v_1^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 -$$
$$6v_1^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_8^2cs^2\omega_5^2 - 24\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}cs^4\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 - 3v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$28\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5 - 6v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 3v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 6\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$12v_1^2\omega_{12}v_2\omega_6^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5^2 + 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^2 + 24\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}cs^4\omega_5 -$$
$$6v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^2 + 12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 3v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$12v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 - 48\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 12v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$6v_1^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$3v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 - 48\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5 +$$
$$6v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 +$$
$$12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 6v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 3v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{12}v_2\omega_6^2v_3^2\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5 +$$
$$12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 12v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 12v_1\omega_{12}\omega_6^2v_3^2\omega_7\omega_{14}\omega_8cs^2\omega_5^2 + 12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 +$$
$$6v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 3v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1\omega_{12}\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$24\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5 + 12\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$6v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 6v_1v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 + 6v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 3\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5 - 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5^2 +$$
$$6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 - 3v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 - 24\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5 -$$
$$6v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8cs^2\omega_5 - 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 24\omega_{12}v_2\omega_6^2\omega_{19}\omega_{20}\omega_{14}\omega_8cs^4\omega_5^2 - 6v_1\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$24\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5 - 6v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 - 6v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2\omega_7\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$6v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 + 2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^2 +$$
$$12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 24\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4 + 6v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 + 3v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 +$$
$$6v_1\omega_{12}\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 3\omega_{12}v_2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$6v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 3v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12v_1v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 +$$
$$24\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2cs^2\omega_5 + 6\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$12v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 3v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 12v_1v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5 -$$
$$12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2cs^2\omega_5 - 12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5 -$$
$$24\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4 - 3v_1\omega_{12}v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5 -$$
$$12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_7\omega_{14}\omega_8cs^2\omega_5 - 3v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 +$$
$$6v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5 - 6v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 12v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 -$$
$$12\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 3v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5^2 +$$
$$12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - 6v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5) \dfrac{1}{12\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_z^2\rho} = (3cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 + 3v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5^2 - 48cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 + 12cs^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 +$$
$$12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 12v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 + 12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2cs^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 3v_1cs^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$12v_1cs^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 3v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$6v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 - 12v_1cs^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 +$$
$$24cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5^2 + 48cs^4\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 24cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 + 12v_1cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 +$$
$$6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 6cs^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 - 6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 + 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$6v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 3v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 3v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 48cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5^2 + 3v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 3v_1cs^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 6v_1cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 28cs^4\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 24cs^4\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 +$$
$$3cs^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 - 24cs^4\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8 +$$

$$12v_1^2cs^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 48cs^4\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6v_1cs^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$3v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2cs^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5^2 - 12cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$6v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 24cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8 - 6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 6cs^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 -$$
$$6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5^2 + 24cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12v_1cs^2\omega_{12}v_2\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$6v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12v_1cs^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^2 +$$
$$12v_1^2cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 3v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$6v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 + 2cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 12v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$24cs^4\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 +$$
$$3v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1^2cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$6v_1v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 12v_1cs^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 24cs^4\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$6v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 24cs^4\omega_{12}v_2\omega_6\omega_{19}\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 6v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 6v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 6v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$24cs^4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 12v_1\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 - 12v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$6v_1cs^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 6cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$3v_1cs^2v_2\omega_6^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12v_1v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 3v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 12v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5 -$$
$$6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 3cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 6v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 + 6v_1cs^2\omega_{12}\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6v_1cs^2\omega_{12}\omega_6^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$6v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 - 24cs^4\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 12cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 -$$
$$6v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 6v_1^2cs^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 6v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 12v_1^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$12v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 + 6v_1cs^2v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 3v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$6v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12v_1^2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 3v_1v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$6v_1cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_6^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5)\frac{1}{12\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2}$$

$C^{(2),\text{CLBM1}}_{\text{D}_x^2\text{D}_z^2\rho} = (-4\omega_{12}v_2\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_1\omega_{12}v_2^2\omega_6v_3^3\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 3v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$
$12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{14}\omega_5 - 12v_1\omega_{12}v_2^2\omega_6v_3^3\omega_{19}\omega_{20}\omega_5 - 3v_1\omega_6v_3^3\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 -$
$6v_2\omega_6v_3^3\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 6v_1v_2\omega_6v_3^3\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 12v_1\omega_{12}v_2^2\omega_6v_3^3\omega_{19}\omega_7\omega_{20}\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{14}\omega_8\omega_5 +$
$3v_2\omega_6v_3^3\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1^2v_2\omega_6v_3^3\omega_{19}\omega_7\omega_{20}\omega_8 + 3\omega_{12}v_2\omega_6v_3^3cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_{12}v_2\omega_6v_3^3\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 3v_1v_2\omega_6v_3^3\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} + 6v_1\omega_{12}v_2^2\omega_6v_3^3\omega_{19}\omega_7\omega_{14}\omega_8 +$
$6v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_{20}\omega_8\omega_5 - 12v_1\omega_{12}v_2\omega_6v_3^2\omega_7\omega_{14}\omega_8\omega_5 + 3v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 6\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_8\omega_5 -$
$6v_1^2v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{14} + 12v_1^2v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20} - 12v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{14} +$
$12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8 + 12\omega_{12}v_2\omega_6v_3^2cs^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14} +$
$6\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5 - 12v_1v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8 - 6v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 -$
$6v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5 - 12v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + 6v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{20}\omega_5 +$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 - 6v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5 - 6v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 3v_1^2v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} + 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_8\omega_5 - 6v_1^2v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 6v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{14}\omega_8 -$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_5 -$
$3v_1\omega_{12}v_2\omega_6v_3^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_7\omega_{14}\omega_8\omega_5 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_5 + 6v_1\omega_{12}v_2^2\omega_6cs^2\omega_7\omega_{14}\omega_8\omega_5 +$
$6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6cs^2\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{14}\omega_5 -$
$3v_1\omega_{12}v_2^2\omega_6cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 - 3v_1\omega_{12}v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 -$
$6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 3v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{14} + 6v_1\omega_{12}v_2^2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 + 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 +$
$12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20} - 12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 + 12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 +$
$6v_1\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{14} - 6v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 2\omega_{12}v_2\omega_6\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$
$12v_1\omega_{12}v_2\omega_6v_3^2cs^2\omega_7\omega_{20} + 12v_1\omega_{12}v_2\omega_6v_3^2cs^2\omega_7\omega_{14}\omega_5 + 12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20} - 6v_1^2\omega_{12}v_2\omega_6cs^2\omega_7\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_5 -$
$6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 - 6\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_8\omega_5 - 6v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 +$
$6v_1v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 - 12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{14}\omega_5 - 12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 +$
$12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20} + 6\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{14}\omega_5 + 12v_1^2\omega_{12}v_2\omega_6cs^2\omega_{14}\omega_8\omega_5 -$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 + 6v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_1\omega_{12}v_2\omega_6cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$
$3v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 - 6v_1^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 +$
$12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 + 6v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_8\omega_5 - 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$12v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_5 - 12v_1v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_5 - 12v_1\omega_{12}v_2^2\omega_6cs^2\omega_7\omega_{14}\omega_8 -$
$6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 3v_1^2\omega_{12}v_2\omega_6v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} - 12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 + 3v_1^2\omega_{12}v_2\omega_6cs^2\omega_7\omega_{20}\omega_{14}\omega_5 - 12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 +$
$12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 - 6v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{20}\omega_8\omega_5 + 12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20} -$
$6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_8 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} - 3v_1v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{14} +$
$6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 6\omega_{12}v_2\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_8 - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_{14}\omega_5 +$
$6v_1\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{14}\omega_8 - 3\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_1^2v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{12}v_2\omega_6v_3^2cs^2\omega_7\omega_{14}\omega_8\omega_5 -$

$$12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_5 + 12v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_5 - 6v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_5 +$$
$$6v_1\omega_{12}\omega_6v_3^2cs^2\omega_7\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_7\omega_{14}\omega_5 + 6v_1v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 3v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_8 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 - 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{14}\omega_8\omega_5 + 6v_1v_2\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 +$$
$$12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_{14}\omega_8\omega_5 + 6v_1\omega_6v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 6v_1\omega_{12}\omega_6v_3^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_5 +$$
$$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}\omega_5 - 6v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 - 12v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_5)\frac{1}{12\omega_{12}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5}$$

$C^{(2),\text{CLBM2}}_{\text{D}_x^2\text{D}_z^2\rho} = (-4\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_8\omega_5 + 12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} - 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 -$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_5 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 + 12v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 6v_1^2v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 +$
$12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7cs^2\omega_{14} + 6v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_5 + 6\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 -$
$12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7cs^2 + 12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{14}\omega_5 + 3v_1^2\omega_{12}v_2\omega_6\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 +$
$12v_1^2v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 - 12v_1\omega_{12}v_2^2\omega_6cs^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - 12v_1\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 +$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{14}\omega_8\omega_5 + 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_8 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_5 - 6v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 -$
$12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 + 6v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_{20}cs^2\omega_8\omega_5 - 12v_1\omega_{12}\omega_6v_3^2\omega_{19}cs^2\omega_{14}\omega_5 + 6\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$12\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 + 12v_1\omega_{12}v_2\omega_6v_3^2\omega_{19}cs^2\omega_{14}\omega_5 + 12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 - 3v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14} - 12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} + 6v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7\omega_{14} + 12\omega_{12}v_2\omega_6v_3^2cs^2\omega_{14}\omega_8\omega_5 -$
$12v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + 6v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{14}\omega_8 + 12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_5 + 12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2 +$
$12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_{20}cs^2\omega_5 + 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 - 6v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2 -$
$6v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 + 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} - 6v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_8\omega_5 -$
$12v_1\omega_{12}\omega_6v_3^2cs^2\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{14}\omega_8\omega_5 + 6v_1v_2^2\omega_6\omega_{20}cs^2\omega_{14}\omega_8\omega_5 +$
$6v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_{14}\omega_5 + 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_7\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 +$
$6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} - 6v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 -$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{14}\omega_5 + 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 - 3v_1\omega_{12}v_2^2\omega_6v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 3\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_6\omega_5 - 3v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 6v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 +$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 + 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1^2v_2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8 -$
$12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20} - 6v_1^2v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - 6v_1^2\omega_{12}v_2\omega_6\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 3v_1v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 +$
$2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_8\omega_5 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}cs^2\omega_{14}\omega_8\omega_5 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} + 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20} + 12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 + 3v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_7\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + 12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 - 12v_1v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8 + 6v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 + 12v_1^2\omega_{12}v_2\omega_6\omega_{19}cs^2\omega_{14}\omega_5 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8 + 12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_5 +$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{14}\omega_5 - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 - 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_8\omega_5 +$
$6v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8 + 6v_1\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - 12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 - 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 -$
$6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 + 3v_1v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_{12}v_2\omega_6\omega_7cs^2\omega_{14}\omega_8\omega_5 + 12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{14} -$
$12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 - 6v_1^2v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 6v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7cs^2\omega_{14}\omega_8 - 3v_1\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$6v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - 12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 - 6v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 + 6v_1v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 +$
$6v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 - 12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{14} - 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}\omega_8\omega_5 + 3v_1^2\omega_{12}v_2\omega_6v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$
$3\omega_{12}v_2\omega_6v_3^2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 3v_1^2v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} +$
$6\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_{20}cs^2\omega_5 + 3v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 6v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8 -$
$6v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 + 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_5 - 3v_1\omega_{12}\omega_6v_3^2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{14}\omega_8 +$
$6v_1v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - 3v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 12v_1^2v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8 - 3v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{14} +$
$6v_1\omega_{12}\omega_6v_3^2\omega_7cs^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 6v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7cs^2\omega_8\omega_5 + 6\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8 +$
$6v_1\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - 6v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - 6\omega_{12}v_2\omega_6v_3^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 3v_1\omega_{12}v_2^2\omega_6\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$6v_1^2v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 12v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 + 12\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_5 +$
$12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2 + 12v_1^2\omega_{12}v_2\omega_6cs^2\omega_{14}\omega_8\omega_5 + 6v_1\omega_{12}\omega_6v_3^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 3v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$
$12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 - 12v_1\omega_{12}v_2^2\omega_6v_3^2\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6\omega_{19}\omega_7cs^2\omega_{14}\omega_5 + 3v_1^2v_2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$6\omega_{12}v_2\omega_6v_3^2\omega_7cs^2\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_5 + 12v_1^2\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_{20}\omega_5 - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 -$
$12v_1\omega_{12}\omega_6v_3^2\omega_{19}\omega_{20}cs^2\omega_5 - 12v_1\omega_{12}v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{14} - 6\omega_{12}v_2\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8)\frac{1}{12\omega_{12}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5}$

$C^{(2),\text{CuLBM1}}_{\text{D}_x^2\text{D}_z^2\rho} = (-2 + \omega_2)\frac{cs^4 v_2}{6\omega_2}$

$C^{(2),\text{CuLBM2}}_{\text{D}_x^2\text{D}_z^2\rho} = (2cs^2\omega_1 - 3v_1^2\omega_2 + 3v_3^2\omega_1 - 14cs^2\omega_2 - 2\omega_1 - 3v_3^2\omega_2 + 6cs^2\omega_1\omega_2 + 3v_1^2\omega_1 + 2\omega_2)\frac{v_2cs^2}{36\omega_1\omega_2}$

coefficient $C^{(2)}_{\text{D}_x^2\text{D}_z^2 v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2\partial x_3^2}$:

$C^{(2),\text{SRT}}_{\text{D}_x^2\text{D}_z^2 v_1} = (-2v_1v_2cs^2\omega^3 - 24v_2^2cs^2 + 48v_1v_2v_3^2 + v_2^2v_3^2\omega^3 + 36v_3^2cs^2\omega - 14v_2^2v_3^2\omega^2 + 28v_1v_2cs^2\omega^2 + v_3^2cs^2\omega^3 + 36v_2^2v_3^2\omega - 24v_3^2cs^2 -$
$72v_1v_2cs^2\omega + 48v_1v_2cs^2 - 24v_2^2v_3^2 - 14v_3^2cs^2\omega^2 - 72v_1v_2v_3^2\omega + 36v_2^2cs^2\omega + 28v_1v_2v_3^2\omega^2 - 14v_2^2cs^2\omega^2 + v_2^2cs^2\omega^3 - 2v_1v_2v_3^2\omega^3)\frac{\rho}{4\omega^3}$

$C^{(2),\text{MRT1}}_{\text{D}_x^2\text{D}_z^2 v_1} = (-8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^2 + 4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - \omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$
$8v_1\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8cs^2\omega_5^2 + 8v_1\omega_9\omega_{12}v_2v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$
$8v_1\omega_9\omega_{12}v_2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4v_1\omega_9\omega_{12}v_2\omega_6\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$
$2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5 - 8v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$

$$
\begin{aligned}
&4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 - 4v_1\omega_9v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + \\
&4v_1\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + 4v_1\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{19}\omega_{13}\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2 + 4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - 8v_1\omega_9\omega_{12}v_2\omega_{19}v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 + \\
&4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^2 + 2v_1\omega_9\omega_{12}v_2v_2\omega_6^2v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + \\
&\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8 cs^2\omega_5^2 + 8v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5 + \omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&8v_1\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 + 12v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + \\
&2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_9v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 - 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 - \\
&4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&6v_1\omega_9\omega_{12}v_2v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 + 4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&8v_1\omega_9\omega_{12}v_2v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_{14}\omega_8 cs^2\omega_5^2 - 4v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - \\
&4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 + 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2 - \\
&4v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - \omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + \\
&8v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + 8v_1\omega_9v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 8v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 8v_1\omega_9\omega_{12}v_2v_2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5 - \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 + 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2 cs^2\omega_5^2 + 8v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5 - 2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_9\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5 - \\
&2v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 - 4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 + 2\omega_9\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&2v_1\omega_9v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 4v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14} cs^2\omega_5 - \\
&4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 cs^2\omega_5^2 + 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - 4v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + \\
&6v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5^2 + \\
&4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 4v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&4v_1\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 - 8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 + \\
&8v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + 8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + \\
&2v_1\omega_9v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5 + \\
&4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_5 + 2\omega_9v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 + \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - 8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 12v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - \\
&4v_1\omega_9v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_9\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2\omega_5^2 + \\
&4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 + 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 - 4v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5 - \\
&2\omega_9v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 8v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + \\
&4v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2\omega_5 - \\
&4\omega_9\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 4v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14} cs^2\omega_5 - \\
&4\omega_9v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4v_1\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 16v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&\omega_9v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4v_1\omega_9\omega_{12}v_2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 - \\
&\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5 - \\
&\omega_9v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 + 2\omega_9\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5 - \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 20v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_9\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2 cs^2\omega_5 + \\
&4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2 + 8v_1\omega_9v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 + \\
&4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 cs^2\omega_5^2 + \\
&2\omega_9\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2 cs^2\omega_5^2 - 4v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2v_3^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 - 4v_1\omega_9v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 - 4v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 + \\
&4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 4v_1\omega_9v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_9v_2^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \\
&4v_1\omega_9\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 cs^2\omega_5 - 8v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 8v_1\omega_9\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2\omega_5^2 - \\
&8v_1\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5 - 4\omega_9\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8 cs^2\omega_5\Big) \frac{\rho}{4\omega_9\omega_{12}\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2}
\end{aligned}
$$

$$
\begin{aligned}
C^{(2),\text{MRT2}}_{\text{D}_x^2 \text{D}_z^2 v_1} = \big(&-8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5^2 - 4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_5^2 - \omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&8v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&2v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - \omega_9 cs^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + \\
&4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 8v_1 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + \omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - \\
&4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 - 4v_1\omega_9v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - \\
&2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9 cs^2v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + \\
&4\omega_9 cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_9 cs^2\omega_{12}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + \\
&4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 2v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 + \\
&4\omega_9 cs^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 8v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 - 4v_1\omega_9 cs^2v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + \\
&4v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - \\
&4\omega_9 cs^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 + \omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 8v_1\omega_9 cs^2\omega_{12}v_2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - \\
&4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 2\omega_9 cs^2v_2^2\omega_6^2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + \\
&8v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 8v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + \\
&8v_1\omega_9\omega_{12}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 2\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - \\
\end{aligned}
$$

$$4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 + 4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 8v_1\omega_9 cs^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 - 4\omega_9 cs^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$2\omega_9 cs^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 + 4v_1\omega_9 cs^2 v_2\omega_6^2 v_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 2\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$8v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 8v_1\omega_9 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5^2 + 2\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5^2 + 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 8v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$8v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 +$$
$$4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 + 8v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 -$$
$$8v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - \omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - \omega_9 cs^2 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$2v_1\omega_9 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_5 - 4v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 + 8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 8v_1 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 6v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$20v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_9 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 + 2v_1\omega_9 cs^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 6v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$\omega_9 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 12v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8^2\omega_5 +$$
$$12v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 8v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$4v_1\omega_9 cs^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_9 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 - 4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4v_1 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$4v_1\omega_9 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 8v_1\omega_9\omega_{12}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2\omega_9 cs^2 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 2\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$4v_1\omega_9 cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 - 4\omega_9 cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 16v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_9 cs^2\omega_{12}\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_8\omega_5 - 8v_1\omega_9 cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5\Big)\frac{\rho}{4\omega_9\omega_{12}\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_x^2\text{D}_y^2 v_1} =$$
$$(-4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 - \omega_{12}v_3^2 cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_{20}\omega_5 - 8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 -$$
$$2\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 - v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} -$$
$$2\omega_{12}v_3^2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_3^2\omega_{19}cs^2\omega_{20}\omega_8\omega_5 - 4\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{14} - 2\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_{12}v_3^2\omega_{19}cs^2\omega_{20}\omega_5 +$$
$$4\omega_{12}v_3^2 v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 + 2v_3^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_5 - 4\omega_{12}v_3^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 -$$
$$\omega_{12}v_2^2 v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 - 4v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 - 2\omega_{12}v_3^2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 +$$
$$4v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} - 4\omega_{12}v_3^2\omega_{19}\omega_{14}\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_5 - 4\omega_{12}v_2^2 cs^2\omega_{14}\omega_8\omega_5 -$$
$$4v_1 v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_8\omega_5 - 4v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{12}v_3^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 8v_1 v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} +$$
$$2v_1\omega_{12}v_2 v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_8 + 4v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_{20}\omega_8\omega_5 + 2v_1\omega_{12}v_2 cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1 v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{12}v_3^2\omega_{19}cs^2\omega_{14}\omega_5 + 2\omega_{12}v_3^2 cs^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_5 +$$
$$\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_{20}\omega_5 - 8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + 2v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20} -$$
$$2\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 4\omega_{12}v_2^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2 cs^2\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 - 4v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_{14}\omega_5 - 4v_1\omega_{12}v_2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2 cs^2\omega_7\omega_{14}\omega_8 + 8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 -$$
$$8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 - 2v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20} - 4v_1\omega_{12}v_2 cs^2\omega_7\omega_{14}\omega_{14}\omega_5 - 4v_1\omega_{12}v_2 v_3^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_5 + 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14} + 2v_1\omega_{12}v_2 cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 - 4\omega_{12}v_2^2 cs^2\omega_7\omega_{14}\omega_5 - 2v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_2^2\omega_{19}cs^2\omega_{20}\omega_8\omega_5 + 2\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{14}\omega_8 +$$
$$2v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 4\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} - 8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 + 2v_1 v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{20} + 4\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 - 4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{14} - v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$2v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 4\omega_{12}v_2^2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 - 4v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 + 8v_1 v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 - 2\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$4\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{14}\omega_5 + 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_5 - 4v_1 v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{12}v_2^2 v_3^2\omega_{14}\omega_8\omega_5 +$$
$$\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2^2 v_3^2\omega_7\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_8 + 2\omega_{12}v_2^2 v_3^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_5 +$$
$$8v_1\omega_{12}v_2 v_3^2\omega_{19}\omega_7\omega_{14} + 2\omega_{12}v_2^2 cs^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 4v_1 v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20} -$$
$$8v_1 v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + 2v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{12}v_2^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 + 2\omega_{12}v_2^2 v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 - 2\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 - 4v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_5 + 4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 +$$
$$8v_1\omega_{12}v_2 v_3^2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + \omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_2^2 v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{14} - 4\omega_{12}v_2^2\omega_{19}cs^2\omega_{20}\omega_5 + 2\omega_{12}v_2^2\omega_{19}cs^2\omega_7\omega_{14}\omega_8 - 4\omega_{12}v_3^2 cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_2^2 v_3^2\omega_{19}\omega_{20}\omega_8\omega_5 - 2\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} - 2\omega_{12}v_2^2 v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 + 2v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8)\frac{\rho}{4\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5}$$

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$$C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1}^{(2),\mathrm{CLBM2}} = (-4\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + 8v_1v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 - 2\omega_{12}v_2^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_{20}\omega_5 -$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_5 - 2\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_5 - 4v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 + 2\omega_{12}v_3^2\omega_{19}\omega_{20}cs^2\omega_8\omega_5 +$$
$$8v_1\omega_{12}v_2cs^2\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2 + \omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 - 4\omega_{12}v_3^2\omega_{19}\omega_{20}cs^2\omega_5 -$$
$$2\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} + 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 + 2v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20} +$$
$$4\omega_{12}v_2^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_5 - \omega_{12}v_2^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 -$$
$$4v_1\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_8\omega_5 + 4\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_{14}\omega_5 - 4v_1v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8 - 4\omega_{12}v_2^2\omega_{19}cs^2\omega_{14}\omega_5 + 4\omega_{12}v_3^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 - 4\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} +$$
$$\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 2v_1\omega_{12}v_2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_{20}\omega_8\omega_5 - 4\omega_{12}v_2^2cs^2\omega_{14}\omega_8\omega_5 -$$
$$4v_1v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 4v_1\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 + \omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_8 - 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_{20}\omega_5 -$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + 2v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4v_1\omega_{12}v_2\omega_7cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_3^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$4\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14} - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 - 4v_1\omega_{12}v_2v_3^2\omega_{20}\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_{14}\omega_5 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_5 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 + 4v_1\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20} +$$
$$2\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8 - 4v_1\omega_{12}v_2v_3^2\omega_7\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}v_2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_3^2\omega_7cs^2\omega_{14}\omega_8\omega_5 + 2v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 +$$
$$4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_2^2\omega_{19}\omega_{20}cs^2\omega_8\omega_5 - 2v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_8 - 4\omega_{12}v_3^2cs^2\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8 - 4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2 - 4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 - \omega_{12}v_2^2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} + 4v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 +$$
$$2v_1v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 - 4v_1v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{14} -$$
$$v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - \omega_{12}v_3^2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 4\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 + 4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 - 2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 +$$
$$4\omega_{12}v_2^2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 - 4\omega_{12}v_2^2\omega_{19}\omega_7cs^2\omega_{14} + 2v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_5 +$$
$$4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} + 4\omega_{12}v_2^2\omega_{19}\omega_7cs^2\omega_{14}\omega_5 - 4\omega_{12}v_2^2v_3^2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{12}v_2^2v_3^2\omega_7\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{14} - 2v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_2^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 +$$
$$8v_1v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_5 - 2\omega_{12}v_2^2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8 + 2v_1v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$$
$$8v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_5 - 4v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + 2v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 + 4\omega_{12}v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_5 + 8v_1v_2v_3^2\omega_{14}\omega_8\omega_5 +$$
$$4\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8 + 2v_1\omega_{12}v_2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{12}v_2^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8 - 2\omega_{12}v_2^2v_3^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{12}v_2^2\omega_{19}\omega_{20}cs^2\omega_5 - 4v_1v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_2^2\omega_7cs^2\omega_{14}\omega_8\omega_5 + 2v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 +$$
$$8v_1\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14} + 2\omega_{12}v_2^2v_3^2\omega_{19}\omega_{20}\omega_8\omega_5 - 4\omega_{12}v_3^2\omega_{19}cs^2\omega_{14}\omega_5 + 4\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14} - 2\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 +$$
$$4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_5 - 2\omega_{12}v_2^2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5)\frac{\rho}{4\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5}$$

$$C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1}^{(2),\mathrm{CuLBM1}} = 0$$

$$C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_1}^{(2),\mathrm{CuLBM2}} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{\rho v_1 v_2}{36\omega_1\omega_2}$$

coefficient $C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_2}^{(2)}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2 \partial x_3^2}$:

$$C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_2}^{(2),\mathrm{SRT}} = (2v_1v_2cs^2\omega^3 - 48v_1v_2v_3^2 - 36v_3^2cs^2\omega - 36v_1^2cs^2\omega - 28v_1v_2cs^2\omega^2 - v_3^2cs^2\omega^3 + 24v_3^2cs^2 + 72v_1v_2cs^2\omega + 14v_1^2cs^2\omega^2 - 48v_1v_2cs^2 -$$
$$8cs^4 + 14v_3^2cs^2\omega^2 - v_1^2cs^2\omega^3 - v_1^2v_3^2\omega^3 + 24v_1^2v_3^2 + 72v_1v_2v_3^2\omega - 4cs^4\omega^2 + 14v_1^2v_3^2\omega^2 - 36v_1^2v_3^2\omega - 28v_1v_2v_3^2\omega^2 + 24v_1^2cs^2 + 12cs^4\omega + 2v_1v_2v_3^2\omega^3)\frac{\rho}{4\omega^3}$$

$$C_{\mathrm{D}_x^2\mathrm{D}_z^2 v_2}^{(2),\mathrm{MRT1}} =$$
$$(4v_1\omega_{12}v_2\omega_7^3\omega_{14}\omega_8^2cs^2\omega_5^3 + 4v_1v_2v_3^2\omega_{19}\omega_3^2\omega_{20}\omega_8\omega_5^3 - 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{14}\omega_8cs^2\omega_5^3 + 4\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8^2cs^4\omega_5^3 - 4v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}cs^2\omega_5^3 -$$
$$2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3 - 4v_1^2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_3^2\omega_{20}\omega_8\omega_5^3 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_3^2\omega_{20}\omega_8\omega_5^2 -$$
$$4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 2v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2cs^2\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_3^2\omega_{14}\omega_8\omega_5^3 - 8v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 -$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}\omega_7^3\omega_{14}\omega_8^2cs^4\omega_5^3 - 2v_1\omega_{12}v_2v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 - 2v_1^2\omega_{12}\omega_7^3\omega_{14}\omega_8^2cs^2\omega_5^3 - 4v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{14}\omega_8^2cs^2\omega_5^3 +$$
$$4\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8cs^4\omega_5^3 - 16v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3 - 2v_1^2v_3^2\omega_{19}\omega_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3 +$$
$$4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8cs^2\omega_5^2 - 2v_1^2\omega_{12}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 4v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_3^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 - \omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 - 2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5^3 +$$
$$4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}cs^2\omega_5^2 + 4\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2 + 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8cs^2\omega_5^2 + 6v_1^2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 2v_1^2\omega_{12}v_3^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 -$$
$$8v_1v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 - 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8cs^2\omega_5^3 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 + 4\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3 + 8v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 +$$
$$4v_1\omega_{12}v_2\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3 + v_1^2v_3^2\omega_{19}\omega_3^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8cs^4\omega_5^2 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_3^2\omega_{14}\omega_8\omega_5^2 + 8\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 + 2v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^3 + v_1^2\omega_{12}v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$$
$$4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5 + 4v_1\omega_{12}v_2v_3^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}cs^2\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 8v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 +$$
$$2\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^4\omega_5^3 - 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2 + v_1^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^3 - 12\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^2 -$$
$$4v_1^2v_3^2\omega_{19}\omega_3^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2v_3^2\omega_7^3\omega_{14}\omega_8\omega_5^3 - 8v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 16\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 -$$
$$8v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8cs^2\omega_5^2 + 4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_8cs^4\omega_5^2 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4\omega_{12}v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2\omega_{12}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^2 +$$
$$2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3 + 8v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_8^2cs^2\omega_5^3 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 -$$
$$4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_8cs^4\omega_5^3 + 4v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^3\omega_5^3 - 4\omega_{19}\omega_7^2\omega_{20}\omega_8^2cs^4\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 - 2v_1^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 -$$
$$4\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8cs^2\omega_5^3 + 8v_1^2\omega_{12}\omega_{19}\omega_7\omega_{14}\omega_8cs^2\omega_5^2 - 2\omega_{12}v_3^2\omega_7\omega_{20}\omega_{14}\omega_8cs^2\omega_5 - 2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^4\omega_5^3 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^3 +$$
$$8v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^3 -$$
$$2v_1\omega_{12}v_2v_3^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^3 - 12v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 - 4v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 -$$
$$2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^2\omega_5^3 - v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5 + 4v_1v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 +$$
$$8v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8cs^2\omega_5^2 - 4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_8cs^4\omega_5^2 + 2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 8v_1v_2\omega_{19}\omega_{20}\omega_8^2cs^2\omega_5^2 +$$
$$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + v_1^2\omega_{12}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 2v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 4v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^2\omega_5^2 +$$

$4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^3 + 4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^4\omega_5^3 + 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5^3 +$
$2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_8^2cs^4\omega_5^3 + 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}cs^2\omega_5^3 +$
$8\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_{14}\omega_8^2cs^2\omega_5^2 - 4v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^2\omega_5^3 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 + 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8cs^4\omega_5^3 -$
$2v_1v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^2 - 12\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5^2 - 2v_1v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 +$
$\omega_{12}v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 - 4\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 + 4v_1\omega_{12}v_2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2\omega_{12}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^3 +$
$8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^3 - 4\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8cs^4\omega_5^3 - 4\omega_{12}\omega_7^2\omega_{14}\omega_8^2cs^4\omega_5^3 + 4v_1^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^2\omega_5^2 +$
$v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 + 2v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_8^2\omega_5^2 +$
$2v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{12}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3 + 8v_1\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8cs^2\omega_5^3 - 2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2cs^4\omega_5^3 - 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 -$
$8v_1\omega_{12}v_2\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^3 + 4v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8cs^2\omega_5^2 - 8\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}cs^2\omega_5^3 -$
$4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8^2cs^2\omega_5^3 - 2v_1^2\omega_{12}v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 +$
$4v_1v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5 - 2\omega_{12}v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 + 4\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^2\omega_5^3 +$
$4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^2 + 8\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 - 4v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8cs^2\omega_5^3 +$
$4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8^2cs^2\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{14}\omega_8cs^2\omega_5^2 + 2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2cs^4\omega_5^2 - 4v_1^2\omega_{12}\omega_{19}\omega_{20}\omega_{14}\omega_8cs^2\omega_5^3 +$
$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - 2v_1^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - v_1^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$
$2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^4\omega_5^3 - 2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^2 - 2v_1^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2\omega_5^3 + 2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2cs^2\omega_5^3)\dfrac{\rho}{4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_2} = (4v_1cs^2\omega_{12}v_2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4v_1v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 + 8cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 -$
$4v_1^2\omega_{12}v_3^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - 4cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^3 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$
$4v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 4cs^4\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 2cs^4\omega_{12}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 -$
$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 - 2v_1v_2v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 2v_1^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 8cs^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$
$4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^3 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^2 + 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 +$
$8v_1\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - 12cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^2 - 8cs^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 2v_1^2\omega_{12}v_3^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 -$
$8v_1v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 + 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5^3 -$
$8v_1cs^2\omega_{12}v_2\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 2cs^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + v_1^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^2 +$
$2cs^4\omega_{19}\omega_7^2\omega_{20}\omega_8^3\omega_5^3 + 4v_1cs^2\omega_{12}v_3^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2v_3^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 4cs^4\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 2cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 +$
$4v_1\omega_{12}v_3^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2v_3^2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 4cs^4\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 2v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$
$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 2cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$
$4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_8^2\omega_5^2 + 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 + v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 2cs^4\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 2cs^2\omega_{12}v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$
$8v_1\omega_{12}v_2v_3^2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5 +$
$4v_1^2cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4v_1cs^2\omega_{12}v_2\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 +$
$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^2 - 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_5^3 - 12v_1^2cs^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 +$
$4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 - 2cs^4\omega_{12}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 2cs^4\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$
$4v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5 - 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 + 2v_1^2cs^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_5 -$
$4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 + 8cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 - 2cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^3 -$
$4v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_8^2\omega_5^3 + 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 - 4v_1^2cs^2\omega_{12}\omega_{19}\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4cs^2\omega_{12}v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 -$
$4cs^4\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 + 4v_1cs^2v_2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^3 + cs^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$
$2cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 - 4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 - v_1^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_5^3 + cs^2\omega_{12}v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$
$2cs^2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 2v_1^2cs^2\omega_{12}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 2v_1^2cs^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4cs^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - 4v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$
$2cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 12cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 16v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 - 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$
$4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - 4v_1^2cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 - 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 2v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5 - 2v_1^2cs^2\omega_{12}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 +$
$v_1^2cs^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 2cs^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 2cs^2\omega_{12}v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$
$4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 8v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 +$
$4v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 8v_1cs^2v_2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 - 2cs^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$
$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 6cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5 + 4cs^4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 + 6v_1^2cs^2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^3 -$
$2v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 + 4cs^4\omega_{12}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 2cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$
$8v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 2v_1v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 4v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 -$
$2v_1cs^2v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8\omega_5^3 + 4v_1\omega_{12}v_2v_3^2\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 - 16cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^3 +$
$2v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4v_1^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 8v_1^2cs^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 - 4cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 +$
$2cs^2v_3^2\omega_{12}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5 - 8v_1cs^2\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^3 + 8cs^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 +$
$8v_1^2cs^2\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{12}v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 4cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4cs^4\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 +$
$4v_1v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^3 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 + 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5^3 +$
$4v_1cs^2v_2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^2 - cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 +$
$4v_1^2cs^2\omega_{12}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 - 4v_1^2cs^2\omega_{12}\omega_{19}\omega_7^2\omega_{14}\omega_8^2\omega_5^3 + 8v_1cs^2\omega_{12}v_2\omega_{19}\omega_7^3\omega_{14}\omega_8\omega_5^3 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{14}\omega_8^2\omega_5^3 -$
$2v_1^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5^3 - 2cs^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5^3 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4cs^2\omega_{12}v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2)\dfrac{\rho}{4\omega_{12}\omega_{19}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^3}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_2} = (-8v_1\omega_{12}v_2v_3^2\omega_7\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_5^2 - 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5 - 8v_1\omega_{12}v_2cs^2\omega_7\omega_{14}\omega_8\omega_5^2 +$
$4\omega_{12}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{14}\omega_5^2 - 2v_1\omega_{12}v_2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_5 - 2v_1\omega_{12}v_2cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$
$4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_5 - 4\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_5^2 + 4\omega_{12}\omega_{19}cs^4\omega_{20}\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{14}\omega_5^2 +$
$4v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_7\omega_{14}\omega_8\omega_5^2 + 4v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5 + 4v_1^2\omega_{12}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 +$
$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5^2 - 2v_1^2\omega_{12}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 + 2\omega_{19}cs^4\omega_7^2\omega_{20}\omega_8\omega_5^2 -$
$2v_1^2\omega_{12}v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5^2 - 2\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8 - 8v_1v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_5^2 -$
$2\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_8\omega_5^2 - 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_3^2cs^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$

$$8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5 + 4v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 - 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_5 + v_1^2\omega_{12}v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$2v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 + 4\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_5^2 + 4v_1\omega_{12}v_2cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$2\omega_{12}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 + 4v_1v_2v_3\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 + 2\omega_{12}cs^4\omega_7^2\omega_{14}\omega_8\omega_5 - 4\omega_{12}\omega_{19}cs^4\omega_7\omega_{20}\omega_5^2 -$$
$$4v_1^2\omega_{12}\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 - 2v_1v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_5 + \omega_{12}v_3^2cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_5^2 +$$
$$4v_1v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_8\omega_5 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^2 +$$
$$4v_1v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5^2 - 2v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{12}\omega_{19}cs^4\omega_7\omega_{14}\omega_5^2 + v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5^2 -$$
$$4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 2v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 + 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_5^2 - 2v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_5^2 -$$
$$4\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5^2 - 4\omega_{19}cs^4\omega_7^2\omega_{20}\omega_8\omega_5 + 4\omega_{12}\omega_{19}cs^4\omega_7\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_5^2 - 2\omega_{12}v_3^2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$2v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_5^2 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_5^2 - 2\omega_{12}\omega_{19}cs^4\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$4\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_5 - v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7\omega_{14}\omega_5^2 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5^2 - 4\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_5 -$$
$$4\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_5^2 - 2\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 2v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 2\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{12}cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2 -$$
$$4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_{12}v_3^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - 2\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$4\omega_{12}\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_5^2 + 4v_1\omega_{12}v_2cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2 + 4v_1v_2v_3^2\omega_7^2\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{14}\omega_5^2 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_5 -$$
$$12\omega_{12}\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_5 - 4\omega_{12}cs^4\omega_7\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5^2 + 2v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - \omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2 + 4v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 +$$
$$4v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_5 - 2v_1^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5^2 + 2\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_5 -$$
$$4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 - 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{14}\omega_5^2 + 8v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5^2 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_5^2 - 2\omega_{12}v_3^2cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_5 + 2\omega_{12}\omega_{19}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 - 2v_1^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_5 + 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5 - 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 - 4v_1^2v_3^2\omega_{19}\omega_7^2\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_5^2 +$$
$$v_1^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5 - 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_5 - 2v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$8v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 - 2v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_{12}\omega_{19}cs^2\omega_7^2\omega_{20}\omega_5^2 + 4v_1^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$4v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^2 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5^2 +$$
$$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4\omega_{19}cs^4\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{14}\omega_5 - 2v_1^2\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5^2 + 2\omega_{12}\omega_{19}cs^4\omega_7\omega_{20}\omega_8\omega_5^2 -$$
$$4\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{20}\omega_5^2 + 8v_1\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5^2 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{20}\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{12}\omega_{19}cs^4\omega_7^2\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}v_3^2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_5 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_7^2\omega_{14}\omega_8\omega_5\big)\dfrac{\rho}{4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2}$$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x^2\mathrm{D}_z^2 v_2} = \big(-8v_1\omega_{12}v_2v_3^2\omega_7\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}\omega_7\omega_{20}cs^4\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{14}\omega_5^2 - 2v_1\omega_{12}v_2v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$

$$4v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_3^2\omega_7cs^2\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_{12}v_2cs^2\omega_{14}\omega_8\omega_5^2 - 4v_1\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{14}\omega_5^2 -$$
$$4\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_5^2 + 4\omega_{12}\omega_{19}\omega_7^2cs^4\omega_{14}\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_7\omega_{14}\omega_8\omega_5^2 - 4\omega_{12}\omega_7cs^4\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_{12}\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5^2 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5^2 + 4v_1\omega_{12}v_2v_2cs^2\omega_{14}\omega_8\omega_5^2 - 2v_1^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 - 2v_1^2\omega_{12}v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^2\omega_5^2 + 4\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^4\omega_5^2 + v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_{12}\omega_{19}\omega_7^2cs^2\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{12}\omega_7^2cs^4\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_5 + 4v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 + v_1^2\omega_{12}v_3^2\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 +$$
$$8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_5^2 + 2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5^2 +$$
$$4v_1\omega_{12}v_2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 - 2\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_3^2\omega_7^2cs^2\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_{12}\omega_7cs^2\omega_{14}\omega_8\omega_5^2 +$$
$$8v_1\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_5 + 2\omega_{12}v_3^2\omega_{19}\omega_7^2cs^2\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 +$$
$$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 - 2v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{12}\omega_{19}\omega_7^2cs^2\omega_{14}\omega_8\omega_5 - \omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^4\omega_5 + 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^2\omega_5 + 4\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_5^2 - 2v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_5 -$$
$$2\omega_{12}\omega_7^2\omega_{20}cs^4\omega_{14}\omega_8\omega_5 - 4\omega_{12}\omega_{19}\omega_7^2cs^4\omega_{14}\omega_5 + 4v_1^2\omega_{12}\omega_{19}\omega_7cs^2\omega_{14}\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5^2 -$$
$$4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5^2 - 8v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5^2 + 4v_1\omega_{12}v_2\omega_{19}\omega_7^2cs^2\omega_{14}\omega_8\omega_5 - 8v_1\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_5^2 + 4v_1^2\omega_{12}\omega_{19}\omega_7^2cs^2\omega_{14}\omega_5 -$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5^2 + 2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_8\omega_5 + 2v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^4\omega_{14}\omega_8 + 4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_5^2 - 4\omega_{12}\omega_{19}\omega_7cs^4\omega_{14}\omega_5^2 - 2v_1^2\omega_{12}v_3^2\omega_7^2\omega_{14}\omega_8\omega_5 - v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_8\omega_5 -$$
$$8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_5^2 + 4v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5^2 + 4v_1\omega_{12}v_2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 - 2\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_8\omega_5^2 -$$
$$4v_1^2\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 - v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}\omega_7^2cs^2\omega_{14}\omega_5 + 4\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_5^2 +$$
$$2\omega_{12}\omega_{19}\omega_7cs^4\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2v_3^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - 2v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 - 12\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_5 - 4v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5^2 - 4\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^4\omega_{14}\omega_5^2 + 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_5^2 + 4v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 +$$
$$2v_1^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_5^2 + 4v_1v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5^2 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5^2 -$$
$$4v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_5 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5^2 + \omega_{12}v_3^2\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 + 2\omega_{19}\omega_7^2\omega_{20}cs^4\omega_8\omega_5^2 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5 - 4v_1\omega_{12}v_2v_3^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_5 -$$
$$2v_1^2\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5^2 + 4\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_8 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_5 - 4v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 - 2v_1^2\omega_{12}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_8\omega_5^2 + 8v_1\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5^2 + 4v_1v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 4\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_5^2 + 4v_1^2\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_5^2 +$$
$$2v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 4\omega_{12}v_3^2\omega_{19}\omega_7cs^2\omega_{14}\omega_5^2 - 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_5 - 4\omega_{19}\omega_7^2\omega_{20}cs^4\omega_8\omega_5 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{14}\omega_5^2 -$$
$$4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_5^2 + 4\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_5^2 - 2v_1v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 + 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5 + 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20} -$$
$$2v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 8v_1v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 - 2v_3^2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_5 - 2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5^2 - 4v_1^2\omega_{12}\omega_{19}\omega_7^2cs^2\omega_{14}\omega_5 +$$
$$4\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_5 - 2\omega_{12}v_3^2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}\omega_{19}\omega_7cs^4\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 - 8v_1v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 + 8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{14}\omega_5^2 + 2v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 + v_1^2\omega_{12}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_{12}v_3^2\omega_7cs^2\omega_{20}\omega_{14}\omega_8\omega_5^2 + 8v_1\omega_{12}v_2\omega_{19}\omega_7^2cs^2\omega_{14}\omega_5^2 + 4\omega_{19}\omega_7^2\omega_{20}cs^4\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5^2 - 2\omega_{12}\omega_{19}\omega_7cs^4\omega_{14}\omega_8\omega_5^2 + 2v_1^2\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 + 4v_1^2\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{12}\omega_{19}\omega_7\omega_{20}cs^4\omega_{14}\omega_8\omega_5^2 +$$
$$8v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_5 - 4v_1^2\omega_{12}\omega_{19}\omega_7^2cs^2\omega_{14}\omega_5^2 - 4v_1^2\omega_{12}v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8\omega_5 - 4v_1\omega_{12}v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$2v_1\omega_{12}v_2v_2^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5^2 - 4v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^2\omega_8\omega_5 - 4\omega_{12}v_3^2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5^2 - 2\omega_{12}\omega_{19}\omega_{20}cs^4\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}\omega_{19}\omega_{20}cs^4\omega_8\omega_5 +$$
$$2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^4\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_{12}\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 8v_1\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}cs^2\omega_{14}\omega_5\big)\dfrac{\rho}{4\omega_{12}\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5^2}$$

$C^{(2),\text{CuLBM1}}_{\text{D}^2_x\text{D}^2_z v_2} = (2\omega_3\omega_1^2 - \omega_3^2 - 2\omega_3\omega_1 + 2\omega_3^2\omega_1 + \omega_{13}\omega_1 + \omega_3\omega_{13} - \omega_3\omega_{13}\omega_1 - \omega_3^2\omega_1^2 - \omega_1^2)\frac{\rho cs^4}{\omega_3^2\omega_{13}\omega_1^2}$

$C^{(2),\text{CuLBM2}}_{\text{D}^2_x\text{D}^2_z v_2} = (-3v_1^4\omega_3\omega_4^2\omega_1^3\omega_5 - 8\omega_3^2 cs^2\omega_4\omega_1^2\omega_5 - 3v_3^2\omega_4^2\omega_1^3\omega_5 - 9v_1^2\omega_3^2 cs^2\omega_1^3\omega_5 - 6v_1^4\omega_3^2\omega_4\omega_1^2\omega_5 - 8\omega_3 cs^2\omega_4^2\omega_1\omega_5 - 18v_3^2 cs^2\omega_4^2\omega_1^2\omega_5 + 3v_1^2\omega_3\omega_4^2\omega_1^3\omega_5 - 3v_1^2\omega_3^2\omega_1^3\omega_5 + 6v_1^2\omega_3^2\omega_4\omega_1^2\omega_5 - 32\omega_3^2 cs^4\omega_4^2\omega_1 + 2\omega_3 cs^4\omega_4^2\omega_1^3\omega_5 + 12v_3^2\omega_3 cs^2\omega_4^2\omega_1\omega_5 + 6v_1^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_5 + 6v_1^2\omega_4^2\omega_1^2\omega_5 + 6v_1^4\omega_3^2\omega_1^2\omega_5 - 6v_3^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_5 - 12v_3^2\omega_3^2 cs^2\omega_4\omega_1\omega_5 + 6v_3^4\omega_3^2\omega_1^2\omega_5 - 3v_1^2\omega_3\omega_4^2\omega_1^3\omega_5 - 6v_1^2\omega_3\omega_4^2\omega_1^2\omega_5 + 9v_3^2 cs^2\omega_4^2\omega_1^3\omega_5 + 3v_1^4\omega_3\omega_4\omega_1^3\omega_5 + 32\omega_3^2 cs^4\omega_4^2\omega_1 + 18v_1^2\omega_3^2 cs^2\omega_1^3\omega_5 + 6v_3^2\omega_4^2\omega_1^2\omega_5 + 2\omega_3 cs^2\omega_4\omega_1^3\omega_5 + 6v_1^4\omega_3\omega_4^2\omega_1^2\omega_5 - 3v_1^4\omega_3^2\omega_1^3\omega_5 + 6v_3^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_5 - 8\omega_3^2 cs^4\omega_4\omega_1\omega_5 - 3v_1^2\omega_4^4\omega_1^3\omega_5 - 6v_1^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_5 - 8\omega_3^2 cs^4\omega_4^2\omega_1^3 - 8\omega_3 cs^4\omega_4^2\omega_1^2\omega_5 + 3v_3^4\omega_4^2\omega_1^3\omega_5 + 6v_1^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_5 + 8\omega_3^2 cs^4\omega_4\omega_1^2\omega_5 + 3v_3^2\omega_3^3\omega_1^3\omega_5 - 6v_3^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_5 + 8\omega_3 cs^4\omega_4^2\omega_1^2\omega_5 - 6v_1^4\omega_4^2\omega_1^2\omega_5 + 18v_3^2\omega_3^2 cs^2\omega_1^3\omega_5 + 3v_3^2\omega_3^2\omega_4\omega_1^3\omega_5 - 8\omega_3^2 cs^4\omega_4^2\omega_1\omega_5 + 16\omega_3^2 cs^4\omega_4^2\omega_5 - 2\omega_3 cs^2\omega_4^2\omega_1^3\omega_5 + 6v_3^4\omega_3\omega_4^2\omega_1^2\omega_5 - 6v_1^2\omega_3^2\omega_1^2\omega_5 - 3v_3^2\omega_3\omega_4\omega_1^3\omega_5 + 9v_1^2 cs^2\omega_4^2\omega_1^3\omega_5 - 6v_3^2\omega_3\omega_4^2\omega_1^3\omega_5 + 6v_3^2\omega_3 cs^2\omega_4^2\omega_1^2\omega_5 + 12v_1^2\omega_3 cs^2\omega_4^2\omega_1\omega_5 - 6v_3^2\omega_3^2\omega_1^2\omega_5 - 2\omega_3^2 cs^4\omega_4\omega_1^3\omega_5 - 12v_3^2\omega_3^2 cs^2\omega_4\omega_1\omega_5 - 6v_1^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_5 - 6v_3^4\omega_4^2\omega_1^2\omega_5 + 3v_3^2\omega_3\omega_4^2\omega_1^3\omega_5 - 18v_1^2 cs^2\omega_4^2\omega_1^2\omega_5 + 3v_1^2\omega_3^2\omega_1^3\omega_5 + 8\omega_3^2 cs^2\omega_4\omega_1\omega_5 + 6v_3^2\omega_3^2\omega_4\omega_1^2\omega_5 - 3v_3^2\omega_3\omega_4^2\omega_1^3\omega_5 + 8\omega_3 cs^2\omega_4^2\omega_1^2\omega_5 - 6v_3^2\omega_3^2\omega_4\omega_1^2\omega_5 - 9v_3^2\omega_3^2 cs^2\omega_1^3\omega_5 + 3v_1^4\omega_4^2\omega_1^3\omega_5)\frac{\rho}{8\omega_3^2\omega_4^2\omega_1^3\omega_5}$

coefficient $C^{(2)}_{\text{D}^2_x\text{D}^2_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2}$:

$C^{(2),\text{SRT}}_{\text{D}^2_x\text{D}^2_z v_3} = (v_1 v_2^2\omega^3 + 14v_1^2 v_2\omega^2 + 14v_2 cs^2\omega^2 - v_1^2 v_2\omega^3 - 14v_1 v_2^2\omega^2 - 24v_1 cs^2 - v_2 cs^2\omega^3 + 36v_1 v_2^2\omega - 36v_2 cs^2\omega - 24v_1 v_2^2 - 36v_1^2 v_2\omega - 14v_1 cs^2\omega^2 + v_1 cs^2\omega^3 + 36v_1 cs^2\omega + 24v_2 cs^2 + 24v_1^2 v_2)\frac{\rho v_3}{2\omega^3}$

$C^{(2),\text{MRT1}}_{\text{D}^2_x\text{D}^2_z v_3} = (4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{12}v_2\omega_6\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \omega_{18}v_1^2 v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 + 4\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{12}v_2^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{12}v_2\omega_2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 8\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5 + 4\omega_{18}v_1^2 v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5^2 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2 + 4\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 6\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 - 2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - \omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 - 4\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_{18}\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - \omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5 - 2\omega_{18}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}cs^2\omega_5^2 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 10\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5^2 - 4\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + \omega_{18}\omega_{12}v_2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - \omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 3\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + \omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 - 4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8 cs^2\omega_5 - 2\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 3\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5^2 + 2\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5^2 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2 - 4\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8 cs^2\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}\omega_{12}v_2\omega_6\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - 4\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 4\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 2\omega_{18}v_1\omega_{12}\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 4\omega_{18}v_1\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}v_1\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_{12}v_2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1^2\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}cs^2\omega_5^2 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2\omega_5 + 2\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5 - 4\omega_{18}v_1\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + \omega_{18}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5^2 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5^2 + 2\omega_{18}\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}cs^2\omega_5 + 4\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2\omega_5)\frac{\rho v_3}{2\omega_{18}\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2}$

$$C^{(2),\text{MRT2}}_{\text{D}^2_{\frac{x}{2}}\text{D}^2_z v_3} = (4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$4cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + \omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5^2 + 4\omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}cs^2\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}cs^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$4\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}cs^2\omega_{12}v_1\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$4\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}cs^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 3\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}cs^2\omega_{12}v_2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 10\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$4cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + \omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2 - \omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$\omega_{18}v_1cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - \omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}v_1cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 4\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + \omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1cs^2\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5^2 + 4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + \omega_{18}cs^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - \omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}cs^2\omega_{12}v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 4\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 3cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 2\omega_{18}v_1cs^2\omega_{12}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1cs^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - 2\omega_{18}cs^2\omega_{12}v_2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_5^2 -$$
$$4\omega_{18}v_1\omega_{12}v_2^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5^2) \frac{\rho v_3}{2\omega_{18}\omega_{12}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{CLBM1}}_{\text{D}^2_x\text{D}^2_z v_3} = (-4v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_8 + 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20} + 4\omega_{12}v_2cs^2\omega_{14}\omega_8\omega_5 - 2v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 + 2\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 +$$
$$4\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14} + v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}v_2\omega_{19}\omega_{14}\omega_5 - 2v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 - v_1\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_5 - 4v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20} - 4v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 + 2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14}\omega_8 -$$
$$\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}\omega_{19}cs^2\omega_{14}\omega_5 + 4v_1\omega_{12}\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 2v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$4\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_5 - 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_8 - 2v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 +$$
$$2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14} + 2v_1\omega_{12}v_2^2\omega_{19}\omega_{20}\omega_8\omega_5 + 4v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_8 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14} +$$
$$2v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}\omega_{19}cs^2\omega_{20}\omega_5 + 2\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + 2v_1\omega_{12}v_2^2\omega_7\omega_{14}\omega_8\omega_5 - 2v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 -$$
$$4v_1\omega_{12}v_2^2\omega_{14}\omega_8\omega_5 - 2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_8 - v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_8 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14}\omega_5 -$$
$$4v_1^2\omega_{12}v_2\omega_{19}\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_5 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_{20}\omega_{14}\omega_5 - 2v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 + v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4v_1\omega_{12}v_2^2\omega_{19}\omega_{20}\omega_5 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_{14}\omega_5 + 2v_1\omega_{19}cs^2\omega_7\omega_{20}\omega_8\omega_5 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14}\omega_5 -$$
$$4v_1\omega_{12}cs^2\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{12}v_2\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{14} - 2\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_8 + 4v_1^2\omega_{12}v_2\omega_{14}\omega_8\omega_5 + 2v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$2v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{14}\omega_8 + v_1^2\omega_{12}v_2v_2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{12}v_2v_2\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{12}v_2cs^2\omega_7\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_5 + 4\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20} - 2v_1\omega_{12}v_2^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_8\omega_5 + 4v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_5 +$$
$$2v_1\omega_{12}cs^2\omega_7\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14} + 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14} - 2\omega_{12}v_2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{19}cs^2\omega_7\omega_{20}\omega_8 +$$
$$4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_5 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_8 - 2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 + 2v_1\omega_{12}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 + 4v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8 + 2\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_5 + 4v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{14}\omega_5 - 4\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{14}\omega_5 -$$
$$2v_1\omega_{12}\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}\omega_{19}cs^2\omega_{20}\omega_{14}\omega_5 - 2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14}\omega_8 + 2\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$2v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_5 - v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_{12}\omega_{19}cs^2\omega_{20}\omega_8\omega_5 -$$

$$4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_5 + \omega_{12}v_2cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} - 4\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_{14} + 2v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 -$$
$$4v_1\omega_{12}v_2^2\omega_{19}\omega_{14}\omega_5 - 2\omega_{12}v_2\omega_{19}cs^2\omega_{20}\omega_8\omega_5 + 2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 4v_1\omega_{12}\omega_{19}cs^2\omega_7\omega_{20}\omega_8 - 4\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20} -$$
$$v_1\omega_{12}cs^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2v_1\omega_{19}cs^2\omega_7\omega_{20}\omega_{14}\omega_8 - 4\omega_{12}v_2\omega_{19}cs^2\omega_7\omega_{20}\omega_8)\frac{\rho v_3}{2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5}$$

$C^{(2),\text{CLBM2}}_{\text{D}_x^2\text{D}_z^2 v_3} = (-4v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_8 + 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20} + 4v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_5 - 4\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_5 + 4\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_5 +$
$4v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 - 4v_1\omega_{19}\omega_7\omega_{20}cs^2\omega_8 - 2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_5 - 4v_1\omega_{12}\omega_{19}\omega_7cs^2\omega_{14} + 2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14}\omega_8 -$
$2v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 + 2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - 2v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 - 2v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 -$
$4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + \omega_{12}v_2\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_8 - 4\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} + 2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 -$
$4v_1\omega_{12}\omega_{19}cs^2\omega_{14}\omega_8\omega_5 - 2v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - 2v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - 4\omega_{12}v_2\omega_{19}cs^2\omega_{14}\omega_8\omega_5 -$
$4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14} + 4v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_{14} + 2v_1\omega_{12}v_2^2\omega_{19}\omega_{20}\omega_8\omega_5 + 4v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_8 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14} - 4\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 +$
$4v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_8 + 2v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}\omega_{19}\omega_{20}cs^2\omega_5 - 2v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 - v_1\omega_{12}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 +$
$2v_1\omega_{12}v_2^2\omega_7\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}v_2^2\omega_{14}\omega_8\omega_5 + 4v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_8 - 2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - v_1\omega_{12}v_2^2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$
$4\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 - 4v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_5 + 4\omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2 + 2v_1\omega_{12}v_2^2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14}\omega_5 +$
$v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_5 + 4v_1\omega_{12}v_2^2\omega_{19}\omega_{20}\omega_{14}\omega_5 + 4\omega_{12}v_2cs^2\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_8 +$
$v_1^2v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}v_2^2cs^2\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}v_2^2\omega_7cs^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_{14}\omega_5 -$
$4v_1\omega_{12}\omega_{19}cs^2\omega_{14}\omega_5 - 2\omega_{12}v_2v_2\omega_7cs^2\omega_{14}\omega_8\omega_5 - \omega_{12}v_2\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 2v_1\omega_{12}\omega_{19}\omega_7cs^2\omega_{14}\omega_8 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14}\omega_5 -$
$2v_1^2\omega_{12}v_2\omega_{20}\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}v_2\omega_{14}\omega_8\omega_5 + 4\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14} + 2v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 + v_1^2\omega_{12}v_2\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_{12}v_2\omega_7\omega_{14}\omega_8\omega_5 +$
$2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 + 2v_1\omega_{12}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 2v_1\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8 - 2\omega_{12}v_2\omega_{20}cs^2\omega_{14}\omega_8\omega_5 - 2v_1\omega_{12}v_2^2\omega_{19}\omega_{20}\omega_{14}\omega_8\omega_5 -$
$2v_1^2\omega_{12}v_2\omega_{19}\omega_{20}\omega_8\omega_5 - 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14} + 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14} + 4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_5 + v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_8 - 2v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{14}\omega_8\omega_5 - v_1\omega_{19}\omega_7\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 + 2\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 -$
$4\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_{14}\omega_5 - 2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{14}\omega_8 - 2v_1\omega_{12}\omega_{19}\omega_{20}cs^2\omega_{14}\omega_8\omega_5 + 4v_1\omega_{12}\omega_{19}\omega_7cs^2\omega_{14}\omega_5 + v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 +$
$2v_1\omega_{19}\omega_7\omega_{20}cs^2\omega_8\omega_5 + 4\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_5 - 4\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_5 - v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5 - 2\omega_{12}v_2\omega_{19}\omega_{20}cs^2\omega_8\omega_5 -$
$4v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_5 + 2v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_8\omega_5 - 4v_1\omega_{12}v_2^2\omega_{19}\omega_{14}\omega_5 + 2v_1\omega_{12}\omega_{19}\omega_{20}cs^2\omega_8\omega_5 + 2v_1^2\omega_{12}v_2\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8 +$
$2\omega_{12}v_2\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 - 2v_1\omega_{12}\omega_{19}\omega_7cs^2\omega_{14}\omega_8\omega_5 - 4v_1\omega_{12}\omega_{19}\omega_7\omega_{20}cs^2 - 4v_1\omega_{12}v_2^2\omega_{19}\omega_7\omega_{20} - 4v_1\omega_{12}cs^2\omega_{14}\omega_8\omega_5)\frac{\rho v_3}{2\omega_{12}\omega_{19}\omega_7\omega_{20}\omega_{14}\omega_8\omega_5}$

$C^{(2),\text{CuLBM1}}_{\text{D}_x^2\text{D}_z^2 v_3} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}_x^2\text{D}_z^2 v_3} = (3cs^2\omega_1 + v_3^2\omega_1 - 3cs^2\omega_2 - \omega_1 - v_3^2\omega_2 + \omega_2)\frac{\rho v_2 v_3}{36\omega_1\omega_2}$

coefficient $C^{(2)}_{\text{D}_x\text{D}_y\text{D}_z^2 \rho}$ at $\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2}$:

$C^{(2),\text{SRT}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = (-14v_2^2v_3cs^2\omega^2 - 14v_1^2v_3cs^2\omega^2 + 36v_1^2v_2^2v_3\omega + 14v_1v_2^2v_3^2\omega^2 + v_2^2v_3cs^2\omega^3 - 36v_1v_3^2cs^2\omega - v_1v_2^2v_3^2\omega^3 + v_1^2v_3cs^2\omega^3 +$
$14v_1v_3^2cs^2\omega^2 + v_1^2v_2^2v_3\omega^3 - 24v_1^2v_2^2v_3 + 36v_1^2v_3cs^2\omega - 14v_1^2v_2^2v_3\omega^3 - 36v_1v_2^2v_3\omega - v_1v_3^2cs^2\omega^3 - 24v_2^2v_3cs^2 + 36v_2^2v_3cs^2\omega - 36v_1v_2^2cs^2\omega +$
$24v_1v_2^2cs^2 + 24v_1v_3^2cs^2 - v_1v_2^2cs^2\omega^3 + 24v_1v_2^2v_3 + 14v_1v_2^2cs^2\omega^2 - 24v_1^2v_3cs^2)\frac{1}{2\omega^3}$

$C^{(2),\text{MRT1}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = (2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$
$\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$
$2\omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 -$
$2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 +$
$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 -$
$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 +$
$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 - 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 +$
$2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 +$
$v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5 -$
$\omega_{15}v_1v_2^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$
$\omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 - v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$
$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{15}v_2^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 - 4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5 +$
$\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$
$2\omega_{15}v_1^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 +$
$4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$
$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 -$
$2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1v_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_5 +$
$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - v_1v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$
$v_1v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 8\omega_{15}v_1v_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5 +$

$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 +$$
$$2v_1v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$$
$$4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_5^2 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 +$$
$$v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 + v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 +$$
$$12\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 8\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 - 2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 - \omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 -$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5 -$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5 +$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + \omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 +$$
$$v_1^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + \omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 +$$
$$v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$$
$$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 8\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 +$$
$$\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4 + 2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 +$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$8\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$

$$v_1 v_3^2 \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 + \omega_{15}v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 + 2v_1 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2 cs^2\omega_5^2 +$$
$$\omega_{15}v_1 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 + 2\omega_{15}v_1 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 + \omega_{15}v_1^2 v_3\omega_{16}\omega_{10}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 +$$
$$4\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 cs^4\omega_5^2 + 2\omega_{15}v_1^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 cs^2\omega_5^2 +$$
$$2v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2 cs^2\omega_5^2 + 2\omega_{15}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 - v_1^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8 cs^2\omega_5^2)\frac{1}{2\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{MRT2}}_{D_x D_y D_2^2 \rho} = (2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_1^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1^2 v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 - v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}cs^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$8\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 8\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + \omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1 v_2^2 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1 cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 v_2^2 v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}cs^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1 cs^2 v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$4\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$\omega_{15}cs^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1 v_2^2 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1 cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1^2 cs^2 v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + \omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + \omega_{15}cs^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + \omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2 v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 8\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - \omega_{15}v_1 v_2^2 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1^2 cs^2 v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$2v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 - 2v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2 v_2^2 v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1 v_2^2 v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1 v_2^2 v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$4\omega_{15}v_1 cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1 cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_5 + v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1 cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1 cs^2 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1^2 v_2^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1^2 cs^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$

$$\omega_{15}v_1^2v_2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1v_2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}cs^2v_2^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1^2cs^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2v_1^2v_2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1cs^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1^2v_2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 8\omega_{15}v_1cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}cs^2v_2^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2cs^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1cs^2v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{15}v_1cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1cs^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1cs^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1cs^2v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - \omega_{15}cs^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1cs^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2v_2^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5\big)\frac{1}{2\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = \big(\omega_{15}v_1v_2^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + v_1^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_8 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 +$$
$$2v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2v_1v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + 2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_2^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + v_2^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 -$$
$$\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 + \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 +$$
$$2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} - \omega_{15}v_1v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_2^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1^2v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2v_3\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 -$$

$$2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$

$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} +$$

$$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{15}v_1v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 - \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 +$$

$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} -$$

$$2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 -$$

$$2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 - 2\omega_{15}v_2^2v_3\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 +$$

$$2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 -$$

$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 -$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$

$$\omega_{15}v_1v_3^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} +$$

$$v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 -$$

$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} +$$

$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$

$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 - v_1v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 -$$

$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_3^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1v_2^2\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2v_1v_3^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$

$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$

$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 -$$

$$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$

$$\omega_{15}v_2^2v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} +$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 +$$

$$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$

$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 + \omega_{15}v_2^2v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2v_2^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$

$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$

$$2v_1^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 -$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 -$$

$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 -$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 -$$

$$\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} +$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_2^2v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} - v_1v_3^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_2^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$

$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$

$$2\omega_{15}v_1v_2^2\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$

$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$\omega_{15}v_1^2v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + 2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1v_3^2\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5)\frac{1}{2\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5}$$

$$C^{(2),\text{CLBM2}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = (-2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$

$$v_1v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 +$$

$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 2v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$

$\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 -$

$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 +$

$2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 +$

$v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} -$

$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + 2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 -$

$2v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 -$

$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 +$

$\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 +$

$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 -$

$2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 +$

$v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 - 2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 +$

$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 +$

$\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 -$

$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 +$

$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$

$2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} -$

$2\omega_{15}v_1^2v_1\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 -$

$2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$

$2\omega_{15}v_1v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 +$

$2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 +$

$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 -$

$2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 -$

$2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$

$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} + \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$

$v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 - \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 +$

$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2 -$

$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 +$

$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 - \omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$

$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 +$

$v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$

$\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 -$

$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$

$2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$

$\omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$

$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 - v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 + 2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 +$

$\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$

$2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 +$

$2\omega_{15}v_1v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 +$

$\omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} +$

$2\omega_{15}v_1^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$

$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$

$2\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$

$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 + 2v_1v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 +$

$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + \omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$

$v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 -$

$$\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5cs^2 -$$
$$2\omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2 + v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - \omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 -$$
$$2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 -$$
$$\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_2^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8 + 2v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 + 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 - v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + \omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 +$$
$$\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} + \omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1^2v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2 +$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 - 2\omega_{15}v_1v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5)\dfrac{1}{2\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = 0$$

$$C^{(2),\text{CuLBM2}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = (-24\omega_3cs^4\omega_4^2\omega_1^3\omega_2 + 324\omega_3cs^4\omega_4^2\omega_1^2\omega_2^3 - 27v_1^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 324\omega_3^2cs^4\omega_4^2\omega_1^2\omega_2^3 + 96v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 +$$
$$72v_1^2v_3^2\omega_3^2\omega_4^2\omega_2^3 + 432v_3^2\omega_3^2cs^2\omega_4^2\omega_2^3 - 72cs^4\omega_4^2\omega_1^3\omega_2 - 72v_4^2\omega_3^2\omega_4^2\omega_1\omega_2 + 10v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 + 192\omega_3^2cs^4\omega_4^2\omega_1^2\omega_2 + 54\omega_3^2cs^2\omega_1^3\omega_2^3 -$$
$$8v_1^2\omega_3^2\omega_4^2\omega_2^3 + 162cs^4\omega_4^2\omega_1^3\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^3 + 108v_1^2\omega_3^2cs^2\omega_4^2\omega_2^3 + 192\omega_3cs^4\omega_4^2\omega_4^2\omega_2 - 27\omega_3^2cs^2\omega_4\omega_1^3\omega_2 - 8v_1^2\omega_3^2cs^2\omega_4^2\omega_4^2\omega_2 -$$
$$168\omega_3^2cs^4\omega_4^2\omega_1\omega_2 - 30\omega_3cs^4\omega_4^2\omega_1^2\omega_2 - 104\omega_3^2cs^2\omega_4^2\omega_1^3 - 108\omega_3^2cs^2\omega_1^2\omega_2^3 + 30\omega_3cs^4\omega_4^2\omega_1^3\omega_2^2 + 48v_4^3\omega_3^2\omega_4^2\omega_1^3 - 432v_3^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^2 -$$
$$96v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 32v_1^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 36v_4^3\omega_3^2\omega_4^2\omega_1^3\omega_2 + 8v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 32v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3 - 8v_1^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 64\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 +$$
$$96v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 162\omega_3^2cs^4\omega_4^2\omega_1^3 + 108v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 - 81\omega_3cs^4\omega_4^2\omega_1^3\omega_2^2 + 72v_4^3\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 8v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 96v_3^2\omega_3^2\omega_4^2\omega_2^3 -$$
$$72\omega_3^2cs^4\omega_4^2\omega_1^2\omega_2 + 56\omega_3cs^2\omega_4^2\omega_1\omega_2^3 - 40v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 10v_1^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 60v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 432v_3^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 +$$
$$108\omega_3^2cs^2\omega_4\omega_1^2\omega_2^3 + 64v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 - 54v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^2 + 128\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 - 192v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 252cs^4\omega_4^2\omega_1^2\omega_2^3 + 144\omega_3cs^4\omega_4^2\omega_1^3 -$$
$$16v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 24cs^2\omega_4^2\omega_1^3\omega_2^2 + 8v_1^2\omega_3cs^2\omega_4^2\omega_1\omega_2^3 + 8\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 432v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 60v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 108\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^2 -$$
$$176\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^2 + 96v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 104\omega_3^2cs^2\omega_4^2\omega_2^3 - 84v_1^2cs^2\omega_4^2\omega_1^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2 - 108v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 + 81\omega_3^2cs^4\omega_4\omega_1^3\omega_2^3 -$$
$$64\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 + 432v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3 + 48v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3 + 864\omega_3^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 + 120v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 56v_1^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^2 + 8\omega_3^2\omega_4^2\omega_2^3 -$$
$$54cs^2\omega_4^2\omega_1^3\omega_2^3 - 36v_4^3\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8v_1^2\omega_3^2\omega_4^2\omega_1^3 + 112\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 56v_1^2\omega_3cs^2\omega_4^2\omega_1\omega_2^3 + 96v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 +$$
$$10\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2^3 + 54v_1^2cs^2\omega_4^2\omega_1^3\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1^3\omega_2 - 96v_3^2\omega_3^2\omega_4^2\omega_1^3 - 10\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^2 - 24\omega_3^2cs^4\omega_4^2\omega_1\omega_2^3 + 144\omega_3^2cs^4\omega_4^2\omega_2^3 +$$
$$27\omega_3cs^2\omega_4^2\omega_1^3\omega_2^2 - 24v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 432v_3^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 168\omega_3cs^4\omega_4^2\omega_1\omega_2^3 + 80\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 24v_1^2cs^2\omega_4^2\omega_1^3\omega_2^2 +$$
$$24v_3^4\omega_3^2\omega_4^2\omega_2^3 + 84cs^2\omega_4^2\omega_1^2\omega_2^3 + 8v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 324\omega_3^2cs^4\omega_4\omega_1^2\omega_2^3 + 27v_1^2\omega_3^2cs^2\omega_4\omega_1^3\omega_2^3 - 216\omega_3^2cs^4\omega_4^2\omega_1\omega_2^2 + 32v_1^2\omega_3^2cs^2\omega_4^2\omega_2^3)\dfrac{v_1}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(2)}_{\text{D}_x\text{D}_y\text{D}_z^2 v_1}$ **at** $\dfrac{\partial^4 v_1}{\partial x_1\partial x_2\partial x_3^2}$**:**

$$C^{(2),\text{SRT}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_1} = (144v_2^2cs^2 - 6v_2^2v_3^2\omega^3 - 216v_3^2cs^2\omega + 84v_2^2v_3^2\omega^2 - 288v_1v_3cs^2 - 6v_3^2cs^2\omega^3 - 216v_2^2v_3^2\omega + 144v_3^2cs^2 + 144v_2^2v_3^2 - 36cs^4 +$$
$$84v_3^2cs^2\omega^2 - 288v_1v_2^2v_3 - cs^4\omega^3 + 432v_1^2v_2^2v_3\omega - 168v_1v_3cs^2\omega^2 + 12v_1v_3cs^2\omega^3 - 16cs^4\omega^2 - 216v_2^2cs^2\omega + 12v_1v_2^2v_3\omega^3 + 54cs^4\omega +$$
$$84v_2^2cs^2\omega^2 - 6v_2^2cs^2\omega^3 - 168v_1v_2^2v_3\omega^2 + 432v_1v_3cs^2\omega)\dfrac{\rho}{12\omega^3}$$

$$C^{(2),\text{MRT1}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_1} = (24\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 6\omega_{15}\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 -$$
$$12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 +$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_3^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^4\omega_5^3 + 12\omega_{15}v_1\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 +$$
$$24\omega_{15}\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^4\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 -$$
$$6\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 18\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^3 +$$
$$24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^4\omega_5^3 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^3 +$$
$$24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_6\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 +$$
$$6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 +$$
$$10\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^4\omega_5^3 + 6\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 +$$

$$
\begin{aligned}
&12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 36\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + \\
&12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^3 + 24\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 6\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3 - 6\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 + 12v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - \\
&12v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5^3 + \\
&24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^4\omega_5^3 - \\
&24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^3 - \\
&6\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^4\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - \\
&6\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 + \\
&12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{15}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - \\
&24\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - \\
&12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^4\omega_5^3 + 12v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \\
&24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^4\omega_5^3 - 18\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 - 12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - \\
&12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + \\
&6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 - \\
&24\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + \\
&12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + \\
&6\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5^3 + \\
&12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^3 + 12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 - 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + \\
&24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3 + \\
&12\omega_{15}\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&6v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&48\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 - 24\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - \\
&24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 + \\
&24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 - 6\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \\
&12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 + \\
&24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^3 - \\
&6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 + 6\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + \\
&12v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + \\
&12v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5 - 12\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 - \\
&24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + \\
&12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + 24\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^4\omega_5^3 - \\
&24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 + \\
&42\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 + 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 + 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - \\
&\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^4\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 6\omega_{15}\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 24\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&18\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - \\
&12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + \\
&36\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + \\
&6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5^3 + \\
&24\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 12\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^4\omega_5^2 - 60\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + \\
&6\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + \\
&12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + \\
&12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 - 24\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \\
&12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^4\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&12\omega_{15}v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&12\omega_{15}v_1\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&6\omega_{15}\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + 6\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 + \\
&12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + \\
&6\omega_{15}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - \\
&24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5^3 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + \\
&12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^4\omega_5^2 + 12\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^3 - \\
&12\omega_{15}v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^4\omega_5^2 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - \\
&12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 6\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - \\
&24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +
\end{aligned}
$$

$$12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5^3 - 6\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5 +$$
$$24\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^4\omega_5^3 +$$
$$12v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 18\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^2 + 12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 +$$
$$6v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 -$$
$$12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 24\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_6^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 12\omega_{15}\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 -$$
$$12\omega_{15}\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 24\omega_{15}v_1\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^4\omega_5^2 + 36\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$$
$$60\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 + 12\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 +$$
$$12\omega_{15}\omega_6^2v_3^3\omega_{19}\omega_3^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^3 - 24\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5^3 + 6\omega_{15}\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^3 -$$
$$24\omega_{15}v_1\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 - 12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 +$$
$$12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^4\omega_5^3 - 18\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 +$$
$$12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 + 12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$6v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}\omega_6^2v_3^3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 - 12\omega_{15}\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}v_2^2\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3 + 12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^4\omega_5^3 -$$
$$12\omega_{15}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^4\omega_5^3 -$$
$$12v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^3)\frac{\rho}{12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3}$$

$C^{(2),\text{MRT2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1} = (-24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 6\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$

$$12cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$60\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 6\omega_{15}cs^2v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$6cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 -$$
$$6\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3 -$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 2\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^3\omega_5^3 +$$
$$6cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 36\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 42\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^4\omega_6\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2 + 6\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$6cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 -$$
$$6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}cs^2v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$6cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3 + 12v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 +$$
$$6\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^3 -$$
$$36\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$18\omega_{15}cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3 -$$
$$12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^3 - 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 -$$
$$12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$6\omega_{15}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3 - 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 6cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}cs^2v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}cs^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 -$$
$$24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 -$$

$$12\omega_{15}cs^2v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^3 +$$
$$24\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 - 12cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}cs^4\omega_6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{15}cs^4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^3 -$$
$$6cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 6\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$6\omega_{15}cs^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 - 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^3 -$$
$$18\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 60\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 -$$
$$12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3 -$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 12cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^3 + 6\omega_{15}cs^4\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^4\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$24v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - \omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 +$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 12\omega_{15}cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^3 + 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$36\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 +$$
$$6\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3 -$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 6\omega_{15}cs^4\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^4\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 +$$
$$12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^3 - 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^3 - 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^4\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 -$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 6\omega_{15}cs^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{15}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 18\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 + 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 -$$
$$48\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$18\omega_{15}cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$6\omega_{15}cs^2v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}cs^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 24v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_8^2\omega_5^3 +$$
$$12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 +$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^3 - 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$12\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^4\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 +$$
$$10\omega_{15}cs^4\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 6\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$24\omega_{15}cs^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 12\omega_{15}cs^4\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^3 + 12v_1v_2^2\omega_6^2v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^3 + 12\omega_{15}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^3 -$$
$$24\omega_{15}v_1cs^2\omega_6^2v_3\omega_{19}\omega_{20}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^3 - 12\omega_{15}cs^2v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}cs^2\omega_6^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$6\omega_{15}cs^2\omega_6^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3)\frac{\rho}{12\omega_{15}\omega_6^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^3}$$

$$C^{(2),\text{CLBM1}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_1} =$$
$$(6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 12\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{17}\omega_5^2 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{17}\omega_5 +$$
$$6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$6v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 6\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$

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$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 24\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$10\omega_{15}\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_5 + 6\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_5^2 - 6v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_5 -$$
$$18\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_5 + 6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5 + 6v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^2 + 6\omega_{15}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_5^2 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_5^2 -$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 18\omega_{15}\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5^2 - 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15}\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 6v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{17}\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 24v_1\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 6\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 + 6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{19}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_{19}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^2 +$$
$$6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_5^2 - 24v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$24v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_5 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_5 -$$
$$6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 - 18\omega_{15}\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$12\omega_{15}\omega_6\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{17}\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{19}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 +$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$12\omega_{15}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_5 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 - 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_5^2 - 12v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$6\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$24v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_6\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{17}\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$

$$24v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^2 + 12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_{19}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 12\omega_{19}\omega_{16}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 +$$
$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12v_1\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$24v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}cs^2\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - \omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}cs^4\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{17}\omega_5^2)\frac{\rho}{12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2}$$

$$C^{(2),\text{CLBM2}}_{D_x D_y D_z^2 v_1} =$$

$$(-12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_5^2 + 6_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_5^2 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - \omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 12v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 6v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^4\omega_8\omega_5^2 +$$
$$12v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 6v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5 +$$
$$6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_5 - 18\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_5 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^4\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_5 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 +$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_5^2 -$$
$$24v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_5 +$$
$$12\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_5^2 + 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^4\omega_8\omega_5 -$$
$$6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^4\omega_5 + 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^2 + 6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 24\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^4\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^2 +$$
$$6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^4\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5^2 + 6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^4\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_5^2 -$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_5 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 +$$
$$12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_5^2 +$$
$$12\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 24v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 6v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 6\omega_{15}v_3^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$2\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_5^2 + 12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_5 -$$
$$6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 + 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_5 + 12\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$

$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$12\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^4\omega_5 +$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_5^2 - 24v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 24v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_6\omega_{19}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5 + 12\omega_{15}\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_5^2 - 6\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_5 + 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_5 - 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5^2 -$$
$$6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 +$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 6\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 - 12\omega_{15}\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 - 12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^4\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8 - 12v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 +$$
$$24\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 - 12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 6v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^4\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$18\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 18\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_5^2 - 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 6\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^4\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5 +$$
$$6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 + 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}v_1\omega_6v_3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5^2 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 6\omega_{15}\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 - 6\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8 -$$
$$6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5 + 12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 12v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$$
$$6v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_5^2 -$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^4\omega_8\omega_5^2 + 10\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 -$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_5^2 -$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_5^2 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 +$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^2\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5 - 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 + 24\omega_{15}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_5^2 -$$
$$12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}cs^4\omega_5^2 - 6v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 + 12\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5^2 +$$
$$24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^4\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^4\omega_8\omega_5^2 - 24v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}cs^4\omega_8\omega_5^2 - 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 + 24\omega_{15}v_1\omega_6v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 -$$
$$24v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}cs^2\omega_8\omega_5^2 - 6\omega_{15}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 +$$
$$6\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2 - 12\omega_{15}\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}cs^2\omega_8\omega_5^2)\frac{\rho}{12\omega_{15}\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2}$$

$$C^{(2),CuLBM1}_{D_xD_yD_z^2 v_1} = (-\omega_3^3\omega_{13}\omega_1^2\omega_2 + 12\omega_3\omega_{13}\omega_1\omega_2 + 12\omega_3^2\omega_1^2\omega_2 - 24\omega_{13}\omega_1^2\omega_2 - 6\omega_3^2\omega_{13}\omega_1^2 - 2\omega_3^2\omega_{13}\omega_1^2\omega_2 + 24\omega_3^3\omega_1\omega_2 - 12\omega_3^3\omega_2 + 12\omega_3^3\omega_{13} -$$
$$6\omega_3^2\omega_{13}\omega_1\omega_2 - 12\omega_3^3\omega_1^2\omega_2 - 6\omega_3^3\omega_{13}\omega_1 + 12\omega_3\omega_{13}\omega_1^2 + 12\omega_3^3\omega_1^2 - 12\omega_3^2\omega_1\omega_2 - 12\omega_3^3\omega_1 - 2\omega_3^3\omega_{13}\omega_1^2 - 12\omega_3^3\omega_1^2 + 24\omega_3\omega_{13}\omega_1^2\omega_2)\frac{\rho cs^4}{12\omega_3^3\omega_{13}\omega_1^2\omega_2}$$

$$C^{(2),CuLBM2}_{D_xD_yD_z^2 v_1} = (-108v_3^2\omega_3^2\omega_1^2\omega_5\omega_2^3 + 12v_3^4\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 162v_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 24v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 28\omega_3^2cs^4\omega_4^2\omega_1^2\omega_5\omega_2^3 -$$
$$8\omega_3^2\omega_4^3\omega_1\omega_5\omega_2 - 72v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 108v_3^2\omega_3cs^2\omega_4\omega_1^3\omega_5\omega_2^2 + 32\omega_3^2cs^4\omega_4^2\omega_1^3\omega_5 + 108v_3^4\omega_3^2\omega_1^2\omega_5\omega_2^3 - 72v_3^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^3 +$$
$$336v_1^2\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2^3 - 48v_3^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 - 48v_3^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 + 24v_3^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 + 4\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 72\omega_3^2cs^4\omega_4\omega_1^3\omega_5\omega_2^2 +$$
$$6v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 108v_3^2\omega_3^2cs^2\omega_4\omega_1\omega_5\omega_2^3 + 56\omega_3^2cs^4\omega_4^2\omega_1^2\omega_5\omega_2^2 - 24v_3^4\omega_3\omega_4\omega_1^3\omega_5\omega_2 + 648v_1^2\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^3 - 72v_3^4\omega_4^2\omega_1^2\omega_5\omega_2^3 -$$
$$108v_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2 - 72v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 24v_3^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 - 12v_3^2\omega_3\omega_4^2\omega_1\omega_5\omega_2 - 72\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 +$$
$$108v_3^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 72\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 72v_3^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 + 72\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^3 + 48v_1^2\omega_3cs^2\omega_4^2\omega_4^2\omega_1^3\omega_5\omega_2 + 8\omega_3^2\omega_4^3\omega_5\omega_2 + 288\omega_3^2cs^4\omega_4^2\omega_1^2\omega_2^3 +$$
$$132v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 108v_3^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 180v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 112\omega_3cs^4\omega_4^2\omega_1\omega_5\omega_2^2 + 64\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^3 + 9v_2^4\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 +$$
$$2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 88\omega_3^2cs^2\omega_4^2\omega_5\omega_2^3 - 36v_3^4\omega_3\omega_4\omega_1\omega_5\omega_2^2 + 288\omega_3^2cs^2\omega_4\omega_1\omega_5\omega_2^3 + 144v_3^2\omega_3\omega_4\omega_1\omega_5\omega_2^3 - 18v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 +$$
$$24v_1^2\omega_3^2cs^2\omega_4^2\omega_1\omega_5^3\omega_5 + 54v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 - 112\omega_3cs^4\omega_4^2\omega_1^2\omega_5\omega_2^2 - 56\omega_3cs^4\omega_4^2\omega_1^2\omega_5\omega_2 + 72v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 - 12v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 +$$
$$36v_3^4\omega_3\omega_4\omega_1^2\omega_5\omega_2^2 - 6v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 108v_3^2\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^3 - 24v_1^2\omega_3^2\omega_4\omega_5\omega_2^3 + 360v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 48v_3^2\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^3 -$$
$$288\omega_3^2cs^4\omega_4\omega_1\omega_5\omega_2^3 - 168v_1^2\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^2 + 36v_3^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 - 144v_3^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 18v_3^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 - 162v_3^2\omega_3^2cs^2\omega_1^3\omega_5\omega_2^3 -$$
$$9v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 + 24v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 2v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 162v_1^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 72\omega_3cs^4\omega_4^2\omega_1^3\omega_2^3 - 216\omega_3cs^4\omega_4^2\omega_1^2\omega_5\omega_2^3 +$$

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$$48v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_5 + 108v_3^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2 - 120v_1^2\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2 + 27v_2^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_3 - 60v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_3 - 54v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 +$$
$$216\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 96v_3^2\omega_3^2\omega_4^3\omega_1^3\omega_5 - 72v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 36v_3^2\omega_3\omega_4\omega_1^2\omega_5\omega_2^3 + 216v_1^2v_3^2\omega_3^2\omega_4^2\omega_5\omega_2^3 - 216v_3^2cs^2\omega_4^2\omega_5\omega_2^3 -$$
$$288\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 - 36v_3^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 4\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 16\omega_3cs^4\omega_4^2\omega_1^3\omega_5\omega_2 - 54v_3^2\omega_3^2\omega_4^3\omega_1^3\omega_5\omega_2 - 24v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5 +$$
$$180v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 108v_3^2\omega_3cs^2\omega_4\omega_1^2\omega_5\omega_2^3 - 27v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_3 + 4\omega_3^2cs^4\omega_4^2\omega_1^3\omega_5\omega_2 - 16\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 54v_3^4\omega_3^2\omega_1^3\omega_5\omega_2^3 -$$
$$162v_1^2\omega_3^2cs^2\omega_4\omega_1^3\omega_5\omega_2 + 288\omega_3^2cs^4\omega_4\omega_1^2\omega_5\omega_2^3 - 288v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 - 24v_3^2\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^2 + 132v_1^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 +$$
$$240v_1^2\omega_3^2cs^2\omega_4^2\omega_5\omega_2^2 - 348v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 180v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 40\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5 - 108v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 54v_3^4\omega_3^2\omega_3^3\omega_5\omega_2^3 +$$
$$160\omega_3cs^4\omega_4^2\omega_1\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5 + 264v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5 + 36v_3^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 36v_3^2\omega_4^3\omega_1^3\omega_5\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_5\omega_2^3 -$$
$$216v_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 160\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2^2 + 54v_3^2\omega_3^3\omega_1^3\omega_5\omega_2^3 - 96v_3^4\omega_3^2\omega_4^2\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 36v_3^2\omega_4^3\omega_1^3\omega_5\omega_2 - 6\omega_3^2cs^4\omega_4^2\omega_1^3\omega_5\omega_2 -$$
$$6v_1^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 180v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 300v_3^2\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^2 + 9v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 + 152\omega_3cs^4\omega_4^2\omega_5\omega_2^2 - 108v_3^2\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^2 +$$
$$6v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 8\omega_3^2cs^4\omega_4^2\omega_1\omega_5\omega_2^2 + 16\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 36v_3^2\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 72\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 36v_3^4\omega_3\omega_4\omega_1^3\omega_5\omega_2 -$$
$$12v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 288\omega_3^2cs^4\omega_4\omega_1\omega_2^3 + 18v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 36\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^2 + 324v_3^2\omega_3^2cs^2\omega_1^2\omega_5\omega_2^3 - 36v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 -$$
$$36v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 + 54v_3^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 + 24v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 72\omega_3cs^4\omega_4^2\omega_1\omega_5\omega_2^3 + 180v_3^2\omega_3cs^2\omega_4^2\omega_1\omega_5\omega_2^3 - 468v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^3 -$$
$$2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 24v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 36v_3^2\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 96v_1^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_5\omega_2 - 36v_3^2\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3\omega_5 + 12v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 -$$
$$28\omega_3^2cs^4\omega_4^2\omega_1^3\omega_5\omega_2 + 72\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 60v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 56\omega_3^2cs^4\omega_4^2\omega_1\omega_5\omega_2^2 - 216v_1^2\omega_3^2cs^2\omega_4\omega_1^2\omega_5\omega_2^3 - 648v_1^2\omega_3^2cs^2\omega_4\omega_1\omega_5\omega_2^3 -$$
$$9v_2^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 + 2v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 36\omega_3^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2 - 72\omega_3cs^4\omega_4^2\omega_1^3\omega_5\omega_2 + 264v_1^2\omega_3cs^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 24v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 -$$
$$18v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 64\omega_3^2cs^2\omega_4^2\omega_1\omega_5\omega_2^2 - 84v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 72v_3^2\omega_3cs^2\omega_4^2\omega_1^3\omega_5\omega_2 + 36v_3^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 - 54v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3}$$

coefficient $C^{(2)}_{D_xD_yD_z^2v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2}$**:**

$C^{(2),\text{SRT}}_{D_xD_yD_z^2v_2} = (-36v_1v_3^2\omega + 36v_1^2v_3\omega + 24v_1cs^2 + 24v_1v_3^3 - v_1v_3^2\omega^3 - 14v_1^2v_3\omega^2 + v_1^2v_3\omega^3 + 14v_1v_3^2\omega^2 + v_3cs^2\omega^3 + 14v_1cs^2\omega^2 - 14v_3cs^2\omega^2 - 24v_3cs^2 - v_1cs^2\omega^3 - 24v_1^2v_3 + 36v_3cs^2\omega - 36v_1cs^2\omega)\frac{\rho v_2}{\omega^3}$

$C^{(2),\text{MRT1}}_{D_xD_yD_z^2v_2} = (-4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$
$12\omega_{15}v_1\omega_6v_{19}\omega_{16}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$
$4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1\omega_6v_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$
$4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 -$
$4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5^2 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$
$2\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1\omega_6v_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 +$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$
$2\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 + 4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 +$
$6\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 2\omega_{15}v_1\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$4\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 -$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}^2\omega_8\omega_5^2 - 4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 +$
$4v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 2\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_{10}^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{15}v_1\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 +$
$2\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 -$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_1^2\omega_6v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 -$
$2\omega_{15}v_1\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 -$
$4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 -$
$2\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$
$4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 -$
$4\omega_{15}v_1\omega_6v_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 - 4\omega_{15}v_1\omega_6v_{19}\omega_{16}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5^2 + 4\omega_{15}v_1\omega_6v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 +$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{10}^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2\omega_6v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 +$
$4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 8\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 +$
$2\omega_{15}\omega_6v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2v_1^2\omega_6v_3\omega_{19}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$
$2\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5 + 2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1\omega_6\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 +$
$2\omega_{15}v_1^2\omega_6v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 8\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 -$
$4\omega_{15}v_1\omega_6v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$
$4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6v_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 +$
$4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 -$
$4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 4v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$
$4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 -$
$4v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 +$
$4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 + 2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$
$2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 9\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 -$
$2\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$
$4\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 -$
$2\omega_{15}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8cs^2\omega_5 - 4\omega_6v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$

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$$
\begin{aligned}
&4v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \\
&4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + \\
&2v_1\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 2\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \\
&2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \\
&2\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \\
&2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 8\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 8\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + \\
&4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{15}v_1\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - \\
&2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5^2 - 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + \\
&2v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 + 2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + \\
&4\omega_{15}v_1\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - \\
&4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 14\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 - \\
&12\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \\
&8\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + \\
&4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 + 4\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5^2 + \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + \\
&2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 12\omega_{15}v_1\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \\
&2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_1\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \\
&2v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5\Big)\frac{\rho v_2}{2\omega_{15}\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2}
\end{aligned}
$$

$$
\begin{aligned}
C^{(2),\text{MRT2}}_{D_x D_y D_z^2 v_2} &= \big(-4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + \\
&4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 - \\
&2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \\
&4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 + \\
&4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 14\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \\
&2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \\
&4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + \\
&4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \\
&4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + \\
&4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + \\
&4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \\
&2v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + \\
&2\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 8\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \\
&2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{17}\omega_8^2\omega_5 + \\
&4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - \\
&2\omega_{15}v_1cs^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + 4cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \\
&2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 8\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \\
&4v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}cs^2\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 4\omega_{15}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \\
&2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 - \\
&4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \\
&2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}cs^2\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - \\
&4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_7\omega_{10}^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \\
&2\omega_{15}v_1cs^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \\
&4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \\
&4\omega_{15}cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \\
&4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \\
&6\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - \\
&4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -
\end{aligned}
$$

$$4v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 8\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$2cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$

$$2\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$

$$4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}cs^2\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 -$$

$$2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 12\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$

$$4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 4v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$

$$2\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$

$$4\omega_{15}v_1 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 9\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$

$$2\omega_{15}v_1 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$

$$4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_3^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$

$$4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$

$$4v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$

$$4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1 cs^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$

$$4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}v_1 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$4\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 - 4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$

$$4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}cs^2\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$

$$4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$

$$2v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$

$$4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1\omega_6 v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$

$$4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$

$$8\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$

$$4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$

$$4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$

$$4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$

$$4v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$

$$2\omega_{15}v_1 cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 +$$

$$4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$

$$8\omega_{15}v_1 cs^2\omega_6\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$2\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2\omega_6 v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$

$$4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}cs^2\omega_6 v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$

$$\left. 2v_1\omega_6 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 \right) \frac{\rho v_2}{2\omega_{15}\omega_6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$C^{(2),\text{CLBM1}}_{D_x D_y D_z^2 v_2} = (2\omega_{15}v_1^2 v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 +$

$2\omega_{15}v_1 v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$

$\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1 v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 -$

$2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$\omega_{15}v_1 v_3^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 -$

$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_5 + 2v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$

$v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{10}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 +$

$\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 +$

$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$

$\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} - \omega_{15}v_1\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} + v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 +$

$\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 +$

$\omega_{15}v_1\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$2\omega_{15}v_1^2 v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$

$\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$

$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} -$

$\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} + 2v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 -$

$2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 - v_1\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1 v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + \omega_{15}v_1\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$

$\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 - \omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$

$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} + 2\omega_{15}v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_3\omega_{19}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - v_1 v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1^2 v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$

$\omega_{15}v_1^2 v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2 v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_8\omega_{20}\omega_5 - 2\omega_{15}v_3\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 +$

$2\omega_{15}v_1 v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$$\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 + \omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 +$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 +$$
$$2\omega_{15}v_1\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_3\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$2\omega_{15}v_1\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 +$$
$$2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2v_1\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 + 2\omega_{15}v_1\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5)\dfrac{\rho v_2}{\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5}$$

$$C^{(2),\text{CLBM2}}_{D_xD_yD_z^2v_2} =$$

$$(2v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} -$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 -$$
$$\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2 + 2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + \omega_{15}v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 - \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 -$$
$$2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + 2\omega_{15}v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 - v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 +$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 -$$
$$\omega_{15}v_1\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} -$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} + \omega_{15}v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2v_1\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 - v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$\omega_{15}v_3\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2 + 2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 +$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_1\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2 + 2\omega_{15}v_1v_3^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 +$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + 2\omega_{15}v_1\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 +$$
$$\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - v_1\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2 - \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 - \omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 + \omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 +$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} - 2\omega_{15}v_1\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2v_1\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$\omega_{15}v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 - 2\omega_{15}v_1\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 + \omega_{15}v_1\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$

$v_1^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} \omega_8 \omega_5 + \omega_{15} v_1 v_3^2 \omega_{19} \omega_{16} \omega_{10} \omega_7 \omega_{20} \omega_{17} \omega_8 \omega_5 + 2\omega_{15} v_1 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_{23} \omega_{20} \omega_{17} cs^2 \omega_8 \omega_5 -$
$2\omega_{15} v_1 \omega_{19} \omega_{10} \omega_7 \omega_{20} \omega_{17} cs^2 \omega_8 \omega_5 - 2\omega_{15} v_1^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_{23} \omega_{20} \omega_{17} \omega_8 \omega_5 - 2\omega_{15} v_1 \omega_{19} \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} cs^2 +$
$2\omega_{15} v_3 \omega_{19} \omega_{16} \omega_{10} \omega_{20} \omega_{17} cs^2 \omega_8 \omega_5 + 2v_1 v_3^2 \omega_{19} \omega_{16} \omega_7 \omega_{23} \omega_{20} \omega_8 \omega_5 + 2\omega_{15} v_1^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{17} \omega_5) \frac{\rho v_2}{\omega_{15} \omega_{19} \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} \omega_8 \omega_5}$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(2),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_2}^{(2),\mathrm{CuLBM2}} = (-9\omega_3 \omega_1 \omega_2 + 6\omega_3 cs^2 \omega_4 \omega_1 - 9v_1^2 \omega_4 \omega_1 \omega_2 + 27\omega_3 cs^2 \omega_1 \omega_2 - 2v_1^2 \omega_3 \omega_4 \omega_2 - 2\omega_3 \omega_4 \omega_1 - 27cs^2 \omega_4 \omega_1 \omega_2 + 9\omega_4 \omega_1 \omega_2 -$
$6\omega_3 cs^2 \omega_4 \omega_2 + 9v_1^2 \omega_3 \omega_1 \omega_2 + 2v_1^2 \omega_3 \omega_4 \omega_1 + 2\omega_3 \omega_4 \omega_2) \frac{\rho v_1 v_2}{72\omega_3 \omega_4 \omega_1 \omega_2}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_3}^{(2)}$ at $\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2}$:

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_3}^{(2),\mathrm{SRT}} = (-24v_2^2 cs^2 + 36v_1^2 cs^2 \omega + 48v_1 v_3 cs^2 - 14v_1^2 cs^2 \omega^2 + v_1^2 cs^2 \omega^3 + 48v_1 v_2^2 v_3 - 72v_1 v_2^2 v_3 \omega - 24v_1^2 v_2^2 + 28v_1 v_3 cs^2 \omega^2 + 36v_1^2 v_2^2 \omega -$
$2v_1 v_3 cs^2 \omega^3 + 36v_2^2 cs^2 \omega + v_1^2 v_2^2 \omega^3 - 2v_1 v_2^2 v_3 \omega^3 - 24v_1^2 cs^2 - 14v_2^2 cs^2 \omega^2 - 14v_1^2 v_2^2 \omega^2 + v_2^2 cs^2 \omega^3 + 28v_1 v_2^2 v_3 \omega^2 - 72v_1 v_3 cs^2 \omega) \frac{\rho}{2\omega^3}$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z^2 v_3}^{(2),\mathrm{MRT1}} = (-\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 + \omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - 8\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 -$
$2\omega_{15} v_1^2 \omega_{19}^2 \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + \omega_{15} v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8^2 cs^2 \omega_5 + 2\omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$
$2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} v_1^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5 + 4\omega_{15} v_1 v_2^2 v_3 \omega_{19}^3 \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 \omega_5 +$
$2\omega_{15} v_2^2 \omega_{19}^2 \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - 4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{15} v_1 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 -$
$2\omega_{15} v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{17} \omega_8 cs^2 \omega_5^2 - 2\omega_{15} v_1^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 cs^2 \omega_5 + 2\omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 +$
$2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15} v_1 v_2^2 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8^2 \omega_5 +$
$v_1^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 + \omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 +$
$\omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8^2 cs^2 \omega_5 + 2\omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5 + 4v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 -$
$\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 + 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 \omega_5 +$
$2v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16}^3 \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 4\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 +$
$2\omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{17} \omega_8 cs^2 \omega_5^2 -$
$2\omega_{15} v_1 v_2^2 v_3 \omega_{19}^2 \omega_{16} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 \omega_5 + \omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15} v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 cs^2 \omega_5 +$
$2\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - 2v_2^2 \omega_7^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 \omega_5 +$
$2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8 \omega_5 - 2\omega_{15} v_1 v_2^2 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 + 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 +$
$4\omega_{15} v_1 v_2^2 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8 \omega_5^2 + 10\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 \omega_5 +$
$2\omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - \omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 -$
$12\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5^2 - 2\omega_{15} v_2^2 \omega_7^2 \omega_{19} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 8\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5 +$
$4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8 \omega_5 + 2\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} cs^2 \omega_5^2 -$
$2\omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - 2v_1 v_3 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 +$
$2\omega_{15} v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5^2 + 2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 + 4v_1 v_2^2 v_3 \omega_{19}^3 \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 \omega_5 -$
$4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 - \omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 -$
$2v_1^2 v_2^2 \omega_7^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 \omega_5^2 + 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 \omega_5 -$
$2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8 \omega_5 + \omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8^2 \omega_5 + 6\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5 +$
$4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 - 2\omega_{15} v_2^2 \omega_{19}^2 \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + \omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 \omega_5^2 +$
$2\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8 \omega_5 + 2\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 \omega_5 - 2\omega_{15} v_2^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8 cs^2 \omega_5^2 +$
$2\omega_{15} v_2^2 \omega_{19}^2 \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 4\omega_{15} v_1 v_2^2 v_3 \omega_{19}^2 \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 \omega_5^2 - 6\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 +$
$2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 \omega_5 + \omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{17} \omega_8^2 cs^2 \omega_5 - 4\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16}^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 +$
$4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5 - v_2^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - \omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 -$
$4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 cs^2 \omega_5^2 + 2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 \omega_5 - 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 \omega_5 -$
$4v_1 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5^2 - \omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8^2 cs^2 \omega_5 - 2v_1 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 +$
$2\omega_{15} v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 cs^2 \omega_5^2 + 2\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 + \omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 \omega_5 -$
$4\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} \omega_8 \omega_5^2 + 4\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 + \omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 +$
$v_1^2 v_2^2 \omega_7^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 - 2v_1 v_3 \omega_7^2 \omega_{19} \omega_{16}^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 - \omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8^2 cs^2 \omega_5^2 -$
$2\omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8 cs^2 \omega_5^2 + 2\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8^2 \omega_5 - v_1^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 +$
$2\omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 cs^2 \omega_5^2 - 4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 -$
$2\omega_{15} v_1^2 v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 \omega_5 + 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8 \omega_5 + 2\omega_{15} v_1^2 \omega_{19} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 -$
$2\omega_{15} v_1 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} cs^2 \omega_5^2 + 2\omega_{15} v_2^2 \omega_{19}^2 \omega_{10} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + v_1^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 -$
$4\omega_{15} v_1 v_2^2 \omega_7^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 \omega_5 + 2\omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{15} v_1 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 +$
$2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 \omega_5 - 2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 \omega_5 -$
$2\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 4\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 +$
$2\omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 + \omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 -$
$4\omega_{15} v_1 v_2^2 v_3 \omega_{19}^2 \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 \omega_5 - 2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8 \omega_5 - 4\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 -$
$4\omega_{15} v_1 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + v_2^2 \omega_7^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + \omega_{15} v_1^2 \omega_7^2 \omega_{19} \omega_{16} \omega_7^3 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 +$
$4\omega_{15} v_1 v_2^2 v_3 \omega_{19}^2 \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 \omega_5 - 2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{17} \omega_8^2 \omega_5 - 4\omega_{15} v_1 v_2^2 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{17} \omega_8 \omega_5 -$
$2\omega_{15} v_1^2 v_2^2 \omega_{19} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_8^2 \omega_5 + 2\omega_{15} v_2^2 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - 2\omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 -$
$4\omega_{15} v_1 v_3 \omega_{19}^3 \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 + 2\omega_{15} v_2^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5^2 - 2\omega_{15} v_1 v_3 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 -$
$2\omega_{15} v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^2 \omega_{20} \omega_{17} \omega_8^2 cs^2 \omega_5 - 4\omega_{15} v_1 v_2^2 v_3 \omega_{19}^2 \omega_{16} \omega_{10} \omega_7^2 \omega_{23} \omega_{17} \omega_8^2 \omega_5 - 2v_1^2 \omega_{19} \omega_{16} \omega_{10} \omega_7^3 \omega_{23} \omega_{20} \omega_8^2 cs^2 \omega_5 +$

$$\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2v_1^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 + 2\omega_{15}v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 +$$
$$4v_1v_2^2\omega_{19}^3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$12\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1v_3\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$$
$$2\omega_{15}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5^2 - 2\omega_{15}v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$2v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_2^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2cs^2\omega_5^2 - 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8cs^2\omega_5 + 4\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 +$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^3\omega_5 + \omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$4\omega_{15}v_1v_3\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$$
$$2v_1^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - \omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 +$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5^2 +$$
$$2v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8cs^2\omega_5^2 - 4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 - \omega_{15}v_1^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 6\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2\omega_5^2 - \omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 4v_1v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2cs^2\omega_5^2 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 -$$
$$\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5 -$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2\omega_5 + 2\omega_{15}v_1v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2\omega_5) \dfrac{\rho}{2\omega_{15}^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(2),\text{MRT2}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3} = (-\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$8\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 + v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - \omega_{15}v_1cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_5^2 - cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - \omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$8\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + 2v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$4v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^3\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$4v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 +$$
$$\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2v_3\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 10\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$2\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + v_1^2cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 6\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + cs^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + \omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 -$$
$$2v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 - 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2v_3\omega_{19}\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$4v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5 + 2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 + \omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5 -$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + \omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$\omega_{15}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 +$$
$$2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1v_2v_3\omega_{19}\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 + \omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 +$$
$$\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$4v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 4v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 4\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 +$$
$$2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 + 2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - \omega_{15}v_1^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_8^2\omega_5^2 - \omega_{15}cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}v_1cs^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}v_1cs^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5 \Big) \frac{\rho}{2\omega_{15}\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2}$$

$$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_3}^{(2),\mathrm{CLBM1}} =$$
$$(v_1^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 + \omega_{15}v_1^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 +$$
$$2v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 - \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20} - 2\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} +$$
$$4v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} + 2\omega_{15}v_1v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_2^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$\omega_{15}v_1^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 -$$
$$4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} + 4\omega_{15}v_1v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 -$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_2^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$

$$4\omega_{15}v_1v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_2^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}v_1v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} +$$
$$\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$4\omega_{15}v_1v_3\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 - 2v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} + 2\omega_{15}v_1^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 +$$
$$4v_1v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} -$$
$$2v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 +$$
$$\omega_{15}v_2^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - 2v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 + v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1v_3\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17} - 2\omega_{15}v_1v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 - 2v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 + \omega_{15}v_2^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 - v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 - 2\omega_{15}v_2^2\omega_{19}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 - 2v_1v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17} -$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 4\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$4\omega_{15}v_1v_3\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} - 2v_1^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + 2v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{17}\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{16}\omega_{10}cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} + 2\omega_{15}v_1\omega_{19}cs^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} - 2v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8 + 2\omega_{15}v_2^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 +$$
$$\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{20} - \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_2^2\omega_{19}\omega_{10}cs^2\omega_{23}\omega_{20}\omega_8\omega_5 -$$
$$2\omega_{15}v_1v_2^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5)\dfrac{\rho}{2\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5}$$

$$C^{(2),\text{CLBM2}}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}^2_v v_3} = (2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 - \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 4v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 - 2\omega_{15}v_1^2\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 +$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + 2\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 - 2\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2 -$$
$$\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 - 4\omega_{15}v_1v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 - v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2v_1v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 +$$
$$2\omega_{15}v_1^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 -$$
$$2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 4v_1v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 +$$
$$2v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 -$$
$$4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$
$$\omega_{15}v_1^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 -$$
$$\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_5 + \omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 +$$
$$2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 + \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 -$$
$$\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 +$$

$$
\begin{aligned}
&4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 + \\
&2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - \\
&4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2\omega_{15}v_1^2v_2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \\
&4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 - \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \\
&4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \\
&2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \\
&4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2 + v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \\
&\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + \\
&2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + 4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + \\
&4\omega_{15}v_1v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2v_1^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \\
&4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + 4v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 - \\
&2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 + v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + 2v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 + \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \\
&\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 - 2\omega_{15}v_1^2\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_5 + \\
&4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_1^2v_2\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} - 2v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \\
&4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + v_1^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 - 2v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \\
&2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 + v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \\
&v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&2v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_5 - \\
&2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_5 - \omega_{15}v_1^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&4\omega_{15}v_1v_3\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \\
&\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_5 + 2v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} - \\
&2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + \\
&2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 - \\
&2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_8 - \\
&2\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + \\
&2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_5 + \omega_{15}v_2^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&4\omega_{15}v_1v_2^2v_3\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \\
&2v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{17}\omega_8\omega_5 - \\
&2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2 - v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2 - \\
&4\omega_{15}v_1v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20} + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8 + \\
&2v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}\omega_5 - \\
&2\omega_{15}v_2^2\omega_{16}\omega_{10}\omega_{23}\omega_{17}cs^2\omega_8\omega_5 - 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{10}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \\
&\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2 + 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&\omega_{15}v_1^2v_2^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + \omega_{15}v_2^2\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{19}\omega_{10}\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \\
&2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17} - 2\omega_{15}v_1v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - 2\omega_{15}v_1v_3\omega_{16}\omega_{10}\omega_7\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \\
&4\omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17} - 4\omega_{15}v_1v_3\omega_{19}\omega_7\omega_{23}\omega_{20}cs^2\omega_{17}\omega_8\omega_5 + \\
&2\omega_{15}v_2^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 - \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + \omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{17}cs^2\omega_8 + 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 + \\
&\omega_{15}v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}cs^2\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_5 - \\
&2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}cs^2\omega_8\omega_5 - \omega_{15}v_1^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{15}v_1^2v_2^2\omega_{19}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_1^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{20}\omega_{17}cs^2\omega_5 + \\
&4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_8\omega_5 - 4\omega_{15}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_{20}\omega_{17}\omega_8\omega_5)\,\frac{\rho}{2\omega_{15}\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5}
\end{aligned}
$$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}^2_z v_3} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}^2_z v_3} = (-3v_1^2\omega_3\omega_1^3\omega_2 + 28\omega_3 cs^2\omega_1^3 + 2\omega_1\omega_2^3 - 24\omega_3 cs^2\omega_1\omega_2^2 - 22v_3^2\omega_3\omega_1^2\omega_2 + 6v_1^2\omega_3\omega_1^2\omega_2^2 - 12\omega_3\omega_1^3 - 24\omega_3 cs^2\omega_1\omega_2^3 +$
$12cs^2\omega_1^2\omega_2^2 - 2v_1^2\omega_1\omega_2^3 + 26v_3^2\omega_3\omega_1^2\omega_2^2 + 10\omega_3\omega_1\omega_2^3 + 16v_3^2\omega_3\omega_1^3 - 4v_1^2\omega_3\omega_1^2\omega_2 - 6cs^2\omega_1^3\omega_2 + 4v_1^2\omega_3\omega_1^3 + 8\omega_3\omega_1\omega_2^2 - 13v_3^2\omega_3\omega_1^3\omega_2 -$
$6cs^2\omega_1\omega_2^3 - 30\omega_3 cs^2\omega_1^2\omega_2 - 10\omega_3\omega_1^2 - 13v_3^2\omega_3\omega_1\omega_2^3 + 4v_1^2\omega_1^2\omega_2^2 - 20\omega_3\omega_1^2\omega_2^2 + 26\omega_3 cs^2\omega_2^3 - 2v_1^2\omega_1^3\omega_2 - 4v_3^2\omega_3\omega_1\omega_2^2 + 10\omega_3\omega_1^3\omega_2 - 4\omega_1^2\omega_2^2 +$
$4v_1^2\omega_3\omega_2^3 - 4v_1^2\omega_3\omega_1\omega_2^2 - 24\omega_3 cs^2\omega_1^3\omega_2 - 3v_1^2\omega_3\omega_1\omega_2^3 + 2\omega_1^3\omega_2 + 14\omega_3\omega_1^2\omega_2 + 48\omega_3 cs^2\omega_1^2\omega_2^2 + 10v_3^2\omega_3\omega_2^3)\,\frac{\rho v_1 v_3}{6\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\mathrm{D}^2_y \mathrm{D}^2_z \rho}$ **at** $\frac{\partial^4 \rho}{\partial x_2^2 \partial x_3^2}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}^2_y \mathrm{D}^2_z \rho} = (24 - 46cs^2\omega^2 + 14\omega^2 + 5cs^2\omega^3 - \omega^3 + 108cs^2\omega + v_2^2\omega^3 - 14v_2^2\omega^2 - 72cs^2 + 36v_2^2\omega - 36\omega - 24v_2^2)\,\frac{v_2 cs^2}{12\omega^3}$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}^2_y \mathrm{D}^2_z \rho} = (-18\omega_{16}^2\omega_{10}^3\omega_7^3 cs^4 + 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 12\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2 - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 72v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 +$

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$$12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^4 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 + 36v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 + 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 6v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 +$$
$$36\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^4 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2cs^2 - 36v_3^2\omega_{19}\omega_{10}^3\omega_7^2cs^2 - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} +$$
$$180\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}cs^4 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 -$$
$$48\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4 + 12\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^4 - 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 -$$
$$54v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 18\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 36v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 -$$
$$12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 36v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2 + 18\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7cs^4 - 36v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} -$$
$$42\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^4 - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_2^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}cs^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 +$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 96\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23}cs^4 + 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2 + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 -$$
$$18v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 - 12\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}cs^4 + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 12v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 30\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^4 +$$
$$36\omega_{16}^2\omega_{10}^3\omega_7^2cs^4 + 24v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} +$$
$$5\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^4 + 18\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^4 - 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3cs^2 - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$$
$$18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 84\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^4 +$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3cs^2 +$$
$$18v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 6v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 - 18\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3cs^4 + 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 72v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 +$$
$$6\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 12v_2^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 12\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 - 36v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 - 6v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} +$$
$$12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2 - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4 - 72v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 + 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} +$$
$$36v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 - 2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 6v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}cs^2 -$$
$$12v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 12v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^4 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2 +$$
$$36v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}cs^2 - 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7cs^4 + 6v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - \omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^2 - 6\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^2 -$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 18v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 +$$
$$150\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^4 - 12v_2^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 36v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}cs^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 -$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 72v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}cs^2 + 36\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^4 + 6\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 + 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2 -$$
$$36\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^4 - 88\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^4 - 12v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^2 + 12v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 +$$
$$6v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3cs^2 - 42\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^4 - 12v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2 +$$
$$6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 - 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 -$$
$$12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 12v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 + 12\omega_{19}\omega_{10}^3\omega_7\omega_{23}cs^2 + v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^2 + 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7cs^4 +$$
$$12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}cs^4 + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 + 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7cs^2\Big) \frac{v_2}{12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}}$$

$C^{(2),\text{MRT2}}_{D_y^2 D_z^2 \rho} = \big(-12cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 72cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} - 6cs^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3 - 12cs^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} -$

$36cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} - 36cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 18cs^4\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} - 36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} - 36cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3 +$

$12cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 - 6cs^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12cs^4\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 36cs^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} - 12cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} -$

$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 18cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 88cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} +$

$12cs^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 12cs^2v_2^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 108cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} - 18v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$

$24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 6cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 18cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 6v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} -$

$24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 12v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 12cs^4\omega_{19}\omega_{10}^3\omega_7\omega_{23} +$

$18cs^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 12cs^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 + 6cs^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 36cs^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 +$

$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 36cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 36cs^4\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 48cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12cs^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 12cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} +$

$12cs^2v_2^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 12cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 18cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 42cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} -$

$12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 24v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} -$

$18cs^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 12cs^2\omega_{16}^2\omega_{10}^3\omega_7^2 - 12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 18cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 6cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 -$

$18cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 12cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 5cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} -$

$36cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 84cs^4\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} - 18cs^4\omega_{16}^2\omega_{10}^3\omega_7^3 + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$

$cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} + 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 6v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 +$

$36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 12v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 6cs^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 12cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$

$36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 18cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 54cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$

$6v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} + 12cs^2v_2^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 96cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 18cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} +$

$150cs^4\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 36cs^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 12v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 - 36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 +$

$6cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 12cs^4\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 42cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 18cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 36cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7 -$

$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12cs^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} -$

$12cs^2v_2^2\omega_{19}\omega_{10}^3\omega_7^2 + 72cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} - 12v_2^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3 + 36cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 18cs^4\omega_{16}^2\omega_{10}^3\omega_7^2 - 6cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} +$

$6cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23} + 12cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 12cs^2\omega_{16}^2\omega_7^3\omega_{23} - 72cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} -$

$2cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 180cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 36cs^4\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 12cs^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} -$

$12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 12v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 6v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 12cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} -$

$12v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 6cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 72cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 36cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 36cs^4\omega_{16}^2\omega_{10}^3\omega_7 +$

$2cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23} - 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 30cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} - 36cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 12v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 +$

$12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 6cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\big) \frac{v_2}{12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}}$

$C^{(2),\text{CLBM1}}_{D_y^2 D_z^2 \rho} = \big(12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 18\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{10}^3\omega_7\omega_{23} - 12v_2^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 36\omega_{19}\omega_{16}^2cs^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7 +$

$12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 18\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} + 36\omega_{19}\omega_{16}\omega_{10}^3cs^2\omega_7 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 54\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_7\omega_{23} -$

$12\omega_{19}\omega_{16}\omega_{10}^3\omega_{23} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 6\omega_{16}^2\omega_{10}^3\omega_7 - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} -$

$6v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 36\omega_{19}\omega_{16}^2\omega_{10}cs^2\omega_7^2\omega_{23} - 12\omega_{16}^2\omega_{10}^3\omega_7 - 12v_2^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} + 36\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_{23} -$

$18\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 12v_2^2\omega_{19}\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{10}^2\omega_7\omega_{23} - 36\omega_{16}^2\omega_{10}^2cs^2\omega_7\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}^3cs^2\omega_7 - 40\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_7\omega_{23} +$

$$12v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 + 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23} + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 54\omega_{19}\omega_{16}\omega_{10}^3cs^2\omega_7\omega_{23} - 2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} -$$
$$18\omega_{19}\omega_{16}^2\omega_{10}^2cs^2\omega_7^2 + 12v_2^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 36\omega_{19}\omega_{10}^3cs^2\omega_7\omega_{23} - \omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23} + 36\omega_{16}^2\omega_{10}^3cs^2\omega_7 -$$
$$12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 18\omega_{19}\omega_{16}\omega_{10}^3cs^2\omega_7^2\omega_{23} + 36\omega_{19}\omega_{10}^3cs^2\omega_7^2\omega_{23} - 6v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 6v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 -$$
$$12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_{23} - 36\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_7 + 5\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_7^2\omega_{23} + 18\omega_{16}^2\omega_{10}^2cs^2\omega_7^2\omega_{23} + 12v_2^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 18\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_7^2 -$$
$$36\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_{23} + 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 - 6\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_7^2\omega_{23} + v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} + 6\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} -$$
$$36\omega_{19}\omega_{16}^2\omega_{10}^3cs^2\omega_{23} + 12v_2^2\omega_{16}^3\omega_{10}^3\omega_7 + 54\omega_{19}\omega_{16}\omega_{10}^2cs^2\omega_7^2\omega_{23} + 36\omega_{19}\omega_{16}\omega_{10}^2cs^2\omega_7^2 - 12\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 18\omega_{16}^2\omega_{10}^3cs^2\omega_7^2 +$$
$$6v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2 - 36\omega_{19}\omega_{10}^2cs^2\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_{23})\,\frac{v_2cs^2}{12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}}$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho} = (12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 36\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}cs - 18\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}cs^2 + 12\omega_{19}\omega_{10}^3\omega_7\omega_{23} -$$
$$12v_2^2\omega_{19}\omega_{10}^3\omega_{10}\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 18\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 12\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2 -$$
$$12\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}^3\omega_{23}cs^2 + 5\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 18\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 -$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 6\omega_{16}^2\omega_{10}^3\omega_7 - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} -$$
$$6v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 36\omega_{16}^2\omega_{10}^3\omega_7cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 12\omega_{16}^2\omega_{10}^3\omega_7 - 12v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{23} -$$
$$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12v_2^2\omega_{19}\omega_{10}^3\omega_7\omega_{23} + 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} + 12v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 + 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23} + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2 -$$
$$36\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7cs^2 + 12v_2^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 54\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 - \omega_{19}\omega_{16}^3\omega_{10}\omega_7^2\omega_{23} -$$
$$12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7 + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} + 54\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2 - 6v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 18\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$$
$$36\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 18\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 +$$
$$6v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_{23} + 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7cs^2 + 12v_2^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 36\omega_{19}\omega_{16}\omega_{10}^3\omega_{23}cs^2 +$$
$$2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 36\omega_{19}\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 54\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}cs^2 + v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 +$$
$$6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 40\omega_{19}\omega_{16}^3\omega_{10}^3\omega_7\omega_{23}cs^2 - 36\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2 + 12v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 36\omega_{19}\omega_{16}\omega_{10}^3\omega_7cs^2 - 12\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} -$$
$$36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 + 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 6\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_{23})\,\frac{v_2cs^2}{12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}}$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho} = (-4\omega_3^3\omega_{11}^2\omega_5^2 + 36cs^2\omega_3\omega_{11}\omega_5^2 + 5cs^2\omega_3^3\omega_{11}^2\omega_5^3 - 18\omega_3\omega_{11}\omega_5^3 + 12v_2^2\omega_3^2\omega_{11}^2 + 12cs^2\omega_3^3\omega_{11}\omega_5^2 - 12\omega_3\omega_{11}\omega_5^3 - \omega_3^3\omega_{11}\omega_5^3 +$$
$$54cs^2\omega_3\omega_{11}\omega_5^3 - 12v_2^2\omega_3\omega_{11}^2\omega_5^2 - 36cs^2\omega_{11}\omega_5^3 + 36cs^2\omega_3^3\omega_5^3 + 6v_2^2\omega_3^3\omega_{11}^2\omega_5^2 - 12v_2^2\omega_{11}^2\omega_5^2 + 12\omega_{11}\omega_5^3 - 12\omega_3^2\omega_5^3 - 54cs^2\omega_3^3\omega_{11}^2\omega_5 + 12v_2^2\omega_{11}^2\omega_5^3 -$$
$$12v_2^2\omega_3\omega_5^3 - 36cs^2\omega_3^2\omega_5^2 - 6v_2^2\omega_3^3\omega_{11}\omega_5^3 + 6v_2^2\omega_3\omega_{11}^2\omega_5^2 + 18\omega_3^3\omega_{11}^2\omega_5 + 12\omega_3^2\omega_5^2 - 12v_2^2\omega_{11}\omega_5^3 + 12v_2^2\omega_3^3\omega_5^3 + 12v_2^2\omega_3\omega_{11}\omega_5^3 + v_2^2\omega_3^3\omega_{11}^2\omega_5^3 -$$
$$36cs^2\omega_{11}^2\omega_5^3 + 12\omega_{11}^2\omega_5^3 + 4v_2^2\omega_3^3\omega_{11}^2\omega_5^3 + 36cs^2\omega_{11}^2\omega_5^3 - 36cs^2\omega_3\omega_5^3 + 18v_2^2\omega_3\omega_{11}\omega_5^3 - 12v_2^2\omega_3^3\omega_5^2 - 12\omega_{11}^2\omega_5^3 + 12\omega_3\omega_5^3 - 40cs^2\omega_3\omega_{11}^2\omega_5^3 + 6\omega_3^3\omega_{11}\omega_5^3 -$$
$$6\omega_3\omega_{11}^2\omega_5^2 + 18cs^2\omega_3^3\omega_{11}\omega_5^2 - 12\omega_3^3\omega_{11}^2 - 18v_2^2\omega_3^3\omega_{11}^2\omega_5 + 36cs^2\omega_3^2\omega_{11}^2 + 12\omega_3\omega_3^2\omega_{11}^2\omega_5 - 18cs^2\omega_3^2\omega_{11}\omega_5^2 + 18cs^2\omega_3\omega_{11}^2\omega_5 - 6\omega_3\omega_{11}\omega_5^2)\,\frac{cs^2v_2}{12\omega_3^3\omega_{11}^2\omega_5^3}$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho} = (-4v_2^2\omega_3^2\omega_4^2\omega_3^3 - 12\omega_3cs^4\omega_4^2\omega_1^3\omega_2 + 32v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 + 108\omega_3cs^4\omega_4^2\omega_1^2\omega_2^2 - 108\omega_3cs^4\omega_1^2\omega_2^2 + 12v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 4\omega_3^2\omega_4^2\omega_1^3 -$$
$$4\omega_3^3\omega_4^2\omega_1\omega_2^2 - 216v_2^2\omega_3^2cs^2\omega_4^2\omega_2^3 - 36cs^4\omega_4^2\omega_1^3\omega_2 - 36v_2^2\omega_3^2cs^2\omega_1^2\omega_2 - 20v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 24\omega_3^3cs^4\omega_4^2\omega_1^2\omega_2^2 - 18\omega_3cs^2\omega_1^3\omega_2 -$$
$$32v_2^2\omega_3^2cs^2\omega_4^2\omega_1^2\omega_2 - 30v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 54cs^4\omega_4^2\omega_1^3\omega_2^2 - 4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 96\omega_3cs^4\omega_4^2\omega_1^2\omega_2^2 - 4v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2 + 9\omega_3^2cs^2\omega_4\omega_1^3\omega_2^3 -$$
$$27v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 36v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 - 48v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 + 16v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 - 102\omega_3cs^4\omega_4^2\omega_1^3\omega_2 + 36v_2^2v_3^2\omega_3^2\omega_4^2\omega_2^3 - 119\omega_3cs^4\omega_4^2\omega_1^2\omega_2^3 -$$
$$52\omega_3cs^2\omega_4^2\omega_1^3 + 27v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 36\omega_3cs^2\omega_1^2\omega_2^3 + 35\omega_3cs^4\omega_4^2\omega_1^3\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3 - 4v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2 + 3v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^3 -$$
$$36v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 18v_2^2\omega_3cs^2\omega_1^3\omega_2^3 - 27v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 27v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 4v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 58\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 + 66v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 54\omega_3^2cs^4\omega_1^3\omega_2^2 -$$
$$27\omega_3cs^4\omega_4^2\omega_1^3\omega_2^2 - 36v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 24\omega_3^2\omega_3^2\omega_4^2\omega_1^3 + 16v_2^2\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 + 28\omega_3cs^2\omega_4^2\omega_1\omega_2^3 + 8v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^2 + 324v_3^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 +$$
$$15\omega_3cs^4\omega_4^2\omega_1^3\omega_2^3 - 36\omega_3cs^2\omega_4\omega_1^3\omega_2^3 - 9v_2^2\omega_3cs^2\omega_4^2\omega_1^3\omega_2^3 + 28\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 + 4v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 72cs^4\omega_4^2\omega_1\omega_2^3 +$$
$$72v_3^2\omega_3cs^4\omega_4^2\omega_1^3 + 12cs^2\omega_4^2\omega_1^3\omega_2^2 + 36v_3^4\omega_3^2\omega_4^2\omega_1\omega_2^2 + 4\omega_3cs^2\omega_4^2\omega_1^3\omega_2 - 9v_2^2\omega_3^2cs^2\omega_4\omega_1^3\omega_2^3 - 138v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^3 - 324v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 -$$
$$36\omega_3cs^2\omega_4^2\omega_1^2\omega_2^3 - 16cs^2\omega_4^2\omega_1^3\omega_2^2 + 12v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 4v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 20\omega_3^2cs^2\omega_4^2\omega_2^3 + 24v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3 - 4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 24v_2^2cs^2\omega_4^2\omega_1^2\omega_2^3 -$$
$$27\omega_3^2cs^4\omega_4\omega_1^3\omega_2^3 - 32\omega_3cs^2\omega_4^2\omega_1^2\omega_2^2 + 216v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3 - 12v_3^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 4\omega_3^2\omega_4^2\omega_2^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 + 72v_3^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 4v_2^2\omega_3^2\omega_4^2\omega_1^3 +$$
$$74\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 8v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 42v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 49\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 16v_2^2\omega_3cs^2\omega_4^2\omega_2^3 - 28v_2^2\omega_3cs^2\omega_4^2\omega_1\omega_2^3 -$$
$$48v_3^2\omega_3^2\omega_4^2\omega_1^3 - 25\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^2 + 4v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 78\omega_3^2cs^4\omega_4^2\omega_1\omega_2^3 + 36v_3^2\omega_3^2cs^2\omega_4\omega_1^2\omega_2^3 + 9\omega_3cs^2\omega_4^2\omega_1^3\omega_2^3 + 60v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 -$$
$$12v_2^2cs^2\omega_4^2\omega_1^3\omega_2^2 - 28v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^2 - 84\omega_3cs^4\omega_4^2\omega_1\omega_2^3 + 4\omega_3^3cs^2\omega_4^2\omega_1^2\omega_2 - 3\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 60v_3^4\omega_3^2\omega_4^2\omega_2^3 + 24cs^2\omega_4^2\omega_1^2\omega_2^3 +$$
$$108\omega_3^2cs^4\omega_4\omega_1^2\omega_2^3 + 18v_2^2cs^2\omega_4^2\omega_1^3\omega_2^3 + 4v_2^2\omega_3^2cs^2\omega_4^2\omega_1\omega_2^3 + 138v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2 - 72v_3^2\omega_3^2cs^4\omega_4\omega_1\omega_2^3 - 30v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2)\,\frac{v_2}{36\omega_3^3\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(2)}_{\mathrm{D}_y^2\mathrm{D}_z^2v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_2^2\partial x_3^2}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y^2\mathrm{D}_z^2v_2} = (-24 + 8cs^2\omega^2 - 12\omega^2 - cs^2\omega^3 - 18cs^2\omega + 36v_2^2\omega^2 + 12cs^2 - 108v_2^2\omega + 36\omega + 72v_2^2)\,\frac{\rho cs^2}{12\omega^3}$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y^2\mathrm{D}_z^2v_2} =$$
$$(-6\omega_{16}^2\omega_{10}^3\omega_7^2cs^4 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4 - 6v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 +$$
$$12v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 18v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^4 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 + 60v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 -$$
$$36v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 36v_3^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4 + 12\omega_{19}\omega_{16}^3\omega_7^3\omega_{23}cs^4 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 180v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 -$$
$$18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 54v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 +$$
$$72v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 48v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23}cs^2 - 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2cs^4 - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 -$$
$$6v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^4 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 36v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 24v_2^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}cs^2 -$$
$$6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 42v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23}cs^4 + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2 +$$

$$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 - 6v_3^2\omega_{16}^3\omega_{10}^3\omega_7^3 cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 cs^2 + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 24v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^4 +$$
$$12\omega_{16}^2\omega_{10}^3\omega_7^2cs^4 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 + 72v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} -$$
$$\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^4 + 6\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^4 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 + 36v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3cs^2 - 12\omega_{19}\omega_{16}^3\omega_{10}^2\omega_7cs^4 + 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} -$$
$$24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 132v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^4 + 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$$
$$12v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3cs^2 + 6v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 18v_2^2\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 -$$
$$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^4 + 36v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 24v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2 -$$
$$12\omega_{16}^2\omega_{10}\omega_7^2cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 - 18v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^4 + 36v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} +$$
$$84v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^4 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 + 108v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 -$$
$$18v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 18v_2^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} - 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7 - 36v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 + 36v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7 -$$
$$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2 + 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}cs^2 - 144v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7cs^4 +$$
$$18v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 6v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 108v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2 -$$
$$72v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}^3\omega_{10}^2\omega_7cs^2 + 60v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4 - 36v_2^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} -$$
$$12v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 78v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^2 - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2 +$$
$$6\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^4 - 4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^4 - 36v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} +$$
$$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 36v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2cs^2 + 6v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 36v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2cs^2 - 24\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}cs^4 -$$
$$12v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} - 84v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2 + 18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 6\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}cs^2 -$$
$$18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2cs^2 - 12v_3^2\omega_{16}^3\omega_{10}^3\omega_7^2 + 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7cs^4 +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2)\dfrac{\rho}{12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}}$$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2} = (18cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 24cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 18cs^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7 + 12cs^4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 6cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$12cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 6cs^4\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 60cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12cs^4\omega_{19}\omega_{16}^3\omega_{10}\omega_7^2 -$
$6v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 6cs^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12cs^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 48cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23} - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} -$
$42cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 6cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 - 6cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 -$
$4cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 36cs^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7 - 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 24cs^2v_2^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 12v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} + 36cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} -$
$54v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 36cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 6cs^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$6cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 - 6v_3^2\omega_{16}\omega_{10}^3\omega_7\omega_{23} - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} - 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 12cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2 +$
$36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} + 6cs^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 36cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 12cs^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 6cs^2\omega_{16}^2\omega_{10}^3\omega_7^3 +$
$12cs^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 + 12cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} - 12cs^4\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 12cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} -$
$144cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 12cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 6cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 108cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 12cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} +$
$60cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} + 72v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} - 6cs^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7 - 12cs^2\omega_{16}^2\omega_{10}^3\omega_7 -$
$36cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 6cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 + 18v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 6cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7 + 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} -$
$84cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} - 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} - cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} + 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} +$
$12v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 12cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 6cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} -$
$36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 36cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7 - 18v_2^2v_3^2\omega_{16}^2\omega_{10}^3\omega_7 + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 +$
$36v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^3 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 18cs^2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} + 108v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 180cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} -$
$18cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 72cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 18v_2^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 24cs^2v_2^2\omega_{19}\omega_{10}^3\omega_7^3\omega_{23} +$
$12v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} - 12cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_{23} - 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 24cs^2\omega_{19}\omega_{16}^3\omega_{10}\omega_7\omega_{23} + 24cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12cs^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23} +$
$36v_2^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7 - 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} - 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 + 18cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 - 24cs^4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} +$
$18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 24cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 72v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$
$132cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 24cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 24cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 36v_2^2v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 -$
$6cs^4\omega_{16}^2\omega_{10}^3\omega_7^2 - 6cs^4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 84cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23} - 24cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23} +$
$12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} - 18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 18cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 36cs^2v_2^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} -$
$12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7 - 36v_2^2v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} - 36v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23} + 6v_3^2\omega_{16}^2\omega_{10}^3\omega_7^3 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 - 12v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$78cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} + 18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} + 24cs^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} - 12cs^2v_3^2\omega_{19}\omega_{10}^3\omega_7^2\omega_{23} + 12cs^4\omega_{16}^2\omega_{10}^3\omega_7^2 +$
$6cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 + 12cs^4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23} - 12cs^4\omega_{19}\omega_{16}^3\omega_{10}\omega_7^3 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2 - 12v_3^2\omega_{16}^2\omega_{10}^3\omega_7^2 +$
$12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3 + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 18cs^2v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3)\dfrac{\rho}{12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2} = (-12\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 18\omega_{19}\omega_{16}\omega_{10}^2 cs^2\omega_7\omega_{23} + 36v_2^2\omega_{16}^2\omega_{10}^2\omega_7 + 12\omega_{19}\omega_{10}cs^2\omega_7^3 - 6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3 - 72v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} -$
$12\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23} + 12\omega_{19}\omega_{10}cs^2\omega_7\omega_{23} + 12\omega_{19}\omega_{10}^2\omega_7^3 - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23} - 18v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 -$
$12\omega_{19}\omega_{10}^2\omega_7^2 + 72v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{23} + 6\omega_{16}^2\omega_{10}cs^2\omega_7^3\omega_{23} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 36v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 36v_2^2\omega_{19}\omega_{10}^2\omega_7^3 +$
$24\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} - 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 - 36v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7 + 12\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}^2 cs^2\omega_{23} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} +$
$24\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23} + 6\omega_{16}^2\omega_{10}\omega_7^3 - 12\omega_{19}\omega_{16}cs^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23} - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$
$36v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 36v_2^2\omega_{19}\omega_{10}^2\omega_7 + 12\omega_{19}\omega_{10}^2 cs^2\omega_7^3\omega_{23} + 18v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{16}^2\omega_{10}^2\omega_7 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$
$36v_2^2\omega_{19}\omega_{10}^2\omega_7^3 - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - \omega_{19}\omega_{16}\omega_{10}^2 cs^2\omega_7^3\omega_{23} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 36v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{19}\omega_{16}\omega_{10}^2 cs^2\omega_7^3 +$
$36v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{10}cs^2\omega_7^3 + 12\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} - 36v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 12\omega_{16}^2\omega_{10}cs^2\omega_7^2 + 12\omega_{19}\omega_{10}cs^2\omega_7^2 +$
$18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 4\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2 + 36v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 6\omega_{16}^2\omega_{10}cs^2\omega_7^3 - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$6\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{19}\omega_{10}\omega_7^3 - 24\omega_{19}\omega_{10}^2 cs^2\omega_7^2\omega_{23})\dfrac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}}$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2} = (-12\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 36v_2^2\omega_{16}\omega_{10}^2\omega_7 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2 - 72v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{19}\omega_{10}^2\omega_7^3 - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 -$
$12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2 + 12\omega_{19}\omega_{10}\omega_7^3cs^2 - 18v_2^2\omega_{16}\omega_{10}^2\omega_7^3 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 - 12\omega_{19}\omega_{10}^2\omega_7^2 + 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 +$

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$$72v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{23}cs^2 + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3 + 36v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23} + 36v_2^2\omega_{19}\omega_{10}\omega_7^3 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 +$$
$$24\omega_{19}\omega_{10}^2\omega_7^2\omega_{23} - 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 36v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2 - 24\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} -$$
$$12\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 + 6\omega_{16}\omega_{10}\omega_7^3 + 12\omega_{16}\omega_{10}^2\omega_7^2cs^2 - 12\omega_{19}\omega_{10}\omega_7^2\omega_{23}cs^2 - 12\omega_{19}\omega_{10}\omega_7^2\omega_{23} - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 36v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} +$$
$$36v_2^2\omega_{19}\omega_{10}\omega_7^2 + 12\omega_{19}\omega_{10}^2\omega_7\omega_{23}cs^2 + 18v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{16}\omega_{10}^2\omega_7^2 + 12\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2 -$$
$$36v_2^2\omega_{19}\omega_{10}^2\omega_7^3 + 12\omega_{19}\omega_{10}^2\omega_7^2cs^2 - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2cs^2 + 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}cs^2 - 12\omega_{19}\omega_{10}^2\omega_7\omega_{23} - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$$
$$6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - \omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 36v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 6\omega_{16}\omega_{10}^2\omega_7^3cs^2 + 12\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^2 -$$
$$36v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^2 + 18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 36v_2^2\omega_{19}\omega_{10}^2\omega_7\omega_{23} + 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23} -$$
$$12\omega_{19}\omega_{10}^2\omega_7^3cs^2 + 12\omega_{19}\omega_{10}\omega_7^2\omega_{23}cs^2 - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 36v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{19}\omega_{10}\omega_7^3) \frac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}}$$

$$C_{D_y^2 D_z^2 v_2}^{(2),\text{CuLBM1}} = (18cs^2\omega_3\omega_{11}\omega_5^2 - 24\omega_3^2\omega_5 + 24cs^2\omega_3^2\omega_5 - 12\omega_3^3 - 12\omega_3^3\omega_5^2 + 12cs^2\omega_3^3\omega_5^2 + 36v_2^2\omega_3^2\omega_{11}\omega_5 - 24cs^2\omega_3^3\omega_5 + 36v_2^2\omega_3\omega_5^2 + 12\omega_3\omega_{11}\omega_5 +$$
$$24\omega_3^3\omega_5 + 12cs^2\omega_3^3 - 24cs^2\omega_3^2\omega_5^2 - 12cs^2\omega_{11}\omega_5^2 - 36v_2^2\omega_3^2\omega_{11} - cs^2\omega_3^3\omega_{11}\omega_5^2 - 12cs^2\omega_3\omega_{11}\omega_5 + 24\omega_3^2\omega_5^2 - 72v_2^2\omega_3^3\omega_5 + 12cs^2\omega_3\omega_5^2 - 12\omega_3\omega_5^2 -$$
$$12\omega_3^2\omega_{11}\omega_5 - 72v_2^2\omega_3^2\omega_5^2 - 12cs^2\omega_3^2\omega_{11} + 12cs^2\omega_3^2\omega_{11}\omega_5^2 + 36v_2^2\omega_3^3 + 12\omega_3^3\omega_{11} - 4cs^2\omega_3^2\omega_{11}\omega_5^2 + 72v_2^2\omega_3^2\omega_5 + 36v_2^2\omega_3^3\omega_5 - 36v_2^2\omega_3\omega_{11}\omega_5) \frac{\rho cs^2}{12\omega_3^3\omega_{11}\omega_5^2}$$

$$C_{D_y^2 D_z^2 v_2}^{(2),\text{CuLBM2}} = (90v_3^2\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 + 12v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 + 60v_2^2\omega_3\omega_3 cs^2\omega_4\omega_1\omega_2^3 - 72\omega_3^2 cs^4\omega_1^2\omega_2^3 - 2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 - 48v_3^4\omega_3^2\omega_4\omega_2^3 + 18v_3^2\omega_3\omega_1^3\omega_2^2 -$$
$$4\omega_3^2\omega_4\omega_1^3\omega_2 + 12v_3^2\omega_3\omega_4\omega_1^3\omega_2 + 36v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 216v_2^2\omega_3^2 cs^2\omega_1^2\omega_2^3 - 18v_3^4\omega_3^2\omega_1^2\omega_2^2 - 18\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 - 12v_3^2\omega_3 cs^2\omega_4\omega_1^2\omega_2 - 36v_3^4\omega_3\omega_4\omega_1^2\omega_2^3 -$$
$$84v_2^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^2 - 18v_3^4\omega_4\omega_1^3\omega_2^2 + 180v_2^2 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 18\omega_3 cs^2\omega_1^3\omega_2^2 + 76\omega_3^2 cs^4\omega_4\omega_1\omega_2^3 - 12v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 96v_2^2\omega_3^2 cs^2\omega_4\omega_2^3 + 8\omega_3^2\omega_4\omega_1^2\omega_2^2 -$$
$$6v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 - v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 48v_3^2\omega_3^2\omega_4\omega_1^3 + 8\omega_3 cs^4\omega_4\omega_1\omega_2^3 + 32\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^2 + 30v_3^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 - 28\omega_3^2 cs^4\omega_4\omega_1\omega_2^2 - 90v_2^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 -$$
$$54v_3^2\omega_3 cs^2\omega_1^3\omega_2^2 - 68\omega_3^2 cs^4\omega_4\omega_2^3 + 36\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 + 6v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 + 48v_3^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 - 18v_3^4\omega_3^2\omega_1^2\omega_2^3 + v_3^4\omega_3^2\omega_4\omega_1^3\omega_2^2 + 54v_3^2\omega_3^2 cs^2\omega_1\omega_2^3 +$$
$$72\omega_3^2 cs^2\omega_1^3\omega_2^3 + 54v_3^2\omega_3 cs^2\omega_1^3\omega_2^3 - 174v_3^2\omega_3 cs^2\omega_4\omega_1^3\omega_2 + 36\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 + 132v_3^2\omega_3^2 cs^2\omega_4\omega_1^3 - 8\omega_3 cs^2\omega_4\omega_1^3\omega_2 - 30v_3^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 -$$
$$12v_3^2\omega_3\omega_4\omega_1^3 - v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 12v_3^4\omega_3\omega_4\omega_1^3\omega_2 + 54v_3^2\omega_3^2 cs^2\omega_1^3\omega_2^3 + 18v_3^4\omega_3^2\omega_1^3\omega_2^2 + 4\omega_3^2\omega_4\omega_2^3 - 4\omega_3^2\omega_4\omega_1^2\omega_2 - 18v_3^2\omega_3^2\omega_1^3 + 54v_3^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 +$$
$$12v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 36v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 - 36\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 + 18\omega_3^2 cs^4\omega_1^3\omega_2^3 + 54v_3^4\omega_3^2\omega_4\omega_1\omega_2^3 - 36v_3^2 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 +$$
$$24v_2^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^2 + 18v_3^4\omega_4\omega_1^2\omega_2^3 + 36v_3^4\omega_3\omega_4\omega_1^3\omega_2^2 - 56\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 + 2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 + 28\omega_3^2 cs^2\omega_4\omega_2^3 - 36v_3^2\omega_3 cs^2\omega_4\omega_1^3\omega_2 -$$
$$24v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 24v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 - 90v_3^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 + 18v_3^2 cs^2\omega_4\omega_1^3\omega_2 - 36v_3^2\omega_3\omega_4\omega_1^3\omega_2 + 72v_2^2 v_3^2\omega_3^2\omega_4\omega_1^3 - 18v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 9v_3^4\omega_3^2\omega_4\omega_1^2\omega_2^3 +$$
$$12v_3^2\omega_3^2\omega_4\omega_2^3 - 18v_3^4\omega_3\omega_4\omega_1^3\omega_2 - 36v_3^4\omega_3^2\omega_4\omega_1\omega_2 + 2\omega_3^2 cs^4\omega_4\omega_1^3\omega_2 - 12v_3^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^2 - 48v_3^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2 + 12v_2^2\omega_3^2 cs^2\omega_4\omega_1^3 + 18v_3^2\omega_4\omega_1^3\omega_2^2 +$$
$$66v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 - 18v_3^2\omega_3 cs^2\omega_4\omega_1\omega_2^3 + 18\omega_3 cs^4\omega_4\omega_1^3\omega_2^2 - 90v_2^2\omega_3 cs^2\omega_4\omega_1^3\omega_2^3 - 18\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 + 12v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 + 9v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 +$$
$$16\omega_3^2 cs^4\omega_4\omega_1^3 + 18v_3^2\omega_3^2\omega_1^2\omega_2^2 + 150v_3^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 - 3\omega_3^2 cs^4\omega_4\omega_1^3\omega_2^3 - 28\omega_3^2 cs^4\omega_4\omega_1^2\omega_2 - 8\omega_3 cs^2\omega_4\omega_1\omega_2^3 - 72\omega_3^2 cs^2\omega_1\omega_2^3 + 54v_3^2 cs^2\omega_4\omega_1^2\omega_2^2 +$$
$$24v_3^4\omega_3^2\omega_4\omega_1^3 + 6v_2^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^2 - 18v_3^4\omega_3^2\omega_4\omega_1^2\omega_2^2 + 54v_3^2\omega_3^2 cs^2\omega_1^3\omega_2^2 + 18v_3^2\omega_3^2\omega_1^3\omega_2^2 + 54v_3^2\omega_3 cs^2\omega_4\omega_1^3\omega_2^2 - 42v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 +$$
$$12v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 32\omega_3^2 cs^2\omega_4\omega_1\omega_2^2 - 36\omega_3 cs^4\omega_4\omega_1^3\omega_2^2 - 18v_3^2\omega_3^2\omega_1^3\omega_2^2 - 4\omega_3^2\omega_4\omega_1\omega_2^2 - 36\omega_3 cs^4\omega_4\omega_1^2\omega_2^3 + 8\omega_3 cs^4\omega_4\omega_1\omega_2^3 + 132v_2^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^2 -$$
$$90v_2^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 6v_2^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 - 54v_3^2 cs^2\omega_4\omega_1^3\omega_2^2 + 108v_2^2 v_3^2\omega_3^2\omega_4\omega_2^3 - 6v_2^2\omega_3^2 cs^2\omega_4\omega_1^3\omega_2 + 28\omega_3^2 cs^4\omega_4\omega_1^2\omega_2^2 - 54v_3^2\omega_3 cs^2\omega_1^3\omega_2^3 +$$
$$18v_3^4\omega_3^2\omega_1\omega_2^3 + 12v_3^4\omega_3^2\omega_4\omega_1^2\omega_2 - 20\omega_3^2 cs^2\omega_4\omega_1^3 - 9v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 4\omega_3^2\omega_4\omega_1^3 - 126v_2^2\omega_3 cs^2\omega_4\omega_1^2\omega_2^3 + 72\omega_3^2 cs^4\omega_1\omega_2^3 + 56\omega_3 cs^4\omega_4\omega_1^2\omega_2^2 +$$
$$24v_2^2\omega_3 cs^2\omega_4\omega_1^3\omega_2 - 18v_3^4\omega_4\omega_1^2\omega_2^3 - 12v_2^2\omega_3^2\omega_4\omega_2^3 - 6v_3^2\omega_3\omega_4\omega_1\omega_2^3 - 4\omega_3^2\omega_4\omega_1\omega_2^3 - 108v_3^2\omega_3^2 cs^2\omega_4\omega_2^3 + 18v_3^4\omega_3\omega_1^2\omega_2^3 + 216v_2^2\omega_3^2 cs^2\omega_1\omega_2^3 -$$
$$54v_3^2\omega_3^2 cs^2\omega_1^2\omega_2^2 + 9v_3^4\omega_3\omega_4\omega_1^3\omega_2^2 - 14\omega_3^2 cs^4\omega_4\omega_1^2\omega_2^3 + 66v_2^2\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^2 - 144v_2^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 6v_3^4\omega_3\omega_4\omega_1\omega_2^3 - 14\omega_3^2 cs^4\omega_4\omega_1^3\omega_2) \frac{\rho}{36\omega_3^3\omega_4\omega_1^3\omega_2^3}$$

coefficient $C_{D_y^2 D_z^2 v_3}^{(2)}$ **at** $\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2}$:

$$C_{D_y^2 D_z^2 v_3}^{(2),\text{SRT}} = 0$$

$$C_{D_y^2 D_z^2 v_3}^{(2),\text{MRT1}} = (-2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} + 4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^2 - 4\omega_{19}^3\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}^3\omega_{10}^3\omega_7^3\omega_{11}cs^2 - 3v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11} +$$
$$11\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11}cs^2 - 4v_2^2\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 - 4\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{11} - \omega_{19}^2\omega_{16}^3\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} -$$
$$2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}cs^2 - \omega_{19}^2\omega_{16}^3\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{11} - 8\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 + 4\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11} - 7\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} -$$
$$6\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 + 2v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 4v_2^2\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} -$$
$$4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11}cs^2 + 12\omega_{19}\omega_{16}^3\omega_{10}^3\omega_7\omega_{23}\omega_{11}cs^2 + 2v_2^2\omega_{19}^2\omega_{16}^3\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 4v_2^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} + 3\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} +$$
$$2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - 4\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} + v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11} + 4\omega_{19}\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 + v_2^2\omega_{19}^2\omega_{16}^3\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11}cs^2 +$$
$$7v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 5\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}cs^2 + 2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}cs^2 + 4\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 2v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{11} -$$
$$2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11}cs^2 - 8\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 - 2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11} + 4\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 +$$
$$2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} + 8\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 - 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 +$$
$$4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{11}cs^2 + 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} -$$
$$6\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11}cs^2 - 8\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 - 4\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} + 3\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} + 4v_2^2\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} -$$
$$24\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11}cs^2 + 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 4\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}cs^2 + 4\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}cs^2 +$$
$$4v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7\omega_{11} - cs^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11}cs^2 + 9v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 13\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}cs^2 + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$4\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 + 8\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}cs^2 - 4v_2^2\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} +$$
$$2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - 5v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + \omega_{19}^2\omega_{16}^3\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 - 2v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} +$$
$$3\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}cs^2 + 4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11}cs^2 + 2v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - 3v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{11} -$$
$$2v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 15\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}cs^2 - 16\omega_{19}^2\omega_{16}\omega_{10}^3\omega_{23}\omega_{11}cs^2 - 2v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} + 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} +$$
$$26\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11}cs^2 + 8\omega_{19}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}cs^2 - 9\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}) \frac{\rho v_2 v_3}{2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}}$$

$$C_{D_y^2 D_z^2 v_3}^{(2),\text{MRT2}} = (2cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - 2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} + 4cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 4\omega_{19}^3\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 11cs^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} -$$
$$3v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 2cs^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 4v_2^2\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 4\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11} - \omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 8cs^2\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} -$$

$\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{11} + 4\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11} - 7\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 4cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} + 2v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} +$
$6\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 2cs^2\omega_{19}\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} + 2cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23} - 8cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} +$
$4v_2^2\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} + 8cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 2v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} - 8cs^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} +$
$3\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - 4\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} - 24cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} -$
$cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 4cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11} + v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 2cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23} + 7v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} +$
$4cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11} + 2cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} - 2v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} - 2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11} -$
$6v_2^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 16cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_{23}\omega_{11} - 15cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 8cs^2\omega_{19}^3\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - 4v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{11} - 4cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} +$
$2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 6cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 4cs^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} - 4\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} + 12cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} +$
$3\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 4v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} + 2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 5cs^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} +$
$4v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} - 2cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 4cs^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 9v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{11} + 4cs^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{11} + 2cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6cs^2\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 4v_2^2\omega_{19}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} +$
$2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} - 5v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{10}^3\omega_{23}\omega_{11} - 8cs^2\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + \omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 2v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} -$
$4cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23} + 2v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} + 13cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 3v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 8cs^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11} +$
$4\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^3\omega_{11} + 12cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} + 3cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 2v_2^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} +$
$4v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} + 26cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7\omega_{23}\omega_{11} - 9\omega_{19}^2\omega_{16}\omega_{10}^3\omega_7^2\omega_{23}\omega_{11} - 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{10}^3\omega_{23}\omega_{11})\frac{\rho v_2 v_3}{2\omega_{19}^2\omega_{16}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}}$

$C^{(2),\text{CLBM1}}_{\text{D}_y^2\text{D}_z^2 v_3} = 0$

$C^{(2),\text{CLBM2}}_{\text{D}_y^2\text{D}_z^2 v_3} = 0$

$C^{(2),\text{CuLBM1}}_{\text{D}_y^2\text{D}_z^2 v_3} = 0$

$C^{(2),\text{CuLBM2}}_{\text{D}_y^2\text{D}_z^2 v_3} =$

$(50v_3^2\omega_3\omega_1^3\omega_2^2 + 84\omega_3 cs^2\omega_1^3 + 6\omega_1\omega_2^3 + 12v_2^2\omega_1^2\omega_2^2 - 9v_2^2\omega_3\omega_1^3\omega_2 + 6v_3^2\omega_3\omega_1^2\omega_2 + 18v_2^2\omega_3\omega_1^2\omega_2^2 - 6v_2^2\omega_1^3\omega_2 - 36\omega_3\omega_1^3 + 108\omega_3 cs^2\omega_1\omega_2^2 + 12v_2^2\omega_3\omega_2^3 -$
$12v_2^2\omega_3\omega_1^2\omega_2 + 36cs^2\omega_1^2\omega_2^2 - 66v_3^2\omega_3\omega_1^2\omega_2^2 - 60\omega_3\omega_1\omega_2^2 + 48v_3^2\omega_3\omega_1^3 - 18cs^2\omega_1^3\omega_2 - 12\omega_3\omega_1\omega_2^2 - 75v_3^2\omega_3\omega_1^3\omega_2 - 50v_3^2\omega_3\omega_1^2\omega_2^3 - 18cs^2\omega_1\omega_2^3 -$
$18\omega_3 cs^2\omega_1^2\omega_2 + 42\omega_3\omega_2^3 + 141v_3^2\omega_3\omega_1\omega_2^3 + 12\omega_3\omega_1^2\omega_2^2 - 66\omega_3 cs^2\omega_2^3 + 42\omega_3 cs^2\omega_1^3\omega_2^2 + 23\omega_3\omega_1^2\omega_2^3 + 60v_3^2\omega_3\omega_1\omega_2^2 + 48\omega_3\omega_1^3\omega_2 - 12\omega_3^2\omega_2^3 -$
$23\omega_3\omega_1^3\omega_2 - 12v_2^2\omega_3\omega_1\omega_2^2 - 42\omega_3 cs^2\omega_1^2\omega_2^3 - 108\omega_3 cs^2\omega_1^3\omega_2 - 6v_2^2\omega_1\omega_2^3 + 6\omega_1^3\omega_2 + 12v_2^2\omega_3\omega_1^3 + 6\omega_3\omega_1^2\omega_2 - 114v_3^2\omega_3\omega_2^3 - 9v_2^2\omega_3\omega_1\omega_2^3)\frac{\rho v_2 v_3}{18\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{\text{D}_x\text{D}_z^3\rho}$ at $\frac{\partial^4\rho}{\partial x_1\partial x_3^3}$:

$C^{(2),\text{SRT}}_{\text{D}_x\text{D}_z^3\rho} = 0$

$C^{(2),\text{MRT1}}_{\text{D}_x\text{D}_z^3\rho} = (-4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11} + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 9\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 +$
$6\omega_{18}\omega_6\omega_2^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_5 + 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$
$4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 - 4\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 -$
$4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2 cs^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$
$9\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 - 12\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 +$
$24\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 - 6\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_8 cs^2\omega_5 - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 +$
$4v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}^2 - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 -$
$4\omega_{18}v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 8\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 6\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 +$
$2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2 cs^2 - 24\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 12\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 -$
$4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 3\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8 cs^2\omega_5 - 6\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 +$
$3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 4v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_5 -$
$12\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$
$4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 cs^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 +$
$12\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + 12\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 + 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_5 +$
$4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 - 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 + 6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 -$
$4\omega_{18}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_{11} - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$
$6\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 cs^2 - 8\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2 cs^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_5 +$
$2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8 cs^2\omega_5 - 12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 + 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_5 -$
$4v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + 4\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 + 6\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 - 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11} cs^2\omega_5 +$
$4\omega_{18}\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 -$
$3\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 - 2\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 -$
$8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8 cs^2\omega_5 - 12\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8)\frac{v_1 v_2 v_3}{4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5}$

$C^{(2),\text{MRT2}}_{\text{D}_x\text{D}_z^3\rho} = (-4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11} + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 6\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_5 - 6\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 -$
$4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_5 + 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 +$

$$8\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 - 4\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}^2\omega_{11}\omega_8\omega_5 - 6\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$$
$$12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2 - 2\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + 6cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18} v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 12\omega_{18}cs^2\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_5 + 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18} v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18} v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 3\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 3\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$24\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 4 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_5 - 12cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 9cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_5 - 12cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11} -$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8 - 12\omega_{18}cs^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}cs^2\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 +$$
$$12cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_5 + 6cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11} -$$
$$2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 8\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_5 +$$
$$2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 - 6\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5 -$$
$$4 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 24\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{11} + 4\omega_{18}\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$12cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 + 6\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 3\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 9\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 - 12cs^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$$
$$2\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}cs^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\big)\frac{v_1 v_2 v_3}{4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5}$$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = 0$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = 0$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = 0$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3\rho} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{v_1 v_2 v_3}{12\omega_1\omega_2}$

coefficient $C^{(2)}_{\mathrm{D}_x\mathrm{D}_z^3 v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1\partial x_3^3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_z^3 v_1} = (2 + 3cs^2\omega + v_3^2\omega - 6cs^2 - 2v_3^2 - \omega)\frac{\rho v_2 v_3}{12\omega}$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_z^3 v_1} = (-12\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 18\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 42\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 36\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8^2 cs^2\omega_5^2 -$
$6\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 54\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 54\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2 - 12\omega_{18}\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$
$18\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$
$9\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 cs^2\omega_5^2 - 12\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 36\omega_{18}\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 -$
$12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 +$
$12\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8^2\omega_5^2 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8 cs^2\omega_5^2 +$
$6\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 36\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2 + 12\omega_{18}\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{11}\omega_8^2\omega_5 + 9\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$
$4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 18\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8^2 cs^2\omega_5 + 6\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$
$24\omega_{18}\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 - 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 54\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 -$
$12\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 54\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 -$
$6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2\omega_5 + 42\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 - 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2 + 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2\omega_5 -$
$6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 - 12\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5^2 +$
$6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 + 6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 36\omega_{18}\omega_6^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 30\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 +$
$12\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 9\omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + 18\omega_{18}\omega_6^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 +$
$12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 6\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5^2 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5^2 - 24\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2\omega_5 +$
$6\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 24\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 12\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 + 4\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 +$
$6\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2\omega_5 - 36\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5^2 - 24\omega_{18}\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5 -$
$6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8 cs^2\omega_5 + 3\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$
$12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 cs^2\omega_5^2 + 6\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 + 6\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 18\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$
$12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 cs^2\omega_5 + 12\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 + 12\omega_6^2\omega_{19}\omega_7\omega_{11}^2\omega_8^2 cs^2\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{11}\omega_8^2\omega_5 +$
$6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 18\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 3\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8^2\omega_5 +$
$6\omega_{18}\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5 + 12\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 -$
$6\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2 cs^2\omega_5 + 12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 24\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 +$
$12\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 - 6\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$
$12\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8^2 cs^2\omega_5^2 - 9\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 12\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2\omega_5^2 + 6\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$
$12\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2\omega_5^2 - 12\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 cs^2\omega_5 +$
$12\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{11}\omega_8^2\omega_5 + 24\omega_{18}\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2 cs^2\omega_5 - 12\omega_{18}\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_7\omega_{11}^2\omega_8^2\omega_5 -$

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$$6\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{11}^2 \omega_8^2 \omega_5 - \omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5 - 12\omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 cs^2 \omega_5)\frac{\rho v_2 v_3}{12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5}$$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-12\omega_6 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 + 18\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 - 6\omega_{18}\omega_6 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 +$
$6 cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 + 6\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{11}^2 \omega_8^2 \omega_5^2 - 12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 + 18\omega_{18}\omega_6^2 v_3^2 \omega_{19}\omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 -$
$12\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5^2 + 12 cs^2 \omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 12\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{11}\omega_8 \omega_5 -$
$6\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 \omega_5 - 12\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 - 12\omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 6\omega_{18}\omega_6^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 9\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 -$
$12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5^2 - 6\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5^2 + 6\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{11}^2 \omega_8^2 \omega_5 - 12 cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 +$
$12\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 \omega_5 - 12 cs^2 \omega_6 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{19}\omega_7 \omega_{11}^2 \omega_8^2 \omega_5^2 - 3\omega_{18}\omega_6^2 v_3^2 \omega_{19}\omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 +$
$6\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5 + 6\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 + 12\omega_{18}\omega_6^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 54\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 -$
$12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8 \omega_5^2 + 9\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_5^2 - 4\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 - 12\omega_{18}\omega_6^2 v_3^2 \omega_{19}\omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 +$
$6\omega_{18}\omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 - 12\omega_6 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + \omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 6\omega_{18}\omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 \omega_5 -$
$24\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 - 6\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5^2 - 12\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 \omega_5 + 36\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_{20}\omega_{11}\omega_8^2 \omega_5^2 -$
$6\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_5 + 18\omega_{18} cs^2 \omega_6^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 6\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{11}^2 \omega_8^2 \omega_5 + 6\omega_{18}\omega_6^2 \omega_{19}\omega_7 \omega_{11}^2 \omega_8^2 \omega_5 +$
$36\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5^2 - 12 cs^2 \omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8 \omega_5 - 6\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5^2 -$
$12\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8 \omega_5^2 + 6\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8 \omega_5 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8 \omega_5 - 36\omega_{18} cs^2 \omega_6^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 +$
$12\omega_6 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 3\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 24\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_{20}\omega_{11}\omega_8 \omega_5^2 + 12\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 +$
$54\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 54\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_7 \omega_{11}^2 \omega_8 \omega_5 - 12\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_7 \omega_{11}^2 \omega_8^2 \omega_5 +$
$4\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 + 6\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5^2 - 6\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5 + 6\omega_6^2 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 +$
$3\omega_{18}\omega_6^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 24\omega_{18} cs^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 30\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 \omega_5^2 + 6\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 +$
$6\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 - 36\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 24\omega_{18} cs^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 18\omega_{18}\omega_6^2 \omega_{19}\omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 +$
$6 cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 - 54\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8 \omega_5^2 - 36\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_5 +$
$12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{11}\omega_8^2 \omega_5^2 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}\omega_7 \omega_{11}^2 \omega_8^2 \omega_5 + 6\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 -$
$18\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 - 6\omega_{18}\omega_6^2 v_3^2 \omega_{19}\omega_7^2 \omega_{11}^2 \omega_8^2 \omega_5^2 + 6\omega_{18}\omega_6^2 v_3^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 42\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8 \omega_5 -$
$12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8 \omega_5 + 12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{19}\omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 12\omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 - 6\omega_{18}\omega_6 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 -$
$12\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_6 \omega_{19}^2 \omega_7 \omega_8^2 \omega_5 -$
$9 cs^2 \omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}\omega_8 \omega_5 - 6\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}\omega_8^2 \omega_5^2 - 12\omega_6 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 9\omega_6^2 v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 +$
$24\omega_{18} cs^2 \omega_6 \omega_{19}\omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 6\omega_{18}\omega_6 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 12\omega_{18}\omega_6^2 \omega_{19}\omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 24\omega_{18} cs^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 -$
$42\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8 \omega_5 + 12 cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8 \omega_5 - 12\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5 -$
$12\omega_{18}\omega_6^2 v_3^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 12\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5 - 18\omega_{18} cs^2 \omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5^2 - 12\omega_{18}\omega_6 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5^2 -$
$6\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{11}^2 \omega_8^2 \omega_5 - \omega_{18}\omega_6^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 - 24\omega_{18} cs^2 \omega_6 \omega_{19}^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5^2 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5^2)\frac{\rho v_2 v_3}{12\omega_{18}\omega_6^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_{11}^2 \omega_8^2 \omega_5}$

$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-\omega_{18} + \omega_{18} v_3^2 \omega_{11} + 3\omega_{18} cs^2 \omega_{11} + \omega_{18} v_3^2 - 3v_3^2 \omega_{11} - \omega_{18}\omega_{11} - 9 cs^2 \omega_{11} + 3\omega_{11} + 3\omega_{18} cs^2)\frac{\rho v_2 v_3}{12\omega_{18}\omega_{11}}$

$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-\omega_{18} + \omega_{18} v_3^2 \omega_{11} + \omega_{18} v_3^2 - 9\omega_{11} cs^2 - 3v_3^2 \omega_{11} - \omega_{18}\omega_{11} + 3\omega_{18}\omega_{11} cs^2 + 3\omega_{11} + 3\omega_{18} cs^2)\frac{\rho v_2 v_3}{12\omega_{18}\omega_{11}}$

$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (-\omega_6 \omega_8 + 3 cs^2 \omega_8 + 3 cs^2 \omega_6 \omega_8 + 3\omega_6 - 3\omega_6 v_3^2 + \omega_6 v_3^2 \omega_8 + v_3^2 \omega_8 - \omega_8 - 9 cs^2 \omega_6)\frac{\rho v_2 v_3}{12\omega_6 \omega_8}$

$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_2^3 v_1} = (9\omega_3 \omega_1 \omega_2 + 4v_3^2 \omega_3 \omega_4 \omega_2 + 12\omega_3 cs^2 \omega_4 \omega_1 - 6\omega_3 \omega_4 \omega_1 \omega_2 - 9v_3^2 \omega_4 \omega_1 \omega_2 - 27\omega_3 cs^2 \omega_1 \omega_2 - 18v_1^2 \omega_3 \omega_4 \omega_2 - 8\omega_3 \omega_4 \omega_1 -$
$27 cs^2 \omega_4 \omega_1 \omega_2 + 9\omega_4 \omega_1 \omega_2 + 6v_3^2 \omega_3 \omega_4 \omega_1 \omega_2 + 6\omega_3 cs^2 \omega_4 \omega_2 + 2v_3^2 \omega_3 \omega_4 \omega_1 - 9v_3^2 \omega_3 \omega_1 \omega_2 + 18v_1^2 \omega_3 \omega_4 \omega_1 + 2\omega_3 \omega_4 \omega_2 + 18\omega_3 cs^2 \omega_4 \omega_1 \omega_2)\frac{\rho v_2 v_3}{72\omega_3 \omega_4 \omega_1 \omega_2}$

coefficient $C^{(2)}_{\mathrm{D}_x\mathrm{D}_2^3 v_2}$ at $\frac{\partial^4 v_2}{\partial x_1 \partial x_3^3}$:

$C^{(2),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_2^3 v_2} = 0$

$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_2^3 v_2} = (v_3^2 \omega_{19}\omega_7^3 \omega_{20}\omega_8^2 \omega_5 + 7\omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 cs^2 \omega_5 + 2\omega_{19}\omega_7^2 \omega_8^2 cs^2 \omega_5^2 + v_3^2 \omega_{19}^2 \omega_7^3 \omega_8^2 \omega_5^2 - 2\omega_{19}^2 \omega_7^3 \omega_{20} cs^2 \omega_5^2 + \omega_{19}\omega_7^3 \omega_8^2 \omega_5^2 +$
$4v_3^2 \omega_{19}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 + 2\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 + 4\omega_{19}\omega_7^2 \omega_{20}\omega_8^2 cs^2 \omega_5^2 - 7\omega_{19}^2 \omega_7^3 \omega_{20}\omega_8 cs^2 \omega_5^2 + \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 - 2\omega_{19}^2 \omega_7^3 \omega_8 \omega_5 - \omega_{19}\omega_7^3 \omega_8^2 cs^2 \omega_5 -$
$v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 - 4\omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 - 2\omega_{19}\omega_7 \omega_{20}\omega_8^2 cs^2 \omega_5^2 - \omega_{19}\omega_7^3 \omega_{20}\omega_8^2 \omega_5 - 6\omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 cs^2 \omega_5 + 2\omega_{19}^2 \omega_7^2 \omega_8^2 \omega_5 - 2\omega_{19}^2 \omega_7^2 \omega_8^2 cs^2 \omega_5^2 +$
$2v_3^2 \omega_{19}\omega_7^2 \omega_8^2 \omega_5^2 + 2v_3^2 \omega_{19}^2 \omega_7^2 \omega_8 \omega_5^2 + \omega_{19}\omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 + 13\omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 cs^2 \omega_5^2 + \omega_{19}^2 \omega_7^3 \omega_8^2 cs^2 \omega_5^2 + v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 + 2\omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 +$
$2\omega_{19}^2 \omega_7^2 \omega_{20} cs^2 \omega_5 - \omega_{19}\omega_7^3 \omega_8^2 cs^2 \omega_5^2 - v_3^2 \omega_{19}\omega_7^3 \omega_7^2 \omega_8^2 \omega_5 - 2v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 + 2\omega_{19}^2 \omega_7^3 \omega_8 \omega_5^2 - \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 + 5\omega_{19}^2 \omega_7^3 \omega_{20}\omega_8 cs^2 \omega_5^2 -$
$2\omega_{19}\omega_7^2 \omega_{20}\omega_8^2 cs^2 \omega_5 - 2\omega_7^2 \omega_{20}\omega_8^2 cs^2 \omega_5^2 - 2\omega_{19}\omega_7^3 \omega_{20}\omega_8^2 cs^2 - \omega_7^3 \omega_{20}\omega_8^2 \omega_5 - 5\omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 cs^2 \omega_5^2 + 2\omega_{19}^2 \omega_7 \omega_{20} cs^2 \omega_5 -$
$2v_3^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 - 2v_3^2 \omega_{19}\omega_7 \omega_{20}\omega_8^2 \omega_5 + 2v_3^2 \omega_{19}^2 \omega_7^3 \omega_8 \omega_5^2 + 6\omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 cs^2 \omega_5 - \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5 - v_3^2 \omega_{19}\omega_7^3 \omega_8^2 \omega_5 - \omega_{19}\omega_7^2 \omega_8^2 \omega_5^2 -$
$\omega_{19}\omega_7^3 \omega_{20}\omega_8^2 \omega_5 - 2\omega_{19}^2 \omega_7^3 \omega_8 cs^2 \omega_5^2 + v_3^2 \omega_{19}^2 \omega_7^3 \omega_{20}\omega_8^2 \omega_5 - 2\omega_{19}\omega_7^2 \omega_8^2 \omega_5 - 2v_3^2 \omega_{19}^2 \omega_7^2 \omega_8^2 \omega_5 + \omega_7^3 \omega_{20}\omega_8^2 cs^2 \omega_5 + v_3^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5 +$
$\omega_{19}\omega_7^3 \omega_{20}\omega_8^2 cs^2 \omega_5 + 2\omega_{19}\omega_7 \omega_{20}\omega_8^2 \omega_5 - 8\omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 cs^2 \omega_5 - 11\omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 cs^2 \omega_5 + 4\omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 cs^2 \omega_5 - \omega_{19}\omega_7^3 \omega_{20}\omega_8^2 cs^2 \omega_5^2 -$
$v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 - v_3^2 \omega_{19}^2 \omega_7^3 \omega_{20}\omega_8 \omega_5 - 2\omega_{19}^2 \omega_7^3 \omega_8^2 \omega_5 + \omega_{19}^2 \omega_7^3 \omega_{20}\omega_8^2 \omega_5 + v_3^2 \omega_7^3 \omega_{20}\omega_8^2 \omega_5 + 2\omega_{19}^2 \omega_7^3 \omega_8^2 cs^2 \omega_5 + 2\omega_{19}^2 \omega_7^2 \omega_8^2 cs^2 \omega_5^2 -$
$2v_3^2 \omega_{19}^2 \omega_7^3 \omega_8^2 \omega_5 + 2\omega_{19}^2 \omega_7^3 \omega_{20}\omega_8 cs^2 + \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 + \omega_{19}^2 \omega_7^3 \omega_8^2 \omega_5)\frac{\rho v_1 v_3}{2\omega_{19}^2 \omega_7^3 \omega_{20}\omega_8^2 \omega_5}$

$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_2^3 v_2} = (v_3^2 \omega_{19}\omega_7^3 \omega_{20}\omega_8^2 \omega_5 + 7 cs^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 + v_3^2 \omega_{19}^2 \omega_7^3 \omega_8^2 \omega_5 + \omega_{19}\omega_7^3 \omega_8^2 \omega_5 + 4v_3^2 \omega_{19}\omega_7^2 \omega_{20}\omega_8^2 \omega_5 + 2\omega_7^2 \omega_{20}\omega_8^2 \omega_5 + 2 cs^2 \omega_{19}\omega_7^2 \omega_8^2 \omega_5 +$
$6 cs^2 \omega_{19}^2 \omega_7 \omega_{20}\omega_8^2 \omega_5 + \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5^2 - 2\omega_{19}^2 \omega_7^3 \omega_8 \omega_5 + 2 cs^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_5 - 2 cs^2 \omega_{19}\omega_7^2 \omega_{20}\omega_8^2 \omega_5 - v_3^2 \omega_{19}^2 \omega_7^2 \omega_{20}\omega_8^2 \omega_5 - 4\omega_{19}\omega_7^2 \omega_{20}\omega_8^2 \omega_5 -$

$$\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5 + cs^2\omega_{19}^2\omega_7^3\omega_8^2\omega_5 + 2\omega_{19}^2\omega_7^2\omega_8^2\omega_5 - cs^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5 + 2v_3^2\omega_{19}\omega_7^2\omega_8^2\omega_5 + 2v_3^2\omega_{19}\omega_7^2\omega_8\omega_5 + \omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5 - 8cs^2\omega_{19}^2\omega_{20}\omega_8^2\omega_5 -$$
$$cs^2\omega_{19}^2\omega_7^3\omega_8^2\omega_5 + cs^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5 + 4cs^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 - 5cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - v_3^2\omega_{19}^3\omega_7^2\omega_8^2\omega_5 +$$
$$2cs^2\omega_{19}^2\omega_7^2\omega_8\omega_5 - 2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{19}^2\omega_7^3\omega_8^2\omega_5 - \omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - \omega_7^3\omega_{20}\omega_8^2\omega_5 - v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_8^2\omega_5 - 2cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8 - 2v_3^2\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$2v_3^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 2cs^2\omega_{19}^2\omega_7^2\omega_8^2\omega_5 - 11cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 + 2v_3^2\omega_{19}\omega_7^3\omega_8\omega_5 - \omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - 6cs^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 - v_3^2\omega_{19}\omega_7^3\omega_8^2\omega_5 -$$
$$\omega_{19}\omega_7^3\omega_8^2\omega_5 - \omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 - 2cs^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 - 7cs^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8\omega_5 + 2cs^2\omega_{19}^2\omega_7^3\omega_8^2\omega_5 + v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 - 2\omega_{19}\omega_7^2\omega_8^2\omega_5 - 2cs^2\omega_7^2\omega_{20}\omega_8^2\omega_5 -$$
$$2v_3^2\omega_{19}^2\omega_7^2\omega_8^2\omega_5 - cs^2\omega_{19}\omega_7^2\omega_8^2\omega_5 + v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_8^2\omega_5 + 2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 + 2cs^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8 + cs^2\omega_7^3\omega_{20}\omega_8^2\omega_5 - 2cs^2\omega_{19}\omega_7\omega_{20}\omega_8^2\omega_5 -$$
$$v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 - v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8\omega_5 - 2cs^2\omega_{19}^2\omega_7^3\omega_8^2\omega_5 - 2\omega_{19}^2\omega_7^3\omega_8^2\omega_5 + \omega_{19}^2\omega_7^3\omega_{20}\omega_8\omega_5 + 2cs^2\omega_{19}^2\omega_7^3\omega_{20}\omega_5 + 5cs^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 +$$
$$v_3^2\omega_7^3\omega_{20}\omega_8^2\omega_5 + 4cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 - 2v_3^2\omega_{19}^2\omega_7^3\omega_8^2\omega_5 + \omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 + \omega_{19}^3\omega_7^3\omega_8^2\omega_5 + 13cs^2\omega_{19}^2\omega_7\omega_{20}\omega_8^2\omega_5)\frac{\rho v_1 v_3}{2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5}$$

$$C^{(2),\text{CLBM1}}_{D_xD_z^3v_2} = 0$$

$$C^{(2),\text{CLBM2}}_{D_xD_z^3v_2} = 0$$

$$C^{(2),\text{CuLBM1}}_{D_xD_z^3v_2} = 0$$

$$C^{(2),\text{CuLBM2}}_{D_xD_z^3v_2} = (2v_1^2\omega_3^2\omega_4\omega_1 - 12\omega_3\omega_4 - 36cs^2\omega_4^2 - 18\omega_3cs^2\omega_4\omega_1 - 2v_3^2\omega_3\omega_4^2\omega_1 + 6v_1^2\omega_3\omega_4^2 + 36\omega_3cs^2\omega_4 + 18cs^2\omega_4^2\omega_1 + 18\omega_3cs^2\omega_4^2 +$$
$$6v_1^2\omega_3^2 - 6v_3^2\omega_4^2 + 12v_3^2\omega_3\omega_4 + 6\omega_3\omega_4\omega_1 - 6\omega_3\omega_4^2 + 6\omega_3^2cs^2\omega_4\omega_1 + 3v_1^2\omega_4^2\omega_1 + 2\omega_3\omega_4^2\omega_1 + 12\omega_4^2 + 3v_3^2\omega_4^2\omega_1 - 6v_1^2\omega_3\omega_4 - 6v_3^2\omega_3\omega_4\omega_1 -$$
$$2\omega_3^2\omega_4\omega_1 - 6v_3^2\omega_3^2 - 6\omega_4^2\omega_1 - 3v_1^2\omega_3^2\omega_1 + 3v_3^2\omega_3^2\omega_1 + 6\omega_3^2\omega_4 - 18\omega_3^2cs^2\omega_4 - 6v_1^2\omega_4^2 - 6\omega_3cs^2\omega_4^2\omega_1)\frac{\rho v_1 v_3}{8\omega_3^2\omega_4^2\omega_1}$$

coefficient $C^{(2)}_{D_xD_z^3v_3}$ at $\frac{\partial^4 v_3}{\partial x_1 \partial x_3^3}$:

$$C^{(2),\text{SRT}}_{D_xD_z^3v_3} = 0$$

$$C^{(2),\text{MRT1}}_{D_xD_z^3v_3} = (-12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11} + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 3\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2\omega_5 +$$
$$2\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_5 + 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 24\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 - 12\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8cs^2\omega_5 + 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 -$$
$$4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2cs^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 6\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 - 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 - 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8cs^2 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 +$$
$$8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8cs^2 - 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_8cs^2\omega_5 - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 +$$
$$12v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2 - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 -$$
$$12\omega_{18}v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 8\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2\omega_5 +$$
$$6\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2cs^2 - 8\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5 - 4\omega_{18}\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 -$$
$$12\omega_{18}\omega_6v_3^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 3\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8cs^2 + 4\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_8cs^2\omega_5 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2 +$$
$$3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 12v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_5 -$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}cs^2 + 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 9\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8cs^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_7^2\omega_{19}^2\omega_{20}\omega_{11}\omega_5 +$$
$$4\omega_{18}^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2 + 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 - 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 + 6\omega_{18}\omega_6v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8cs^2\omega_5 + 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 -$$
$$4\omega_{18}\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5 - 4\omega_6\omega_{19}^2\omega_7\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11} - 2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8cs^2 - 24\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2cs^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_5 +$$
$$2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8cs^2\omega_5 - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8cs^2\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 + 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_5 -$$
$$12v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8cs^2 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}cs^2\omega_5 +$$
$$4\omega_{18}\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 + 4\omega_7^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 -$$
$$9\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}cs^2\omega_5 - 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 - 2\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 -$$
$$8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{11}^2\omega_8cs^2\omega_5 - 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8cs^2\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8)\frac{\rho v_1 v_2}{4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5}$$

$$C^{(2),\text{MRT2}}_{D_xD_z^3v_3} = (-12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11} + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8 - 2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_5 + 4\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 +$$
$$24\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 - 12\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 -$$
$$6\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 6\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$4\omega_{18}^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 -$$
$$4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 + 12v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2 - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_8\omega_5 -$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2 - 2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 2cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 12\omega_{18}v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 -$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}cs^2\omega_6\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_5 + 8\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 +$$
$$6\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_{18}v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 3\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 3\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$8\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 12v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_5 - 4cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 3cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$6\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 9\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{11}^2\omega_5 - 4cs^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11} -$$

$$4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 - 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 - 4\omega_{18}cs^2\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}\omega_6v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 + 4\omega_{18}cs^2\omega_6\omega_7^2\omega_{20}\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}cs^2\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 +$$
$$4cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_7^2\omega_{11}\omega_5 + 2cs^2\omega_6\omega_7^2\omega_{20}\omega_{20}\omega_{11}^2\omega_8 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11} -$$
$$2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 24\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_5 +$$
$$2\omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}cs^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 4\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_8\omega_5 - 2\omega_{18}cs^2\omega_6\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5 -$$
$$12v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 12\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 8\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{11} + 4\omega_{18}\omega_6\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$4cs^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 + 2\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6\omega_{19}^2\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$4\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 9\omega_6v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 3\omega_{18}cs^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_5 - 4cs^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_6\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}cs^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 8\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8)\dfrac{\rho v_1 v_2}{4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5}$$

$$C^{(2),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3 v_3} = 0$$

$$C^{(2),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3 v_3} = 0$$

$$C^{(2),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_z^3 v_3} = 0$$

$$C^{(2),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_z^3 v_3} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\dfrac{\rho v_1 v_2}{36\omega_1\omega_2}$$

coefficient $C^{(2)}_{\mathrm{D}_y\mathrm{D}_z^3\rho}$ at $\dfrac{\partial^4\rho}{\partial x_2\partial x_3^3}$:

$$C^{(2),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_z^3\rho} = (24 - 42cs^2\omega^2 + 14\omega^2 + 3cs^2\omega^3 - \omega^3 + 108cs^2\omega + 36v_3^2\omega - 72cs^2 + v_3^2\omega^3 - 24v_3^2 - 36\omega - 14v_3^2\omega^2)\dfrac{v_3 cs^2}{12\omega^3}$$

$$C^{(2),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^3\rho} = (36\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2cs^4 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 12v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 6v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2 - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 27v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 12v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 +$$
$$6v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 24v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11} -$$
$$36v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 96\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11}^2cs^4 - 42\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^4 - 45v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 +$$
$$18\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^4 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 24v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 + 36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^4 +$$
$$12v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12v_2^2v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{10}^2\omega_7^3\omega_{11}^2cs^2 + 54\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 +$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2 + 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 18v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 -$$
$$24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 36v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 -$$
$$12v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} - 18\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2cs^4 - 15v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 6v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 36v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$156\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^4 - 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 144v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 - 36\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^4 -$$
$$12v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 36v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 12v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 9v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 5v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 +$$
$$36v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 - 18v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 -$$
$$72v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 15\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 - 48v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 108v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 36v_2^2\omega_{19}^2\omega_7^3\omega_{11}^2cs^2 +$$
$$6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 + 12\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2cs^2 - 6v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 - 36\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}cs^4 +$$
$$36v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2cs^2 - 12v_2^2v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 + 15\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^4 - 6v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 +$$
$$12v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 12v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 3v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 +$$
$$6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} +$$
$$12v_2^2v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^4 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 - 12v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}cs^2 + 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 +$$
$$24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 6\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 +$$
$$6v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_7^2\omega_{11}^2cs^4 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 - 12v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} +$$
$$3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 6v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 - 6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} +$$
$$12v_3^2\omega_{19}^2\omega_7^3\omega_{11}^2cs^2 - 36\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^4 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^4 - 36\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^4 +$$
$$6v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 18v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2cs^4 + 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^4 +$$
$$36v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 + 12\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^4 + 36\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 +$$
$$24v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2cs^2 - 12v_2^2\omega_{19}^2\omega_7^3\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 -$$
$$12\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2cs^2 + 12v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 72v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 - 60\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^4 + 72v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 -$$
$$12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 + 12v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 36v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 + 36v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} -$$
$$18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 36\omega_{19}^2\omega_7^2\omega_{11}^2cs^4 - 36v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2cs^2 +$$
$$15v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 + 48v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 12v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} -$$
$$6\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 + 72v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^4 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2cs^2 + 12v_3^2\omega_{19}^2\omega_7^3\omega_7^2\omega_{11} -$$
$$9v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11})\dfrac{v_3}{12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2}$$

$$C^{(2),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^3\rho} = (-12v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 6v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 + 15cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 6cs^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$36cs^4\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} + 12cs^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 27cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 6cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 12cs^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^2 -$$
$$24v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 36cs^4\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 156cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12cs^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} +$$
$$12v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11} - 45cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 36cs^2v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 15cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 36cs^2v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$$
$$18cs^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11} + 12cs^4\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 5cs^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6cs^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} +$$

$$24v_2^2v_3\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 36cs^2v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12v_2^2v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2 + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 +$$
$$12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12v_2^2v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 3cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 12v_2^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12cs^2\omega_{19}^3\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 36cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 12cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12cs^2v_3^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} -$$
$$24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12cs^2\omega_{19}^3\omega_7^3\omega_{11}^2 - 12v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{11}^2 - 12cs^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{11} - 15v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 +$$
$$5cs^2\omega_{19}^3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 36\omega_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 12cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 -$$
$$12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + cs^2v_3^2\omega_{19}^3\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 3cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 9v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 18cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 24v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 12cs^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 18cs^2v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} -$$
$$48v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 72cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 - 36cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 36cs^2v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{11}^2 -$$
$$6v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 3cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12v_2^2v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 + 12cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 -$$
$$6v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 36cs^2v_2^2\omega_{19}^3\omega_7^3\omega_{11}^2 + 72cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12cs^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 6cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} +$$
$$6v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_7^2\omega_{11}^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 18cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 -$$
$$6v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 12v_2^2v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 12cs^2v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$$
$$36cs^2v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} - 12cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 - 18cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 6cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 +$$
$$24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 18cs^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6cs^4\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 18cs^4\omega_{19}\omega_{16}\omega_7^3\omega_7^2\omega_{11}^2 +$$
$$6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 18cs^2v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12v_2^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{11} + 36cs^4\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} +$$
$$6cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 54cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 36cs^2v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$$
$$144cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 72cs^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 12cs^2v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{11}^2 - 12cs^2\omega_{19}\omega_{10}\omega_7^2\omega_{11}^2 + 6v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$18cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 36cs^4\omega_{19}^3\omega_7^3\omega_{11}^2 + 36cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 108cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6cs^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$18cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 42cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 24v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} -$$
$$12v_2^2\omega_{19}^2\omega_7^3\omega_{11}^2 + 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 96cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11}^2 + 12v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 +$$
$$36cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 60cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 36cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 36cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 36cs^4\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 - 36v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 -$$
$$18cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 12cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 15v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 72cs^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 36cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 +$$
$$36cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 18cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 48v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 12v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{11} +$$
$$12cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 + 12cs^2v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2 - 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 12v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^2 - 9v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}) \, \dfrac{v_3}{12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2}$$

$C_{\mathrm{D}_y\mathrm{D}_z^3\rho}^{(2),\mathrm{CLBM1}} = (-36\omega_{19}^2cs^2\omega_7^2\omega_{23} - 6\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 3v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{23} -$

$12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{11} - 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11} - 15\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23} + 6v_{19}^3\omega_{16}\omega_7^2\omega_{11} + 12v_3^2\omega_{19}^2\omega_{10}\omega_7\omega_{11} +$

$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11} + 12\omega_{19}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} + 6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36\omega_{19}^2\omega_{10}cs^2\omega_7^2\omega_{11} - 36\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{11} -$

$12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{23} - 12\omega_{19}^2\omega_7^2\omega_{11} - 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} + 36\omega_{19}^2\omega_{10}cs^2\omega_7^2\omega_{23} + 36\omega_{19}^2\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} +$

$v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 54\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{11} + 3\omega_{19}^2\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{11} + 3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 36\omega_{19}^2cs^2\omega_7^2\omega_{11} - 12v_3^2\omega_{19}^2\omega_{10}\omega_7\omega_{23} -$

$6v_{19}^3\omega_{16}\omega_7^2\omega_{23} + 18\omega_{19}^2\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{11} + 18v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} + 18\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{11} - 6v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11} - 36\omega_{19}^2\omega_{16}\omega_{10}cs^2\omega_{23} -$

$12\omega_{19}^2\omega_{10}\omega_7\omega_{11} + 12v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 36\omega_{19}^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{11} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 5v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 36\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{11} -$

$18\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 18\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{23} - 9\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{11} + 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} -$

$36\omega_{19}^2\omega_{10}cs^2\omega_7\omega_{23} - 36\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{11} - 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 18\omega_{19}^2\omega_{16}cs^2\omega_7^2\omega_{11} +$

$12\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_{23} + 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} + 36\omega_{19}^2\omega_{10}cs^2\omega_7\omega_{11} +$

$12\omega_{19}^2\omega_{10}\omega_7\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_7^2\omega_{23} + 6v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11} + 6v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} +$

$36\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 12v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} + 54\omega_{19}^2\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}) \, \dfrac{v_3cs^2}{12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}}$

$C_{\mathrm{D}_y\mathrm{D}_z^3\rho}^{(2),\mathrm{CLBM2}} = (36\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11}cs^2 - 6\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 9\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 3v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$

$36\omega_{19}^2\omega_{10}\omega_7\omega_{23}cs^2 - 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11} + 6v_{19}^3\omega_{16}\omega_7^2\omega_{11} - 36\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}cs^2 + 12v_3^2\omega_{19}^2\omega_{10}\omega_7\omega_{11} +$

$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11} + 12\omega_{19}^2\omega_7^2\omega_{23} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} + 6v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 18\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2 - 18\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11}cs^2 -$

$12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{23} - 36\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 54\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2 + 36\omega_{19}^2\omega_7^2\omega_{11}cs^2 - 12\omega_{19}^2\omega_7^2\omega_{11} - 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} -$

$36\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}cs^2 + 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} - 36\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11}cs^2 + v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$

$3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}cs^2 - 12v_3^2\omega_{19}^2\omega_{10}\omega_7\omega_{23} - 6v_{19}^3\omega_{16}\omega_7^2\omega_{23} + 18v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23} - 6v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11} -$

$12\omega_{19}^2\omega_{10}\omega_7\omega_{11} + 12v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 15\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 - 36\omega_{19}^2\omega_{23}cs^2 + 12v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23} + 54\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 -$

$5v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 36\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{11}cs^2 - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} -$

$6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 36\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}cs^2 - 6v_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 3v_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 12\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} +$

$18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 36\omega_{19}^2\omega_{10}\omega_7\omega_{11}cs^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_{23} + 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11} + 18\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} +$

$12\omega_{19}^2\omega_{10}\omega_7\omega_{23} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_7^2\omega_{23} + 6v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11} - 18\omega_{19}^2\omega_7^2\omega_{11}cs^2 +$

$6v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 12v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} + 36\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11}cs^2) \, \dfrac{v_3cs^2}{12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}}$

$C_{\mathrm{D}_y\mathrm{D}_z^3\rho}^{(2),\mathrm{CuLBM1}} = (-18cs^2\omega_3^2\omega_{10} + v_3^2\omega_3^2\omega_{10} - 9cs^2\omega_6\omega_3^2\omega_{10} - 36cs^2\omega_6\omega_3 + 6\omega_3^2\omega_{10} + 12\omega_6\omega_3 - 3\omega_6v_3^2\omega_3^2\omega_{10} + 36cs^2\omega_6\omega_{10}^2 + 3\omega_6\omega_3^2\omega_{10} -$

$36cs^2\omega_{10}^2 - 12\omega_6\omega_{10}^2 + 12\omega_6\omega_{10} - \omega_6\omega_3^2\omega_{10} - 36cs^2\omega_6\omega_{10} - \omega_3^2\omega_{10} + \omega_6v_3^2\omega_3^2\omega_{10} - 6\omega_6\omega_3^2 + 12\omega_{10}^2 - 6v_3^2\omega_3^2\omega_{10} + 3cs^2\omega_3^2\omega_{10} +$

$3cs^2\omega_6\omega_3^2\omega_{10} + 18cs^2\omega_6\omega_3 - 6\omega_3\omega_{10} - 12\omega_6v_3^2\omega_3 - 12\omega_6v_3^2\omega_3\omega_{10} + 12v_3^2\omega_3\omega_{10} + 18cs^2\omega_3\omega_{10} - 12v_3^2\omega_{10} - 36cs^2\omega_6\omega_3\omega_{10} + 12\omega_6v_3^2\omega_{10} +$

$12\omega_6\omega_3\omega_{10} - 18\omega_6\omega_3\omega_{10} - 12\omega_6v_3^2\omega_{10} + 36cs^2\omega_3\omega_{10} + 6v_3^2\omega_3\omega_{10} + 54cs^2\omega_6\omega_3\omega_{10} - 12\omega_3\omega_{10} + 6\omega_6v_3^2\omega_3^2 + 18\omega_6v_3^2\omega_3\omega_{10}) \, \dfrac{cs^2v_3}{12\omega_6\omega_3^2\omega_{10}^2}$

$C_{\mathrm{D}_y\mathrm{D}_z^3\rho}^{(2),\mathrm{CuLBM2}} = (48\omega_3cs^4\omega_4^2\omega_1^3\omega_2 + 216\omega_3cs^4\omega_4^2\omega_1^2\omega_2^3 - 108\omega_3cs^4\omega_1^2\omega_2^3 - 136v_3^2\omega_3\omega_4^2\omega_1^2\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 - 784v_3^2\omega_3^2cs^2\omega_4^2\omega_2^3 +$

$120v_3^4\omega_3^3\omega_4^2\omega_1^2\omega_2 + 12\omega_3^2cs^4\omega_4^2\omega_1^2\omega_2^2 - 18\omega_3^2cs^4\omega_1^2\omega_2^2 - 18v_2^2\omega_3^2cs^2\omega_4^2\omega_1^3\omega_2^3 - 9v_3^2\omega_3^3cs^2\omega_4^2\omega_1^3\omega_2 + 54cs^4\omega_4^2\omega_1^3\omega_2^3 + 28\omega_3^2\omega_4^2\omega_1\omega_2^3 +$

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$120\omega_3 cs^4\omega_4^2\omega_1^2\omega_2^2 + 9\omega_3^2 cs^2\omega_4\omega_1^3\omega_2^3 - 92v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 18v_3^2 cs^2\omega_4^2\omega_1^3\omega_2^3 - 276\omega_3^2 cs^4\omega_4^2\omega_1^3\omega_2 - 342\omega_3^2 cs^4\omega_4^2\omega_1^2\omega_2^3 - 104cs^2\omega_4^2\omega_1^3 +$
$78\omega_3^4\omega_2^3\omega_1^2\omega_2^2 + 36\omega_3^2 cs^2\omega_1^2\omega_2^3 + 144\omega_3^2 cs^4\omega_4^2\omega_1^3\omega_2^2 + 48\omega_3^4 cs^2\omega_4\omega_4^3 - 56v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 + 36v_3^2\omega_3^2 cs^2\omega_4\omega_1\omega_2^3 - 132v_3^4\omega_3^2\omega_4\omega_1^3\omega_2 -$
$78v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 92v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 368\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 - 56v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 + 152v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 54\omega_3^2 cs^4\omega_1^3\omega_2^3 - 27cs^4\omega_4^2\omega_1^3\omega_2^3 -$
$96\omega_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 160v_3^2\omega_3^2\omega_4^2\omega_2^3 + 72\omega_3^2 cs^4\omega_4^2\omega_1^2\omega_2 + 56\omega_3 cs^2\omega_4^2\omega_1\omega_2^3 - 36v_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 + 18\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 + 1232v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 +$
$18\omega_3^2 cs^4\omega_4^2\omega_1^3\omega_2^3 - 36\omega_3^2 cs^2\omega_4\omega_1^2\omega_2^3 - 108\omega_3 cs^4\omega_4^2\omega_1^3\omega_2^2 + 56\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^2 + 104v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 108cs^4\omega_4^2\omega_1^2\omega_2^3 + 144\omega_3^2 cs^4\omega_4^2\omega_1^3 +$
$18v_3^2\omega_3^2 cs^2\omega_1^3\omega_2^2 - 24v_3^4\omega_3^2\omega_4\omega_1\omega_2^3 - 6v_3^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 16\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 - 460v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 - 712v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2 - 72\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^3 +$
$52\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^2 + 32v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 6v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 40v_3^2\omega_3 cs^2\omega_4^2\omega_1^2\omega_2^3 + 208\omega_3^2 cs^2\omega_4^2\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^3\omega_2 - 27\omega_3 cs^4\omega_4\omega_1^3\omega_2^3 - 40\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^2 +$
$320v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^3 - 412v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 - 16\omega_3^2\omega_4^2\omega_2^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 + 228v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 14\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 72\omega_3^2 v_3 cs^2\omega_4^2\omega_1^2\omega_2^3 +$
$208\omega_3^2 cs^2\omega_4^2\omega_1\omega_2 - 256v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 184\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2^3 + 16v_3^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 - 14\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 20\omega_3^2\omega_4^3\omega_1\omega_2 - 56v_3^2\omega_3^2\omega_4\omega_1^3 -$
$118\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 36v_3^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 + 588\omega_3^2 cs^4\omega_4^2\omega_1\omega_2^3 + 6v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2^3 - 288cs^4\omega_4^2\omega_1\omega_2^3 + 9\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^3 + 448v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2 -$
$36v_3^2\omega_3^2 cs^2\omega_4^2\omega_1\omega_2^3 - 168\omega_3 cs^4\omega_4\omega_1\omega_2^3 - 88\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 - 9v_3^2\omega_3 cs^2\omega_4^2\omega_1^3\omega_2 - 6v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 - 6\omega_3^2 cs^2\omega_4^2\omega_1^3\omega_2 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 -$
$144v_3^4\omega_3^2\omega_4^2\omega_2^3 + 36cs^2\omega_4^2\omega_1^3\omega_2^2 + 6v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 36\omega_3 cs^2\omega_4^2\omega_1^3\omega_2^2 + 108\omega_3^2 cs^4\omega_4\omega_1^3\omega_2^3 + 394v_3^2\omega_3^2 cs^2\omega_4^2\omega_1^2\omega_2 - 144\omega_3^2 cs^4\omega_4^2\omega_1\omega_2)\frac{v_3}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(2)}_{D_y D_2^3 v_2}$ at $\frac{\partial^4 v_2}{\partial x_2 \partial x_3^3}$:

$C^{(2),\text{SRT}}_{D_y D_2^3 v_2} = (2 + 3cs^2\omega + v_3^2\omega - 6cs^2 - 2v_3^2 - \omega)\frac{\rho v_2 v_3}{12\omega}$

$C^{(2),\text{MRT1}}_{D_y D_2^3 v_2} = (12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 36\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 cs^2 + 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 + 48\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 +$
$24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 + v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 + 36\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} cs^2 + 24\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 -$
$4\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 24v_3^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 - 36v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 +$
$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 + 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 + 24\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 cs^2 +$
$12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}^2 cs^2 - 132\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 cs^2 + 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$
$3v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} cs^2 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 48\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 -$
$24\omega_{19}^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 24\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}^2 cs^2 - 66\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$
$12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 60\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 84\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 cs^2 - \omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 96\omega_{19}^2\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}^2 cs^2 -$
$84\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 - 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} +$
$12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 + 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 4v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}^2 cs^2 + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}^2 - 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}^2 -$
$6v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 90\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 18\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$
$6\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 24\omega_{19}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 72\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 cs^2 -$
$24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 66\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 42\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 - 18\omega_{19}^2\omega_{16}^2\omega_7^3\omega_{23} cs^2 -$
$12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}^2 - 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 cs^2 +$
$156\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 cs^2 + 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$
$24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} - 24v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} cs^2 + 24\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 24v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 +$
$66v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}^2 cs^2 + 24v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}^2 -$
$24v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 24\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 -$
$72\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23})\frac{\rho v_2 v_3}{12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2}$

$C^{(2),\text{MRT2}}_{D_y D_2^3 v_2} = (12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} + 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 + 24cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 -$
$12cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 24cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 + 24cs^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 - 4\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 24v_3^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 -$
$36v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 132cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 -$
$24cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 12v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 66cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 84cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$
$12v_3^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 12cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 24v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 +$
$90cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 24v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 - 42cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} -$
$24cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}^2 + 12cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 24cs^2\omega_{19}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 - \omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 -$
$18v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 +$
$36\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 4v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 72cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 - 36cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 +$
$36cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 48cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 6cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 +$
$12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}^2 - 6v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 24cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 12cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 -$
$24cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} + 3cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 18\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 48cs^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 +$
$6\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23} - 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 60cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 24cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} + 84cs^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 -$
$66\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 96cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}^2 - 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} +$
$12cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 12v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 18v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} +$
$12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 24cs^2\omega_{19}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 - 24\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}^2 - 24v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} - 24cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 +$
$72cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 + 24\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 24v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 18cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 66v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} +$
$12\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{11} + 156cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} + 12cs^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$
$24v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12cs^2\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}^2 - 24cs^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 -$
$12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} + 24cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2)\frac{\rho v_2 v_3}{12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2}$

$C^{(2),\text{CLBM1}}_{D_y D_2^3 v_2} = (-\omega_{19}\omega_{11} - 3v_3^2\omega_{11} - \omega_{19} - 9cs^2\omega_{11} + v_3^2\omega_{19}\omega_{11} + v_3^2\omega_{19} + 3\omega_{19}cs^2\omega_{11} + 3\omega_{11} + 3\omega_{19}cs^2)\frac{\rho v_2 v_3}{12\omega_{19}\omega_{11}}$

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$$C^{(2),\text{CLBM2}}_{\text{D}_y\text{D}_z^3 v_2} = (-\omega_{19}\omega_{11} - 9\omega_{11}cs^2 - 3v_3^2\omega_{11} - \omega_{19} + v_3^2\omega_{19}\omega_{11} + 3\omega_{19}cs^2 + v_3^2\omega_{19} + 3\omega_{11} + 3\omega_{19}\omega_{11}cs^2)\frac{\rho v_2 v_3}{12\omega_{19}\omega_{11}}$$

$$C^{(2),\text{CuLBM1}}_{\text{D}_y\text{D}_z^3 v_2} = (3\omega_6 - \omega_6\omega_{10} + 3cs^2\omega_6\omega_{10} + 3cs^2\omega_{10} - \omega_{10} - 3\omega_6 v_3^2 - 9cs^2\omega_6 + \omega_6 v_3^2\omega_{10} + v_3^2\omega_{10})\frac{\rho v_2 v_3}{12\omega_6\omega_{10}}$$

$$C^{(2),\text{CuLBM2}}_{\text{D}_y\text{D}_z^3 v_2} = (9\omega_3\omega_1\omega_2 + 4v_3^2\omega_3\omega_4\omega_2 + 12\omega_3 cs^2\omega_4\omega_1 - 6\omega_3\omega_4\omega_1\omega_2 - 9v_3^2\omega_4\omega_1\omega_2 - 27\omega_3 cs^2\omega_1\omega_2 - 8\omega_3\omega_4\omega_1 - 18v_2^2\omega_3\omega_4\omega_2 -$$
$$27cs^2\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 + 6v_3^2\omega_3\omega_4\omega_1\omega_2 + 6\omega_3 cs^2\omega_4\omega_2 + 2v_3^2\omega_3\omega_4\omega_1 - 9v_3^2\omega_3\omega_1\omega_2 + 18v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2 + 18\omega_3 cs^2\omega_4\omega_1\omega_2)\frac{\rho v_2 v_3}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(2)}_{\text{D}_y\text{D}_z^3 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3}$:

$$C^{(2),\text{SRT}}_{\text{D}_y\text{D}_z^3 v_3} = (-12 + 2cs^2\omega^2 - 6\omega^2 - cs^2\omega^3 - 54v_3^2\omega + 36v_3^2 + 18\omega + 18v_3^2\omega^2)\frac{\rho cs^2}{12\omega^3}$$

$$C^{(2),\text{MRT1}}_{\text{D}_y\text{D}_z^3 v_3} = (12\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2 cs^4 + \omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 36v_2^2 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 18v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$$
$$6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 + 9v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 102v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 12v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 -$$
$$12\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 24v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{11}^2 - 12v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11}^2 cs^4 -$$
$$18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^4 - 15v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 +$$
$$72v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^4 + 36v_2^2 v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_7^2\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$$
$$36v_2^2 v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_7^3\omega_{11}^2 cs^2 + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 36v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 cs^2 +$$
$$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 18v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 72v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 +$$
$$54v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 60v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^2 - 12v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{11}^2 - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 cs^4 - 45v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$18v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 + 36v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 18\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^4 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 48v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 +$$
$$6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^4 - 12v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 36v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 cs^2 +$$
$$27v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 15v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 24v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 - 48v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 -$$
$$36v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 12v_2^2\omega_{19}^2\omega_7^3\omega_{11}^2 cs^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 + 12\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 cs^2 - 6v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 -$$
$$12\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}cs^4 + 12v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 36v_2^2 v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^4 - 18v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} +$$
$$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 36v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 24v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 30v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 +$$
$$6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 36v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 72v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 18v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} +$$
$$36v_2^2 v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^4 + 60v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^2 - 36v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}cs^2 + 5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 +$$
$$24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 6\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2 cs^2 + 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 18v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 +$$
$$18v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^4 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 36v_2^2 v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 -$$
$$18v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2 cs^2 - 48v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11}^2 cs^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^2 - 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_7^2\omega_{11} +$$
$$36v_3^2\omega_{19}^2\omega_7^3\omega_{11}^2 cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 18v_2^2 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$6v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 - 12\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 cs^4 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^4 + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 + 12\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}cs^2 -$$
$$36v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 + 72v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 12v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 -$$
$$12v_2^2\omega_{19}^2\omega_7^3\omega_{11}^2 + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2 cs^2 + 12v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^2 -$$
$$5\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^4 + 24v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 - 15v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 36v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 +$$
$$12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 12\omega_{19}^2\omega_7^3\omega_{11}^2 cs^4 - 108v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$12v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 36v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2 cs^2 + 15v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 36v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 + 144v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 +$$
$$36v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 + 24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^4 -$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 + 36v_2^2 v_3^2\omega_{19}\omega_7^3\omega_{11}^2 - 9v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11})\frac{\rho}{12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2}$$

$$C^{(2),\text{MRT2}}_{\text{D}_y\text{D}_z^3 v_3} = (-36v_2^2 v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 18v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 + 6cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12cs^2 v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12cs^4\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} + 9cs^2 v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 36cs^2 v_3^2\omega_{19}^2\omega_7^3\omega_7^2\omega_{11} -$$
$$24v_2^2\omega_{11}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 12cs^4\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 18cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12cs^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} +$$
$$12v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{11}^2 - 15cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 12cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 5cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12cs^2 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$6cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 - 15cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 18cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 72v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} -$$
$$12cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 36v_2^2 v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} + 60cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$$
$$36v_2^2 v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 30cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 36v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 + 18v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12cs^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$12cs^2 v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} + 12cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 36cs^2 v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 72v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12cs^2\omega_{19}^2\omega_7^3\omega_{11}^2 -$$
$$12v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11} - 36cs^2 v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} - 45v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 5cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 36v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$36cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 60cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 48cs^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11}^2 -$$
$$6cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 27v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6cs^4\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 24v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$36cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 6cs^2 v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 48cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_7^2\omega_{11} -$$
$$12cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12cs^2 v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{11}^2 - 6v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 6cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$36v_2^2 v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 + 12cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 18v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 12cs^2 v_2^2\omega_{19}^2\omega_7^3\omega_{11}^2 + 24cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} -$$
$$36cs^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 6cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 36v_2^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 72v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 -$$
$$102cs^2 v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 18v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 24v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 36v_2^2 v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$6cs^2 v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 36cs^2 v_3^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12cs^2 v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} - 12cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6cs^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 -$$
$$6cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 6cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 54cs^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$$
$$6cs^4\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 + 18v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 6cs^2 v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 36v_2^2 v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} + 12cs^4\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$

$6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 6cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 18cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 18v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 12cs^2v_2^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$6cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 48cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 36cs^2v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 - 12cs^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2 +$
$18v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 6cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 12cs^4\omega_{19}^2\omega_7^3\omega_{11}^2 + 12cs^4\omega_{19}^2\omega_{10}\omega_7^2\omega_{11}^2 - 36cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$
$6cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 18cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 24cs^2v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 36v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 72v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} -$
$12v_2^2\omega_{19}^2\omega_7^3\omega_{11}^2 + 12cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 18cs^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}\omega_{11}^2 + 12v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 18cs^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 +$
$12cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 5cs^4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 12cs^2v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 36v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} -$
$12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 12cs^4\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 - 108v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12cs^4\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 +$
$18cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 15cs^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 15v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 24cs^2v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 12cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 +$
$12cs^2v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 18cs^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 144v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 12v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} +$
$12cs^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 + 36cs^2v_3^2\omega_{19}^2\omega_{10}\omega_7^3\omega_{11}^2 - 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 36v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^2 - 9v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}) \frac{\rho}{12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2}$

$C_{D_yD_z^3v_3}^{(2),\text{CLBM1}} = (-18v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 18\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 3v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{11} - 36v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} -$
$\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{11} + 36v_3^2\omega_{19}\omega_7^3\omega_{11} - 5\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23} - 6\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} -$
$54v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{11} - 36v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{11} + 12\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{23} - 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{11} -$
$36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 12\omega_{19}\omega_{10}cs^2\omega_7^3\omega_{11} + 36v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} + 36v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 36v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{11} - 12\omega_{19}\omega_{10}cs^2\omega_7^2\omega_{23} +$
$18\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{11} + \omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 12\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{11} - 36v_3^2\omega_{19}\omega_7^2\omega_{23} +$
$18\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23} + 18v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 6\omega_{16}\omega_{10}\omega_7^3\omega_{11} -$
$18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{19}\omega_{10}\omega_7^3\omega_{11} - 6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{11} - 5\omega_{19}\omega_{16}\omega_{10}cs^2\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 54v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} +$
$12\omega_{19}cs^2\omega_7^3\omega_{11} + 12\omega_{19}\omega_7^3\omega_{23} - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{16}\omega_{10}cs^2\omega_7\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 5\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} -$
$12\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 12\omega_{19}cs^2\omega_7^3\omega_{23} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 6\omega_{16}\omega_{10}cs^2\omega_7^3\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}cs^2\omega_7^3\omega_{23} + 6\omega_{19}\omega_{16}\omega_7^3\omega_{11} -$
$12\omega_{19}\omega_7^3\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 15v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12\omega_{19}\omega_{10}\omega_7^2\omega_{11}) \frac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}}$

$C_{D_yD_z^2v_3}^{(2),\text{CLBM2}} = (-18v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 18\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 5\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 3v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{23} +$
$36v_3^2\omega_{19}\omega_7^3\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2 + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{19}\omega_{10}\omega_7^2\omega_{11}cs^2 - 54v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}cs^2 -$
$36v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{11} + 12\omega_{19}\omega_{10}\omega_7^3\omega_{23}cs^2 - 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 12\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} + 36v_3^2\omega_{19}\omega_{10}\omega_7^3\omega_{23} +$
$12\omega_{16}\omega_{10}\omega_7^2\omega_{11}cs^2 - 5\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 + 36v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 36v_3^2\omega_{19}\omega_{10}\omega_7^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_7^3\omega_{11}cs^2 -$
$6\omega_{19}\omega_{16}\omega_7^3\omega_{11}cs^2 + \omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - \omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 36v_3^2\omega_{19}\omega_7^3\omega_{23} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11}cs^2 +$
$18v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{11}cs^2 + 18\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 6\omega_{16}\omega_{10}\omega_7^3\omega_{11} -$
$18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 12\omega_{19}\omega_{10}\omega_7^3\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 54v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2 +$
$12\omega_{19}\omega_7^3\omega_{23} - 6\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{19}\omega_7^3\omega_{23}cs^2 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 5\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{16}\omega_{10}\omega_7^2\omega_{11} -$
$12\omega_{19}\omega_{10}\omega_7^3\omega_{23} - 12\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 18\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 12\omega_{19}\omega_7^3\omega_{11} + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 - 6\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 +$
$12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 12\omega_{19}\omega_{10}\omega_7^2\omega_{23}cs^2 - 15v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36v_3^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12\omega_{19}\omega_{10}\omega_7^2\omega_{11}) \frac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}}$

$C_{D_yD_z^3v_3}^{(2),\text{CuLBM1}} = (6cs^2\omega_3^2\omega_{10} - 5cs^2\omega_6\omega_3^2\omega_{10} + 12cs^2\omega_6\omega_3 - 6\omega_3^2\omega_{10} - 12\omega_6\omega_3 - 3\omega_6v_3^2\omega_3^2\omega_{10} + 6\omega_3^3 + \omega_6\omega_3^2\omega_{10} + 3v_3^2\omega_3^3\omega_{10} - 12\omega_3^2 -$
$6\omega_6\omega_3^3 - \omega_3^3\omega_{10} - 12cs^2\omega_6\omega_{10} - cs^2\omega_6\omega_3^3\omega_{10} + 6cs^2\omega_6\omega_3^3 - 6cs^2\omega_3^3 + cs^2\omega_3^3\omega_{10} + 18\omega_6\omega_3^3 + 18v_3^2\omega_3^3\omega_{10} + 12cs^2\omega_3^3 - 18cs^2\omega_6\omega_3^3 +$
$36\omega_6v_3^2\omega_3 - 36v_3^2\omega_3\omega_{10} + 36v_3^2\omega_3^3 + 18\omega_6v_3^2\omega_3^3 - 12cs^2\omega_3\omega_{10} + 18cs^2\omega_6\omega_3\omega_{10} - 18v_3^2\omega_3^3 + 12\omega_3\omega_{10} - 54\omega_6v_3^2\omega_3^3) \frac{\rho cs^2}{12\omega_6\omega_3^3\omega_{10}}$

$C_{D_yD_z^3v_3}^{(2),\text{CuLBM2}} = (153v_3^2\omega_3cs^2\omega_4\omega_1^3\omega_2^2 - 28\omega_3cs^4\omega_4\omega_1\omega_2^2 + 16\omega_3cs^4\omega_4\omega_1^3 + 138v_3^2\omega_3\omega_4\omega_1^3\omega_2 + 81v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 - 20cs^2\omega_4\omega_1^2\omega_2^2 -$
$138v_3^4\omega_3\omega_4\omega_1\omega_2^3 + 27v_3^2\omega_3cs^2\omega_1^3\omega_2^3 - 240v_3^4\omega_3\omega_4\omega_1^3\omega_2 - 16\omega_3cs^2\omega_4\omega_1^2\omega_2^2 + 84v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 + 120v_3^2\omega_3cs^2\omega_4\omega_1^2\omega_2 + 4\omega_3\omega_4\omega_1^3 +$
$94v_3^2\omega_4\omega_4\omega_1\omega_2^3 - 24\omega_3cs^2\omega_4\omega_1^3\omega_2^2 - 168v_3^4\omega_3\omega_4\omega_1^2\omega_2^2 - 8cs^2\omega_4\omega_1^3\omega_2 + 18cs^2\omega_4\omega_1^2\omega_2^3 - 36\omega_3cs^2\omega_1\omega_2^3 + 24v_3^2cs^2\omega_4\omega_1\omega_2^3 -$
$108v_3^2\omega_3cs^2\omega_1^2\omega_2^3 + 24\omega_3cs^2\omega_4\omega_1^2\omega_2^3 + 42\omega_3cs^2\omega_4\omega_1^3\omega_2 + 192v_3^4\omega_3\omega_4\omega_1^2\omega_2 - 20\omega_3cs^2\omega_4\omega_1^3 + 18cs^2\omega_4\omega_1^3\omega_2^2 + 144v_3^2\omega_3\omega_4\omega_2^3 -$
$96v_3^2\omega_3\omega_4\omega_1^2\omega_2 + 8cs^4\omega_4\omega_1\omega_2^3 - 90v_3^2\omega_3cs^2\omega_4\omega_1^2\omega_2^2 - 4\omega_3\omega_4\omega_1\omega_2^2 - 9cs^2\omega_4\omega_1^3\omega_2^3 + 96v_3^4\omega_3\omega_4\omega_1\omega_2^3 + 138v_3^4\omega_3\omega_4\omega_1^3\omega_2^2 - 6\omega_3cs^2\omega_4\omega_1^2\omega_2^2 -$
$288v_3^2\omega_3cs^2\omega_4\omega_1^3\omega_2 + 14\omega_3\omega_4\omega_1\omega_2^3 - 312v_3^2\omega_3cs^2\omega_4\omega_2^2 - 153v_3^2\omega_3cs^2\omega_4\omega_1^2\omega_2^2 - 81v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 36\omega_3cs^4\omega_1\omega_2^3 - 9\omega_3cs^2\omega_1^3\omega_2^3 - 8\omega_3\omega_4\omega_2^3 +$
$32\omega_3cs^2\omega_4\omega_1\omega_2^2 + 60v_3^2cs^2\omega_4\omega_1^2\omega_2^2 - 10\omega_3\omega_4\omega_1^3\omega_2 + 432v_3^2\omega_3cs^2\omega_4\omega_1\omega_2^3 - 3\omega_3cs^4\omega_4\omega_1^3\omega_2^3 - 7\omega_3\omega_4\omega_1^2\omega_2^3 + 3v_3^2\omega_3cs^2\omega_4\omega_1^3\omega_2^2 +$
$8\omega_3cs^4\omega_4\omega_1^2\omega_2 + 20cs^4\omega_4\omega_1^2\omega_2^2 - 36\omega_3cs^4\omega_1^3\omega_2^2 + 24v_3^2cs^2\omega_4\omega_1^3\omega_2 + 108v_3^2\omega_3cs^2\omega_1\omega_2^3 - 54\omega_3cs^2\omega_4\omega_1\omega_2^3 + v_2^4\omega_3\omega_4\omega_1^3\omega_2^2 -$
$54v_3^2cs^2\omega_4\omega_1^2\omega_2^2 - 68\omega_3cs^4\omega_4\omega_2^3 + 8cs^4\omega_4\omega_1^3\omega_2 - v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 - 18cs^4\omega_4\omega_1^2\omega_2^3 - 4\omega_3\omega_4\omega_1^2\omega_2^2 + 17\omega_3cs^4\omega_4\omega_1^3\omega_2^2 - 60v_3^2\omega_3cs^2\omega_4\omega_1\omega_2^2 -$
$18cs^4\omega_4\omega_1^3\omega_2^2 + v_2^2\omega_3\omega_4\omega_1^3\omega_2^3 + 12v_3^2\omega_3\omega_4\omega_1\omega_2^2 - 264v_3^4\omega_3\omega_4\omega_2^3 + 9\omega_3cs^4\omega_1^3\omega_2^2 - 29\omega_3cs^4\omega_4\omega_1^2\omega_2^2 + 8\omega_3\omega_4\omega_1^2\omega_2 - 32\omega_3cs^4\omega_4\omega_1^3\omega_2 -$
$54v_3^2cs^2\omega_4\omega_1^3\omega_2 - v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 24v_3^4\omega_3\omega_4\omega_1\omega_2^2 + 36\omega_3cs^2\omega_1^3\omega_2^3 - 8cs^2\omega_4\omega_1\omega_2^3 + 144v_3^2\omega_3cs^2\omega_4\omega_1^3 - 60v_3^2\omega_3\omega_4\omega_1^3 - 3v_2^2\omega_3cs^2\omega_4\omega_1^2\omega_2^2 +$
$7\omega_3\omega_4\omega_1^3\omega_2^2 + 10\omega_3cs^4\omega_4\omega_1^2\omega_2^2 + 40\omega_3cs^2\omega_4\omega_2^3 - 222v_3^2\omega_3\omega_4\omega_1\omega_2^3 + 9cs^4\omega_4\omega_1^3\omega_2^3 + 27v_3^2cs^2\omega_4\omega_1^3\omega_2^2 + 408v_3^4\omega_3\omega_4\omega_1\omega_2^3) \frac{\rho}{36\omega_3\omega_4\omega_1^3\omega_2^3}$

coefficient $C_{D_z^4\rho}^{(2)}$ at $\frac{\partial^4\rho}{\partial x_3^4}$:

$C_{D_z^4\rho}^{(2),\text{SRT}} = (6v_3^4 - 12v_3^2cs^2\omega - 3v_3^4\omega + 24v_3^2cs^2 + 2cs^4 + cs^2\omega + 3v_3^4\omega - 2cs^2 - 6v_3^2 - cs^4\omega) \frac{v_2}{24\omega}$

$C_{D_z^4\rho}^{(2),\text{MRT1}} = (48\omega_{19}\omega_7\omega_{11}^2cs^4 + 48v_3^2\omega_{19}\omega_{11}^2 - 24\omega_{19}^2\omega_7cs^2 + 36v_3^4\omega_{19}^2\omega_7\omega_{11} - 24\omega_{19}^2\omega_{11}cs^2 + 12v_3^4\omega_7^2\omega_{11} - 72v_3^2\omega_{19}^2\omega_7 + 12\omega_{19}\omega_7^2\omega_{11}^2cs^2 -$
$12v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2cs^2 - 48v_3^4\omega_{19}\omega_7\omega_{11} - 36v_3^4\omega_{19}^2\omega_7 - 144v_3^2\omega_{19}^2\omega_7^2cs^2 - 12\omega_{19}^2\omega_7^2cs^4 - 432v_3^2\omega_{19}^2\omega_7\omega_{11}cs^2 + 30v_3^2\omega_{19}\omega_7^2\omega_{11} + 24\omega_{19}\omega_{11}cs^2 -$
$48v_3^4\omega_{19}\omega_{11}^2 - 24v_3^2\omega_{19}\omega_7^2\omega_{11} + 432v_3^2\omega_{19}\omega_7^2\omega_{11}^2cs^2 + 24\omega_7\omega_{11}^2cs^2 + 72v_3^2\omega_7^2\omega_{11}^2cs^2 - \omega_{19}^2\omega_7^2\omega_{11}cs^4 + 12\omega_7^2\omega_{11}^2cs^4 + 96v_3^4\omega_{19}\omega_7\omega_{11}^2 +$
$72v_3^4\omega_{19}^2\omega_7 - 12v_3^2\omega_7^2\omega_{11}^2 + 72v_3^2\omega_{19}\omega_7^2\omega_{11}cs^2 - 14\omega_{19}^2\omega_7^2\omega_{11}cs^2 + 96v_3^3\omega_{19}^2\omega_7\omega_{11} + 36v_3^2\omega_{19}^2\omega_7 - 3v_3^4\omega_{19}\omega_7^2\omega_{11} - 48\omega_{19}\omega_7\omega_{11}cs^4 +$

$$\omega_{19}^2\omega_7^2\omega_{11}^2cs^2 - 36v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 126v_3^2\omega_{19}\omega_7^2\omega_{11}^2cs^2 - 12\omega_7^2\omega_{11}^2cs^2 - 144v_3^2\omega_7\omega_{11}^2cs^2 - 48v_3^2\omega_{19}^2\omega_{11} - 24\omega_7\omega_{11}^2cs^4 - 144v_3^2\omega_{19}\omega_7\omega_{11}cs^2 +$$
$$48\omega_{19}^2\omega_7\omega_{11}cs^2 + 48cs^2v_3^2\omega_{19}\omega_7\omega_{11} - 30v_3^4\omega_{19}\omega_7^2\omega_{11} + 14\omega_{19}^2\omega_7^2\omega_{11}cs^2 + 24v_3^2\omega_7\omega_{11}^2 + 24\omega_{19}^2\omega_{11}cs^4 + 24v_3^4\omega_{19}\omega_7^2\omega_{11} + 288v_3^2\omega_{19}^2\omega_7cs^2 -$$
$$12\omega_{19}\omega_7^2\omega_{11}^2cs^4 - 48\omega_{19}\omega_7\omega_{11}^2cs^2 + 48v_3^4\omega_{19}^2\omega_{11} + 24\omega_{19}^2\omega_7cs^4 + 216v_3^2\omega_{19}^2\omega_{11}cs^2 - 96v_3^2\omega_{19}\omega_7\omega_{11}^2 + 12\omega_{19}^2\omega_7^2cs^2 - 96v_3^4\omega_{19}^2\omega_7\omega_{11} -$$
$$24\omega_{19}\omega_{11}^2cs^4 + 3v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 216v_3^2\omega_{19}\omega_{11}^2cs^2 + 150v_3^2\omega_{19}^2\omega_7\omega_{11}cs^2 - 24v_3^4\omega_7\omega_{11}^2)\frac{v_2}{24\omega_{19}^2\omega_7^2\omega_{11}^2}$$

$C_{\mathrm{D}_z^4\rho}^{(2),\mathrm{MRT2}} = (48v_3^2\omega_{19}\omega_{11}^2 + 72cs^2v_3^2\omega_7^2\omega_{11} + 36v_3^4\omega_{19}^2\omega_7^2\omega_{11} - 144cs^2v_3^2\omega_{19}\omega_7\omega_{11} - 14cs^2\omega_{19}^2\omega_7^2\omega_{11} + 12v_3^4\omega_7^2\omega_{11} + 24cs^4\omega_{19}^2\omega_{11} -$
$72v_3^2\omega_{19}^2\omega_7 - 12cs^4\omega_{19}\omega_7^2\omega_{11} - 48v_3^4\omega_{19}\omega_7\omega_{11} - 36v_3^4\omega_{19}^2\omega_7 - 144cs^2v_3^2\omega_{19}^2\omega_7 - 24cs^4\omega_7\omega_{11}^2 + 30v_3^2\omega_{19}\omega_7^2\omega_{11}^2 + 150cs^2v_3^2\omega_{19}^2\omega_7\omega_{11} +$
$288cs^2v_3^2\omega_{19}^2\omega_7 - 48v_3^4\omega_{19}\omega_{11}^2 - 12cs^2v_3^2\omega_{19}\omega_7^2\omega_{11} - 24v_3^2\omega_{19}\omega_7^2\omega_{11} - 48cs^2\omega_{19}\omega_7^2\omega_{11} + 96v_3^4\omega_{19}\omega_7\omega_{11} + 72v_3^4\omega_{19}^2\omega_7 - 12v_3^2\omega_7^2\omega_{11}^2 -$
$216cs^2v_3^2\omega_{19}\omega_{11}^2 - 24cs^2\omega_{19}^2\omega_{11} + 432cs^2v_3^2\omega_{19}\omega_7\omega_{11}^2 + 96v_3^2\omega_{19}^2\omega_7\omega_{11} + cs^2\omega_{19}^2\omega_7^2\omega_{11} + 36v_3^2\omega_{19}^2\omega_7 + 24cs^2\omega_7\omega_{11}^2 - 48cs^4\omega_{19}\omega_7\omega_{11} -$
$3v_3^4\omega_{19}^2\omega_7^2\omega_{11} - 126cs^2v_3^2\omega_{19}\omega_7^2\omega_{11} - 36v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 24cs^4\omega_{19}^2\omega_{11} + 24cs^4\omega_{19}^2\omega_7 - 12cs^2\omega_7^2\omega_{11}^2 - 48v_3^2\omega_{19}^2\omega_{11} + 14cs^4\omega_{19}^2\omega_7^2\omega_{11} +$
$12cs^2v_3^2\omega_{19}^2\omega_7^2 + 12cs^2\omega_{19}\omega_7^2\omega_{11}^2 + 48v_3^2\omega_{19}\omega_7\omega_{11} - 30v_3^4\omega_{19}\omega_7^2\omega_{11}^2 + 24v_3^2\omega_7\omega_{11}^2 + 24v_3^4\omega_{19}\omega_7^2\omega_{11} + 48cs^4\omega_{19}\omega_7\omega_{11} + 216cs^2v_3^2\omega_{19}^2\omega_{11} +$
$24cs^2\omega_{19}\omega_{11}^2 + 12cs^4\omega_7^2\omega_{11} + 48v_3^4\omega_{19}^2\omega_{11} - 24cs^2\omega_{19}^2\omega_7 - 96v_3^2\omega_{19}\omega_7\omega_{11}^2 - 432cs^2v_3^2\omega_{19}\omega_7\omega_{11}^2 - 12cs^4\omega_{19}^2\omega_7^2 - 144cs^2v_3^2\omega_7\omega_{11}^2 -$
$96v_3^4\omega_{19}^2\omega_7\omega_{11} - cs^4\omega_{19}^2\omega_7^2\omega_{11} + 48cs^2\omega_{19}^2\omega_7\omega_{11} + 3v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 + 72cs^2v_3^2\omega_{19}\omega_7^2\omega_{11} - 24v_3^4\omega_7\omega_{11}^2)\frac{v_2}{24\omega_{19}^2\omega_7^2\omega_{11}^2}$

$C_{\mathrm{D}_z^4\rho}^{(2),\mathrm{CLBM1}} = (-12v_3^2cs^2\omega_{11} + 6v_3^4 + 3v_3^2\omega_{11} - 2cs^2 + cs^2\omega_{11} + 2cs^4 + 24v_3^2cs^2 - cs^4\omega_{11} - 6v_3^2 - 3v_3^2\omega_{11})\frac{v_2}{24\omega_{11}}$

$C_{\mathrm{D}_z^4\rho}^{(2),\mathrm{CLBM2}} = (6v_3^4 - 2cs^2 + \omega_{11}cs^2 + 3v_3^2\omega_{11} - 12v_3^2\omega_{11}cs^2 + 24v_3^2cs^2 - 6v_3^2 - 3v_3^4\omega_{11} + 2cs^4 - \omega_{11}cs^4)\frac{v_2}{24\omega_{11}}$

$C_{\mathrm{D}_z^4\rho}^{(2),\mathrm{CuLBM1}} = (6v_3^4 + 2cs^4 - 3\omega_6v_3^4 - cs^4\omega_6 - 12cs^2\omega_6v_3^2 + 24cs^2v_3^2 - 2cs^2 + 3\omega_6v_3^2 - 6v_3^2 + cs^2\omega_6)\frac{v_2}{24\omega_6}$

$C_{\mathrm{D}_z^4\rho}^{(2),\mathrm{CuLBM2}} = (4cs^4\omega_2 - 2cs^2\omega_1 - 36v_3^2cs^2\omega_1\omega_2 + 9v_3^2\omega_1\omega_2 + 24v_3^2cs^2\omega_1 + 12v_3^4\omega_2 - 9v_3^4\omega_1\omega_2 - 6v_3^2\omega_1 - 3cs^4\omega_1\omega_2 - 4cs^2\omega_2 + 2cs^4\omega_1 +$
$48v_3^2cs^2\omega_2 - 12v_3^2\omega_2 + 3cs^2\omega_1\omega_2 + 6v_3^4\omega_1)\frac{v_2}{72\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_z^4v_2}^{(2)}$ **at** $\frac{\partial^4v_2}{\partial x_3^4}$ **:**

$C_{\mathrm{D}_z^4v_2}^{(2),\mathrm{SRT}} = (-14cs^2\omega^2 - 72v_3^4 + 216v_3^2cs^2\omega + cs^2\omega^3 + 108v_3^4\omega + 6v_3^2cs^2\omega^3 - 42v_3^4\omega^2 - 144v_3^2cs^2 + 48cs^4 - 84v_3^2cs^2\omega^2 + 3v_3^4\omega^3 + 36cs^2\omega -$
$3cs^4\omega^3 - 108v_3^2\omega + 30cs^4\omega^2 - 24cs^2 - 3v_3^2\omega^3 + 72v_3^2 - 72cs^4\omega + 42v_3^2\omega^2)\frac{\rho}{24\omega^3}$

$C_{\mathrm{D}_z^4v_2}^{(2),\mathrm{MRT1}} = (-24v_3^2\omega_{19}\omega_7cs^2 + 12\omega_{19}^2\omega_7cs^2 + 3v_3^4\omega_{19}^2\omega_7^3 - 24v_3^4\omega_7^2 + 24\omega_{19}\omega_7cs^4 - 24v_3^2\omega_{19}^2\omega_7 - 24v_3^4\omega_{19}^2\omega_7^2 - 72v_3^2\omega_{19}^2\omega_7^2cs^2 + 24\omega_{19}\omega_7^2cs^2 +$
$24\omega_{19}^2\omega_7cs^4 + 12v_3^4\omega_7^3 - 96v_3^2\omega_{19}^2\omega_7 - 3v_3^2\omega_{19}^3\omega_7 + 24v_3^4\omega_{19}^2\omega_7 - 3\omega_{19}\omega_7^3cs^4 + 24v_3^2\omega_{19}^2\omega_7^2 - 6\omega_{19}\omega_7^3cs^2 + 6v_3^2\omega_{19}\omega_7^3cs^2 - 24v_3^2\omega_7^2cs^2 -$
$72v_3^2\omega_{19}\omega_7^2 + 24\omega_{19}^2cs^4 - 12v_3^2\omega_7^3 + 18v_3^2\omega_{19}\omega_7^3 + 6\omega_{19}\omega_7^3cs^4 + \omega_{19}^2\omega_7^3cs^2 + 24v_3^2\omega_7^2 - 12v_3^2\omega_{19}\omega_7^3cs^2 - 48v_3^4\omega_{19}\omega_7 + 156v_3^2\omega_{19}^2\omega_7cs^2 -$
$24\omega_{19}\omega_7cs^2 + 72v_3^4\omega_{19}\omega_7^2 - 48\omega_{19}^2\omega_7cs^4 + 12v_3^2\omega_7^3cs^2 + 48v_3^2\omega_{19}\omega_7^2cs^2 - 8\omega_{19}^2\omega_7^2cs^2 - 18v_3^4\omega_{19}\omega_7^3 + 48v_3^2\omega_{19}\omega_7 - 24\omega_{19}\omega_7^2cs^4)\frac{\rho}{24\omega_{19}^2\omega_7^3}$

$C_{\mathrm{D}_z^4v_2}^{(2),\mathrm{MRT2}} = (-24cs^4\omega_{19}\omega_7 + 3v_3^4\omega_{19}^2\omega_7^3 - 24cs^2v_3^2\omega_7^2 - 24v_3^4\omega_7^2 - 24v_3^2\omega_{19}^2\omega_7 + 6cs^2v_3^2\omega_{19}\omega_7^3 + 24cs^4\omega_{19}^2 + 6cs^4\omega_{19}\omega_7^3 - 24v_3^4\omega_{19}^2\omega_7^2 -$
$72cs^2v_3^2\omega_{19}^2\omega_7^2 - 24cs^2\omega_{19}\omega_7 + 12v_3^4\omega_7^3 + 12cs^2v_3^2\omega_7^3 + 24cs^2\omega_{19}\omega_7^2 - 3v_3^2\omega_{19}^3\omega_7 + 156cs^2v_3^2\omega_{19}^2\omega_7 - 96cs^2v_3^2\omega_{19}^2 + 24v_3^4\omega_{19}^2\omega_7 - 6cs^2\omega_{19}\omega_7^3 +$
$24v_3^2\omega_{19}^2\omega_7^2 + 24cs^4\omega_{19}\omega_7 - 72v_3^2\omega_{19}\omega_7^2 + cs^2\omega_{19}^2\omega_7^3 - 48cs^4\omega_{19}^2\omega_7 - 12v_3^2\omega_7^3 + 18v_3^2\omega_{19}\omega_7^3 - 24cs^2v_3^2\omega_{19}\omega_7 - 8cs^2\omega_{19}^2\omega_7^2 + 24v_3^2\omega_7^2 -$
$48v_3^4\omega_{19}\omega_7 + 72v_3^4\omega_{19}\omega_7^2 - 3cs^4\omega_{19}^2\omega_7^3 + 12cs^2\omega_{19}^2\omega_7 + 48cs^2v_3^2\omega_{19}\omega_7^2 - 18v_3^4\omega_{19}\omega_7^3 + 24cs^4\omega_{19}^2\omega_7 + 48v_3^2\omega_{19}\omega_7 - 12cs^2v_3^2\omega_{19}\omega_7^3)\frac{\rho}{24\omega_{19}^2\omega_7^3}$

$C_{\mathrm{D}_z^4v_2}^{(2),\mathrm{CLBM1}} = (3v_3^4\omega_{19}^2\omega_7^3 - 3\omega_{19}^2cs^4\omega_7^3 - 72v_3^4\omega_7^2 - 24\omega_{19}cs^2\omega_7 - 36v_3^2\omega_{19}^2cs^2\omega_7 - 12v_3^4\omega_{19}^2\omega_7 + 36v_3^4\omega_7^3 + 24\omega_{19}cs^4\omega_7 - 3v_3^2\omega_{19}^3\omega_7 -$
$48\omega_{19}^2cs^4\omega_7 - 12v_3^2\omega_{19}^2cs^2\omega_7^2 + 24\omega_{19}cs^2\omega_7^2 + 12v_3^2\omega_{19}^2\omega_7 - 6\omega_{19}cs^2\omega_7^3 + 6v_3^2\omega_{19}cs^2\omega_7^3 + 24\omega_{19}cs^4\omega_7 - 72v_3^2\omega_{19}\omega_7^2 - 36v_3^2\omega_7^3 +$
$144v_3^2\omega_{19}cs^2\omega_7^2 - 8\omega_{19}^2cs^2\omega_7^2 + 30v_3^2\omega_{19}\omega_7^3 + \omega_{19}^2cs^2\omega_7^3 - 72v_3^2\omega_{19}cs^2\omega_7^3 + 72v_3^2\omega_7^2 + 72v_3^4\omega_{19}\omega_7^2 + 24\omega_{19}^2cs^4 + 108v_3^2cs^2\omega_7^3 + 6\omega_{19}cs^4\omega_7^3 -$
$30v_3^4\omega_{19}\omega_7^3 + 12\omega_{19}^2cs^2\omega_7 + 72v_3^2\omega_{19}cs^2\omega_7 - 24\omega_{19}cs^4\omega_7^2 - 216v_3^2cs^2\omega_7^2)\frac{\rho}{24\omega_{19}^2\omega_7^3}$

$C_{\mathrm{D}_z^4v_2}^{(2),\mathrm{CLBM2}} = (-12v_3^2\omega_{19}\omega_7^2cs^2 + 24\omega_{19}\omega_7^2cs^2 + 3v_3^4\omega_{19}^2\omega_7^3 - 72v_3^4\omega_7^2 + 24\omega_{19}\omega_7^2cs^4 - 12v_3^4\omega_{19}^2\omega_7 + 72v_3^2\omega_{19}\omega_7cs^2 + 12\omega_{19}^2\omega_7cs^2 +$
$24\omega_{19}\omega_7cs^4 + 36v_3^4\omega_7^3 - 3\omega_{19}^2\omega_7^3cs^4 - 3v_3^2\omega_{19}^3\omega_7 - 6\omega_{19}\omega_7^3cs^2 + 6v_3^2\omega_{19}\omega_7^3cs^2 + 12v_3^2\omega_{19}^2\omega_7 - 72v_3^2\omega_{19}\omega_7^2 + 6\omega_{19}\omega_7^3cs^4 + \omega_{19}^2\omega_7^3cs^2 -$
$72v_3^2\omega_{19}\omega_7^3cs^2 - 36v_3^2\omega_7^3 + 24\omega_{19}^2cs^4 + 30v_3^2\omega_{19}\omega_7^3 - 216v_3^2\omega_7^2cs^2 + 72v_3^2\omega_7^2 + 144v_3^2\omega_{19}\omega_7^2cs^2 - 8\omega_{19}^2\omega_7^2cs^2 + 72v_3^4\omega_{19}\omega_7^2 - 24\omega_{19}\omega_7^2cs^4 -$
$36v_3^2\omega_{19}^2\omega_7cs^2 - 24\omega_{19}\omega_7cs^2 - 30v_3^4\omega_{19}\omega_7^3 + 108v_3^2\omega_7^2cs^2 - 48\omega_{19}^2\omega_7cs^4)\frac{\rho}{24\omega_{19}^2\omega_7^3}$

$C_{\mathrm{D}_z^4v_2}^{(2),\mathrm{CuLBM1}} = (-72cs^2v_3^2\omega_3^2\omega_{10} + 24cs^2\omega_3^2\omega_{10} + 12v_3^2\omega_3^2\omega_{10}^2 + 6cs^4\omega_3^3\omega_{10} + 3v_3^4\omega_3^3\omega_{10}^2 - 12cs^2v_3^2\omega_3^2\omega_{10}^2 + cs^2\omega_3^3\omega_{10}^2 + 30v_3^2\omega_3^3\omega_{10} +$
$24cs^4\omega_3^2\omega_{10}^2 + 72v_3^4\omega_3^2\omega_{10} - 12v_3^4\omega_3^2\omega_{10}^2 - 24cs^4\omega_3^2\omega_{10} + 36v_3^4\omega_3^3 - 3v_3^2\omega_3^3\omega_{10}^2 + 144cs^2v_3^2\omega_3^2\omega_{10} - 6cs^2\omega_3^3\omega_{10} - 72v_3^4\omega_3^2 - 30v_3^4\omega_3^3\omega_{10} -$
$3cs^4\omega_3^3\omega_{10}^2 - 72v_3^2\omega_3^3\omega_{10} + 6cs^2v_3^2\omega_3^3\omega_{10}^2 - 8cs^2\omega_3^2\omega_{10}^2 + 24cs^4\omega_3^2\omega_{10}^2 + 12cs^2\omega_3\omega_{10}^2 + 24cs^4\omega_3\omega_{10} + 72cs^2v_3^2\omega_3\omega_{10} + 72v_3^4\omega_3^2 - 36cs^2v_3^2\omega_3\omega_{10}^2 -$
$48cs^4\omega_3\omega_{10}^2 - 216cs^2v_3^2\omega_3^2 - 24cs^2\omega_3\omega_{10} - 36v_3^2\omega_3^3 + 108cs^2v_3^2\omega_3^3)\frac{\rho}{24\omega_3^3\omega_{10}^2}$

$C_{\mathrm{D}_z^4v_2}^{(2),\mathrm{CuLBM2}} = (-36v_3^2\omega_3^2\omega_4\omega_1^2 + 15v_3^2\omega_3\omega_4^2\omega_1^3 + 27v_3^2\omega_3^2cs^2\omega_1^3 - 8\omega_3^2cs^2\omega_4^2\omega_1^2 + 72v_3^2\omega_3cs^2\omega_4^2\omega_1^2 + 36v_3^2\omega_3^2cs^2\omega_4\omega_1 - 48\omega_3^2cs^4\omega_4^2\omega_1 +$
$24\omega_3^2cs^4\omega_4^2 - 54v_3^2\omega_3^2cs^2\omega_1^2 - 36v_3^2\omega_3\omega_4^2\omega_1^2 + 15v_3^2\omega_3\omega_4^2\omega_1^2 + \omega_3^2cs^2\omega_4^2\omega_1^3 - 36v_3^2\omega_3cs^2\omega_4^2\omega_1^3 + 3v_3^4\omega_3^2\omega_4^2\omega_1^3 - 36v_3^2\omega_3^2cs^2\omega_4\omega_1^3 - 36v_3^4\omega_3\omega_4\omega_1^2 +$

$24\omega_3^2cs^4\omega_4^2\omega_1^2 + 36v_3^2\omega_3cs^2\omega_4^2\omega_1 + 12\omega_3^2cs^2\omega_4^2\omega_1 + 72v_3^2\omega_3^2cs^2\omega_4\omega_1^2 + 18v_3^4\omega_3\omega_4\omega_1^3 - 12v_3^4\omega_3^2\omega_4^2\omega_1^2 - 3\omega_3^2cs^4\omega_4^2\omega_1^3 - 12\omega_3^2cs^2\omega_4\omega_1 + 36v_3^4\omega_3^2\omega_4\omega_1^2 + 12\omega_3cs^2\omega_4^2\omega_1^2 - 15v_3^4\omega_3^2\omega_4^2\omega_1^3 - 12v_3^2\omega_3^2cs^2\omega_4^2\omega_1^2 + 18v_3^2\omega_3^2\omega_1^2 - 18v_3^4\omega_4^2\omega_1^2 + 3\omega_3^2cs^4\omega_4\omega_1^3 + 36v_3^4\omega_3\omega_4^2\omega_1^2 - 3\omega_3cs^2\omega_4^2\omega_1^3 + 6v_3^2\omega_3^2cs^2\omega_4^2\omega_1^3 - 15v_3^4\omega_3^2\omega_4\omega_1^3 - 12\omega_3^2cs^4\omega_4\omega_1^2 + 9v_3^4\omega_4^2\omega_1^3 + 12\omega_3cs^4\omega_4^2\omega_1 - 9v_3^2\omega_3^2\omega_1^3 + 12\omega_3^2cs^4\omega_4\omega_1 - 12\omega_3cs^4\omega_4^2\omega_1^2 - 3v_3^2\omega_3^2\omega_4\omega_1^3 + 36v_3^2\omega_3\omega_4\omega_1^2 + 27v_3^2cs^2\omega_4^2\omega_1^3 - 18v_3^4\omega_3^2\omega_1^2 + 54v_3^2\omega_3cs^2\omega_4\omega_1^3 - 3\omega_3^2cs^2\omega_4\omega_1^3 + 18v_3^2\omega_4^2\omega_1^2 - 18v_3^2\omega_3\omega_4\omega_1^3 + 3\omega_3cs^4\omega_4^2\omega_1^3 + 12v_3^2\omega_3\omega_4^2\omega_1^2 - 108v_3^2\omega_3cs^2\omega_4\omega_1^2 - 9v_3^2\omega_4^2\omega_1^3 + 12\omega_3^2cs^2\omega_4\omega_1^2 + 9v_3^4\omega_3^2\omega_1^3 - 36v_3^2\omega_3^2cs^2\omega_4^2\omega_1 - 12\omega_3cs^2\omega_4^2\omega_4\omega_1 - 54v_3^2cs^2\omega_4^2\omega_1^2)\frac{\rho}{24\omega_3^2\omega_4^2\omega_1^3}$

coefficient $C^{(2)}_{D_z^4 v_3}$ at $\frac{\partial^4 v_3}{\partial x_3^4}$:

$C^{(2),\text{SRT}}_{D_z^4 v_3} = (-4 - 3cs^2\omega - 5v_3^2\omega + 6cs^2 + 10v_3^2 + 2\omega)\frac{\rho v_2 v_3}{12\omega}$

$C^{(2),\text{MRT1}}_{D_z^4 v_3} = (-84v_3^2\omega_{19}\omega_{11}^2 + 72\omega_{19}^2\omega_7cs^2 + 24\omega_{19}^2\omega_7 - 72\omega_{19}\omega_7\omega_{11}^2 + 60\omega_{19}^2\omega_{11}cs^2 + 120v_3^2\omega_{19}^2\omega_7 - 33\omega_{19}\omega_7^2\omega_{11}^2cs^2 - 24\omega_{19}\omega_7\omega_{11}cs^2 - 51v_3^2\omega_{19}\omega_7^2\omega_1 - 12\omega_7^2\omega_{11}^2 - 60\omega_{19}\omega_{11}^2cs^2 + 2\omega_{19}^2\omega_7^2\omega_{11} - 25\omega_{19}^2\omega_7^2\omega_{11} + 36v_3^2\omega_{19}\omega_7^2\omega_{11} - 48\omega_7\omega_{11}^2cs^2 + 24v_3^2\omega_7^2\omega_{11}^2 + 24\omega_{19}\omega_7\omega_{11} + 39\omega_{19}^2\omega_7^2\omega_{11}cs^2 - 168v_3^2\omega_{19}^2\omega_7\omega_{11} + 36\omega_{19}\omega_{11}^2 - 60v_3^2\omega_{19}^2\omega_7^2 - 48\omega_{19}^2\omega_7 - 12\omega_{19}\omega_7^2\omega_{11} - 3\omega_{19}^2\omega_7^2\omega_{11}^2cs^2 + 61v_3^2\omega_{19}\omega_7^2\omega_{11} + 24\omega_7^2\omega_{11}^2cs^2 + 84v_3^2\omega_{19}^2\omega_{11} - 120\omega_{19}^2\omega_7\omega_{11}cs^2 + 72\omega_{19}^2\omega_7\omega_{11} - 72v_3^2\omega_{19}\omega_7\omega_{11} - 48v_3^2\omega_7\omega_{11}^2 + 120\omega_{19}\omega_7\omega_{11}^2cs^2 + 168v_3^2\omega_{19}\omega_7\omega_{11}^2 + 24\omega_7\omega_{11}^2 - 36\omega_{19}^2\omega_7^2cs^2 - 36\omega_{19}^2\omega_{11} - 5v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 + 21\omega_{19}\omega_7^2\omega_{11}^2 + 12\omega_{19}\omega_7^2\omega_{11}cs^2)\frac{\rho v_2 v_3}{12\omega_{19}^2\omega_7^2\omega_{11}^2}$

$C^{(2),\text{MRT2}}_{D_z^4 v_3} = (-84v_3^2\omega_{19}\omega_{11}^2 + 24\omega_{19}^2\omega_7^2 - 72\omega_{19}\omega_7\omega_{11}^2 + 39cs^2\omega_{19}^2\omega_7^2\omega_{11} + 120v_3^2\omega_{19}^2\omega_7 - 51v_3^2\omega_{19}\omega_7^2\omega_{11}^2 - 12\omega_7^2\omega_{11}^2 + 2\omega_{19}^2\omega_7^2\omega_{11}^2 - 24cs^2\omega_{19}\omega_7\omega_{11} - 25\omega_{19}^2\omega_7^2\omega_{11} + 36v_3^2\omega_{19}\omega_7^2\omega_{11} + 120cs^2\omega_{19}\omega_7\omega_{11}^2 + 24v_3^2\omega_7^2\omega_{11}^2 + 60cs^2\omega_{19}^2\omega_{11} + 24\omega_{19}\omega_7\omega_{11} - 168v_3^2\omega_{19}^2\omega_7\omega_{11} + 36\omega_{19}\omega_{11}^2 - 3cs^2\omega_{19}^2\omega_7^2\omega_1 - 60v_3^2\omega_{19}^2\omega_7^2 - 48cs^2\omega_7\omega_{11}^2 - 48\omega_{19}^2\omega_7 - 12\omega_{19}\omega_7^2\omega_{11} + 61v_3^2\omega_{19}\omega_7^2\omega_{11} + 24cs^2\omega_7^2\omega_{11}^2 + 84v_3^2\omega_{19}^2\omega_{11} - 36cs^2\omega_{19}^2\omega_7^2 - 33cs^2\omega_{19}\omega_7^2\omega_{11}^2 + 72\omega_{19}^2\omega_7\omega_{11} - 72v_3^2\omega_{19}\omega_7\omega_{11} - 48v_3^2\omega_7\omega_{11}^2 - 60cs^2\omega_{19}\omega_{11}^2 + 72cs^2\omega_{19}^2\omega_7 + 12cs^2\omega_{19}\omega_7^2\omega_{11} + 168v_3^2\omega_{19}\omega_7\omega_{11}^2 + 24\omega_7\omega_{11}^2 - 36\omega_{19}\omega_{11} - 120cs^2\omega_{19}^2\omega_7\omega_{11} - 5v_3^2\omega_{19}\omega_7^2\omega_{11}^2 + 21\omega_{19}\omega_7^2\omega_{11}^2)\frac{\rho v_2 v_3}{12\omega_{19}^2\omega_7^2\omega_{11}^2}$

$C^{(2),\text{CLBM1}}_{D_z^4 v_3} = (-4 - 5v_3^2\omega_{11} + 6cs^2 - 3cs^2\omega_{11} + 2\omega_{11} + 10v_3^2)\frac{\rho v_2 v_3}{12\omega_{11}}$

$C^{(2),\text{CLBM2}}_{D_z^4 v_3} = (-4 + 6cs^2 - 3\omega_{11}cs^2 - 5v_3^2\omega_{11} + 2\omega_{11} + 10v_3^2)\frac{\rho v_2 v_3}{12\omega_{11}}$

$C^{(2),\text{CuLBM1}}_{D_z^4 v_3} = (-4 + 2\omega_6 + 6cs^2 - 5\omega_6 v_3^2 + 10v_3^2 - 3cs^2\omega_6)\frac{\rho v_2 v_3}{12\omega_6}$

$C^{(2),\text{CuLBM2}}_{D_z^4 v_3} = (6cs^2\omega_1 - 15v_3^2\omega_1\omega_2 + 6\omega_1\omega_2 + 10v_3^2\omega_1 + 12cs^2\omega_2 - 4\omega_1 + 20v_3^2\omega_2 - 9cs^2\omega_1\omega_2 - 8\omega_2)\frac{\rho v_2 v_3}{36\omega_1\omega_2}$

3.4 Conservation of momentum: ρv_3

$v_3\frac{\partial\rho}{\partial t} + \rho\frac{\partial v_3}{\partial t} + v_1 v_3\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_1} + \rho v_3\frac{\delta_l}{\delta_t}\frac{\partial v_1}{\partial x_1} + \rho v_1\frac{\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_1} + v_2 v_3\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_2} + \rho v_3\frac{\delta_l}{\delta_t}\frac{\partial v_2}{\partial x_2} + \rho v_2\frac{\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_2} + C^{(3)}_{D_z\rho}\frac{\delta_l}{\delta_t}\frac{\partial\rho}{\partial x_3} + 2\rho v_3\frac{\delta_l}{\delta_t}\frac{\partial v_3}{\partial x_3} + C^{(3)}_{D_x\rho,D_z v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_3}{\partial x_1} + C^{(3)}_{D_x\rho,D_z v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_1}\frac{\partial v_1}{\partial x_3} + C^{(3)}_{D_x v_1,D_z v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial v_1}{\partial x_1}\frac{\partial v_1}{\partial x_3} + C^{(3)}_{D_y\rho,D_y v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_2} + C^{(3)}_{D_y\rho,D_z v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_3} + C^{(3)}_{D_y v_2,D_z v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial v_2}{\partial x_2}\frac{\partial v_2}{\partial x_3} + C^{(3)}_{D_z\rho,D_x v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_1}{\partial x_1} + C^{(3)}_{D_z\rho,D_y v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_2}{\partial x_2} + C^{(3)}_{D_z\rho,D_z v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial\rho}{\partial x_3}\frac{\partial v_3}{\partial x_3} + C^{(3)}_{D_z v_3,D_z v_3}\frac{\delta_l^2}{\delta_t}\left(\frac{\partial v_3}{\partial x_3}\right)^2 + C^{(3)}_{D_x^2 v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_3}{\partial x_1^2} + C^{(3)}_{D_y^2 v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_3}{\partial x_2^2} + C^{(3)}_{D_x D_z\rho}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_1\partial x_3} + C^{(3)}_{D_x D_z v_1}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_1}{\partial x_1\partial x_3} + C^{(3)}_{D_y D_z\rho}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_2\partial x_3} + C^{(3)}_{D_y D_z v_2}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_2}{\partial x_2\partial x_3} + C^{(3)}_{D_z^2\rho}\frac{\delta_l^2}{\delta_t}\frac{\partial^2\rho}{\partial x_3^2} + C^{(3)}_{D_z^2 v_3}\frac{\delta_l^2}{\delta_t}\frac{\partial^2 v_3}{\partial x_3^2} + C^{(3)}_{D_x^3\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^3} + C^{(3)}_{D_x^3 v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^3} + C^{(3)}_{D_x^3 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1^3} + C^{(3)}_{D_x^2 D_y v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1^2\partial x_2} + C^{(3)}_{D_x^2 D_y v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_2} + C^{(3)}_{D_x D_y^2 v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2^2} + C^{(3)}_{D_x D_y^2 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_2^2} + C^{(3)}_{D_y^3\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2^3} + C^{(3)}_{D_y^3 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2^3} + C^{(3)}_{D_y^3 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_2^3} + C^{(3)}_{D_x^2 D_z\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1^2\partial x_3} + C^{(3)}_{D_x^2 D_z v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1^2\partial x_3} + C^{(3)}_{D_x^2 D_z v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1^2\partial x_3} + C^{(3)}_{D_x D_y D_z\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_2\partial x_3} + C^{(3)}_{D_x D_y D_z v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_2\partial x_3} + C^{(3)}_{D_x D_y D_z v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_1\partial x_2\partial x_3} + C^{(3)}_{D_y^2 D_z\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2^2\partial x_3} + C^{(3)}_{D_y^2 D_z v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2^2\partial x_3} + C^{(3)}_{D_y^2 D_z v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_2^2\partial x_3} + C^{(3)}_{D_x D_z^2\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_1\partial x_3^2} + C^{(3)}_{D_x D_z^2 v_1}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_1}{\partial x_1\partial x_3^2} + C^{(3)}_{D_x D_z^2 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_1\partial x_3^2} + C^{(3)}_{D_y D_z^2\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_2\partial x_3^2} + C^{(3)}_{D_y D_z^2 v_2}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_2}{\partial x_2\partial x_3^2} + C^{(3)}_{D_y D_z^2 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_2\partial x_3^2} + C^{(3)}_{D_z^3\rho}\frac{\delta_l^3}{\delta_t}\frac{\partial^3\rho}{\partial x_3^3} + C^{(3)}_{D_z^3 v_3}\frac{\delta_l^3}{\delta_t}\frac{\partial^3 v_3}{\partial x_3^3} + C^{(3)}_{D_x^4\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^4} + C^{(3)}_{D_x^4 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^4} + C^{(3)}_{D_x^4 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1^4} + C^{(3)}_{D_x^3 D_y\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^3\partial x_2} + C^{(3)}_{D_x^3 D_y v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^3\partial x_2} + C^{(3)}_{D_x^3 D_y v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^3\partial x_2} + C^{(3)}_{D_x^3 D_y v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1^3\partial x_2} + C^{(3)}_{D_x^2 D_y^2\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2} + C^{(3)}_{D_x^2 D_y^2 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2} + C^{(3)}_{D_x^2 D_y^2 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2} + C^{(3)}_{D_x^2 D_y^2 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1^2\partial x_2^2} + C^{(3)}_{D_x D_y^3\rho}\frac{\delta_l^4}{\delta_t}\frac{\partial^4\rho}{\partial x_1\partial x_2^3} + C^{(3)}_{D_x D_y^3 v_1}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_1}{\partial x_1\partial x_2^3} + C^{(3)}_{D_x D_y^3 v_2}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_2}{\partial x_1\partial x_2^3} + C^{(3)}_{D_x D_y^3 v_3}\frac{\delta_l^4}{\delta_t}\frac{\partial^4 v_3}{\partial x_1\partial x_2^3} +$

$$C^{(3)}_{D_y^4\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_2^4} + C^{(3)}_{D_y^4 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^4} + C^{(3)}_{D_y^4 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2^4} + C^{(3)}_{D_x^3 D_z\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_1^3 \partial x_3} + C^{(3)}_{D_x^3 D_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^3 \partial x_3} + C^{(3)}_{D_x^3 D_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^3 \partial x_3} +$$

$$C^{(3)}_{D_x^2 D_y D_z\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_1^2 \partial x_2 \partial x_3} + C^{(3)}_{D_x^2 D_y D_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_2 \partial x_3} + C^{(3)}_{D_x^2 D_y D_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1^2 \partial x_2 \partial x_3} + C^{(3)}_{D_x^2 D_y D_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3} +$$

$$C^{(3)}_{D_x D_y^2 D_z\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_1 \partial x_2^2 \partial x_3} + C^{(3)}_{D_x D_y^2 D_z v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3} + C^{(3)}_{D_x D_y^2 D_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1 \partial x_2^2 \partial x_3} + C^{(3)}_{D_x D_y^2 D_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3} +$$

$$C^{(3)}_{D_y^3 D_z\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_2^3 \partial x_3} + C^{(3)}_{D_y^3 D_z v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^3 \partial x_3} + C^{(3)}_{D_y^3 D_z v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2^3 \partial x_3} + C^{(3)}_{D_x^2 D_z^2\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_1^2 \partial x_3^2} + C^{(3)}_{D_x^2 D_z^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2} +$$

$$C^{(3)}_{D_x^2 D_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2} + C^{(3)}_{D_x D_y D_z^2\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_1 \partial x_2 \partial x_3^2} + C^{(3)}_{D_x D_y D_z^2 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2} + C^{(3)}_{D_x D_y D_z^2 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2} +$$

$$C^{(3)}_{D_x D_y D_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2} + C^{(3)}_{D_y^2 D_z^2\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_2^2 \partial x_3^2} + C^{(3)}_{D_y^2 D_z^2 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2} + C^{(3)}_{D_y^2 D_z^2 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2} + C^{(3)}_{D_x D_z^3\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_1 \partial x_3^3} +$$

$$C^{(3)}_{D_x D_z^3 v_1} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_1}{\partial x_1 \partial x_3^3} + C^{(3)}_{D_x D_z^3 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_1 \partial x_3^3} + C^{(3)}_{D_y D_z^3\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_2 \partial x_3^3} + C^{(3)}_{D_y D_z^3 v_2} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_2}{\partial x_2 \partial x_3^3} + C^{(3)}_{D_y D_z^3 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_2 \partial x_3^3} +$$

$$C^{(3)}_{D_z^4\rho} \frac{\delta_l^4}{\delta_t} \frac{\partial^4\rho}{\partial x_3^4} + C^{(3)}_{D_z^4 v_3} \frac{\delta_l^4}{\delta_t} \frac{\partial^4 v_3}{\partial x_3^4} = 0,$$

where:

coefficient $C^{(3)}_{D_z\rho}$ at $\frac{\partial\rho}{\partial x_3}$:

$$C^{(3),\text{SRT}}_{D_z\rho} = (cs^2 + v_3^2)$$

$$C^{(3),\text{MRT1}}_{D_z\rho} = (cs^2 + v_3^2)$$

$$C^{(3),\text{MRT2}}_{D_z\rho} = (cs^2 + v_3^2)$$

$$C^{(3),\text{CLBM1}}_{D_z\rho} = (v_3^2 + cs^2)$$

$$C^{(3),\text{CLBM2}}_{D_z\rho} = (cs^2 + v_3^2)$$

$$C^{(3),\text{CuLBM1}}_{D_z\rho} = (cs^2 + v_3^2)$$

$$C^{(3),\text{CuLBM2}}_{D_z\rho} = (v_3^2 + cs^2)$$

coefficient $C^{(3)}_{D_x\rho,D_x v_3}$ at $\frac{\partial\rho}{\partial x_1} \frac{\partial v_3}{\partial x_1}$:

$$C^{(3),\text{SRT}}_{D_x\rho,D_x v_3} = (-2 + \omega)\frac{cs^2}{2\omega}$$

$$C^{(3),\text{MRT1}}_{D_x\rho,D_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$$

$$C^{(3),\text{MRT2}}_{D_x\rho,D_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$$

$$C^{(3),\text{CLBM1}}_{D_x\rho,D_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$$

$$C^{(3),\text{CLBM2}}_{D_x\rho,D_x v_3} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$$

$$C^{(3),\text{CuLBM1}}_{D_x\rho,D_x v_3} = (-2 + \omega_2)\frac{cs^2}{2\omega_2}$$

$$C^{(3),\text{CuLBM2}}_{D_x\rho,D_x v_3} = (-2 + \omega_1)\frac{cs^2}{2\omega_1}$$

coefficient $C^{(3)}_{D_x\rho,D_z v_1}$ at $\frac{\partial\rho}{\partial x_1} \frac{\partial v_1}{\partial x_3}$:

$$C^{(3),\text{SRT}}_{D_x\rho,D_z v_1} = (-2 + \omega)\frac{cs^2}{2\omega}$$

$$C^{(3),\text{MRT1}}_{D_x\rho,D_z v_1} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$$

$$C^{(3),\text{MRT2}}_{D_x\rho,D_z v_1} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$$

$C_{\mathrm{D}_x\rho,\mathrm{D}_z v_1}^{(3),\mathrm{CLBM1}} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C_{\mathrm{D}_x\rho,\mathrm{D}_z v_1}^{(3),\mathrm{CLBM2}} = (-2 + \omega_6)\frac{cs^2}{2\omega_6}$

$C_{\mathrm{D}_x\rho,\mathrm{D}_z v_1}^{(3),\mathrm{CuLBM1}} = (-2 + \omega_2)\frac{cs^2}{2\omega_2}$

$C_{\mathrm{D}_x\rho,\mathrm{D}_z v_1}^{(3),\mathrm{CuLBM2}} = (6cs^2\omega_1 - 6v_1^2\omega_2 - 12cs^2\omega_2 - 2\omega_1 + 3cs^2\omega_1\omega_2 + 6v_1^2\omega_1 + 2\omega_2)\frac{1}{6\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3)}$ at $\frac{\partial v_1}{\partial x_1}\frac{\partial v_1}{\partial x_3}$:

$C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3),\mathrm{MRT1}} = 0$

$C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3),\mathrm{MRT2}} = 0$

$C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x v_1,\mathrm{D}_z v_1}^{(3),\mathrm{CuLBM2}} = (\omega_1 - \omega_2)\frac{2\rho v_1}{\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3)}$ at $\frac{\partial\rho}{\partial x_2}\frac{\partial v_3}{\partial x_2}$:

$C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3),\mathrm{SRT}} = (-2 + \omega)\frac{cs^2}{2\omega}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3),\mathrm{MRT1}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3),\mathrm{MRT2}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3),\mathrm{CLBM1}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3),\mathrm{CLBM2}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3),\mathrm{CuLBM1}} = (-2 + \omega_3)\frac{cs^2}{2\omega_3}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_y v_3}^{(3),\mathrm{CuLBM2}} = (-2 + \omega_1)\frac{cs^2}{2\omega_1}$

coefficient $C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3)}$ at $\frac{\partial\rho}{\partial x_2}\frac{\partial v_2}{\partial x_3}$:

$C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3),\mathrm{SRT}} = (-2 + \omega)\frac{cs^2}{2\omega}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3),\mathrm{MRT1}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3),\mathrm{MRT2}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3),\mathrm{CLBM1}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3),\mathrm{CLBM2}} = (-2 + \omega_7)\frac{cs^2}{2\omega_7}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3),\mathrm{CuLBM1}} = (-2 + \omega_3)\frac{cs^2}{2\omega_3}$

$C_{\mathrm{D}_y\rho,\mathrm{D}_z v_2}^{(3),\mathrm{CuLBM2}} = (6cs^2\omega_1 + 6v_2^2\omega_1 - 6v_2^2\omega_2 - 12cs^2\omega_2 - 2\omega_1 + 3cs^2\omega_1\omega_2 + 2\omega_2)\frac{1}{6\omega_1\omega_2}$

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coefficient $C^{(3)}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2}$ **at** $\frac{\partial v_2}{\partial x_2} \frac{\partial v_2}{\partial x_3}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2} = 0$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2} = 0$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_y v_2, \mathrm{D}_z v_2} = (\omega_1 - \omega_2)\frac{2\rho v_2}{\omega_1 \omega_2}$

coefficient $C^{(3)}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1}$ **at** $\frac{\partial \rho}{\partial x_3} \frac{\partial v_1}{\partial x_1}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1} = 0$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1} = 0$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_x v_1} = (cs^2 \omega_1 - 3v_1^2 \omega_2 - cs^2 \omega_2 - \omega_1 + 3v_1^2 \omega_1 + \omega_2)\frac{1}{3\omega_1 \omega_2}$

coefficient $C^{(3)}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2}$ **at** $\frac{\partial \rho}{\partial x_3} \frac{\partial v_2}{\partial x_2}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2} = 0$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2} = 0$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_z \rho, \mathrm{D}_y v_2} = (cs^2 \omega_1 + 3v_2^2 \omega_1 - 3v_2^2 \omega_2 - cs^2 \omega_2 - \omega_1 + \omega_2)\frac{1}{3\omega_1 \omega_2}$

coefficient $C^{(3)}_{\mathrm{D}_z \rho, \mathrm{D}_z v_3}$ **at** $\frac{\partial \rho}{\partial x_3} \frac{\partial v_3}{\partial x_3}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_3} = (-2 + 4cs^2 - 2cs^2 \omega - 3v_3^2 \omega + 6v_3^2 + \omega)\frac{1}{\omega}$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_3} = (-2 - 3v_3^2 \omega_{11} + 4cs^2 + \omega_{11} + 6v_3^2 - 2cs^2 \omega_{11})\frac{1}{\omega_{11}}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_3} = (-2 - 3v_3^2 \omega_{11} + 4cs^2 - 2\omega_{11}cs^2 + \omega_{11} + 6v_3^2)\frac{1}{\omega_{11}}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_z \rho, \mathrm{D}_z v_3} = (-2 - 3v_3^2 \omega_{11} - 2cs^2 \omega_{11} + \omega_{11} + 6v_3^2 + 4cs^2)\frac{1}{\omega_{11}}$

$$C^{(3),\text{CLBM2}}_{\text{D}_z\rho,\text{D}_z v_3} = (-2 - 3v_3^2\omega_{11} - 2cs^2\omega_{11} + 4cs^2 + \omega_{11} + 6v_3^2)\frac{1}{\omega_{11}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_z\rho,\text{D}_z v_3} = (-2 + 4cs^2 + \omega_6 - 2\omega_6 cs^2 - 3\omega_6 v_3^2 + 6v_3^2)\frac{1}{\omega_6}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_z\rho,\text{D}_z v_3} = (4cs^2\omega_1 - 9v_3^2\omega_1\omega_2 + 3\omega_1\omega_2 + 6v_3^2\omega_1 + 8cs^2\omega_2 - 2\omega_1 - 6cs^2\omega_1\omega_2 + 12v_3^2\omega_2 - 4\omega_2)\frac{1}{3\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_z v_3,\text{D}_z v_3}$ **at** $\left(\frac{\partial v_3}{\partial x_3}\right)^2$**:**

$$C^{(3),\text{SRT}}_{\text{D}_z v_3,\text{D}_z v_3} = (2 - \omega)\frac{3\rho v_3}{\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}_z v_3,\text{D}_z v_3} = (2 - \omega_{11})\frac{3\rho v_3}{\omega_{11}}$$

$$C^{(3),\text{MRT2}}_{\text{D}_z v_3,\text{D}_z v_3} = C^{(3),\text{MRT1}}_{\text{D}_z v_3,\text{D}_z v_3}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_z v_3,\text{D}_z v_3} = C^{(3),\text{MRT1}}_{\text{D}_z v_3,\text{D}_z v_3}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_z v_3,\text{D}_z v_3} = C^{(3),\text{MRT1}}_{\text{D}_z v_3,\text{D}_z v_3}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_z v_3,\text{D}_z v_3} = (2 - \omega_6)\frac{3\rho v_3}{\omega_6}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_z v_3,\text{D}_z v_3} = (-3\omega_1\omega_2 + 2\omega_1 + 4\omega_2)\frac{\rho v_3}{\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_x^2 v_3}$ **at** $\frac{\partial^2 v_3}{\partial x_1^2}$**:**

$$C^{(3),\text{SRT}}_{\text{D}_x^2 v_3} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}_x^2 v_3} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$$

$$C^{(3),\text{MRT2}}_{\text{D}_x^2 v_3} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x^2 v_3} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x^2 v_3} = (-2 + \omega_6)\frac{\rho cs^2}{2\omega_6}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_x^2 v_3} = (-2 + \omega_2)\frac{\rho cs^2}{2\omega_2}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_x^2 v_3} = (-2 + \omega_1)\frac{\rho cs^2}{2\omega_1}$$

coefficient $C^{(3)}_{\text{D}_y^2 v_3}$ **at** $\frac{\partial^2 v_3}{\partial x_2^2}$**:**

$$C^{(3),\text{SRT}}_{\text{D}_y^2 v_3} = (-2 + \omega)\frac{\rho cs^2}{2\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}_y^2 v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(3),\text{MRT2}}_{\text{D}_y^2 v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_y^2 v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_y^2 v_3} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_y^2 v_3} = (-2 + \omega_3)\frac{\rho cs^2}{2\omega_3}$$

$C_{\mathrm{D}_y^2 v_3}^{(3),\mathrm{CuLBM2}} = (-2 + \omega_1) \frac{\rho cs^2}{2\omega_1}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3)}$ at $\frac{\partial^2 \rho}{\partial x_1 \partial x_3}$:

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3),\mathrm{MRT1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3),\mathrm{MRT2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM2}} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2) \frac{v_1}{3\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3)}$ at $\frac{\partial^2 v_1}{\partial x_1 \partial x_3}$:

$C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3),\mathrm{SRT}} = (-2 + \omega) \frac{\rho cs^2}{2\omega}$

$C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3),\mathrm{MRT1}} = (-2 + \omega_6) \frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3),\mathrm{MRT2}} = (-2 + \omega_6) \frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3),\mathrm{CLBM1}} = (-2 + \omega_6) \frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3),\mathrm{CLBM2}} = (-2 + \omega_6) \frac{\rho cs^2}{2\omega_6}$

$C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3),\mathrm{CuLBM1}} = (-2 + \omega_2) \frac{\rho cs^2}{2\omega_2}$

$C_{\mathrm{D}_x \mathrm{D}_z v_1}^{(3),\mathrm{CuLBM2}} = (2cs^2\omega_1 - 6v_1^2\omega_2 - 8cs^2\omega_2 - 2\omega_1 + 3cs^2\omega_1\omega_2 + 6v_1^2\omega_1 + 2\omega_2) \frac{\rho}{6\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3)}$ at $\frac{\partial^2 \rho}{\partial x_2 \partial x_3}$:

$C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{MRT1}} = 0$

$C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{MRT2}} = 0$

$C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM2}} = (3cs^2\omega_1 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2) \frac{v_2}{3\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_y \mathrm{D}_z v_2}^{(3)}$ at $\frac{\partial^2 v_2}{\partial x_2 \partial x_3}$:

$C_{\mathrm{D}_y \mathrm{D}_z v_2}^{(3),\mathrm{SRT}} = (-2 + \omega) \frac{\rho cs^2}{2\omega}$

$C_{\mathrm{D}_y \mathrm{D}_z v_2}^{(3),\mathrm{MRT1}} = (-2 + \omega_7) \frac{\rho cs^2}{2\omega_7}$

$$C^{(3),\text{MRT2}}_{\text{D}_y\text{D}_z v_2} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_y\text{D}_z v_2} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_y\text{D}_z v_2} = (-2 + \omega_7)\frac{\rho cs^2}{2\omega_7}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_y\text{D}_z v_2} = (-2 + \omega_3)\frac{\rho cs^2}{2\omega_3}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_y\text{D}_z v_2} = (2cs^2\omega_1 + 6v_2^2\omega_1 - 6v_2^2\omega_2 - 8cs^2\omega_2 - 2\omega_1 + 3cs^2\omega_1\omega_2 + 2\omega_2)\frac{\rho}{6\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_z^2 \rho}$ at $\frac{\partial^2 \rho}{\partial x_3^2}$:

$$C^{(3),\text{SRT}}_{\text{D}_z^2 \rho} = (-2 + 6cs^2 - 3cs^2\omega - v_3^2\omega + 2v_3^2 + \omega)\frac{v_3}{2\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}_z^2 \rho} = (-2 - v_3^2\omega_{11} + 6cs^2 + \omega_{11} + 2v_3^2 - 3cs^2\omega_{11})\frac{v_3}{2\omega_{11}}$$

$$C^{(3),\text{MRT2}}_{\text{D}_z^2 \rho} = (-2 - v_3^2\omega_{11} + 6cs^2 - 3\omega_{11}cs^2 + \omega_{11} + 2v_3^2)\frac{v_3}{2\omega_{11}}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_z^2 \rho} = (-2 - v_3^2\omega_{11} - 3cs^2\omega_{11} + \omega_{11} + 2v_3^2 + 6cs^2)\frac{v_3}{2\omega_{11}}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_z^2 \rho} = (-2 - v_3^2\omega_{11} - 3cs^2\omega_{11} + 6cs^2 + \omega_{11} + 2v_3^2)\frac{v_3}{2\omega_{11}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_z^2 \rho} = (-2 + 6cs^2 + \omega_6 - 3\omega_6 cs^2 - \omega_6 v_3^2 + 2v_3^2)\frac{v_3}{2\omega_6}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_z^2 \rho} = (6cs^2\omega_1 - 3v_3^2\omega_1\omega_2 + 3\omega_1\omega_2 + 2v_3^2\omega_1 + 12cs^2\omega_2 - 2\omega_1 - 9cs^2\omega_1\omega_2 + 4v_3^2\omega_2 - 4\omega_2)\frac{v_3}{6\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_z^2 v_3}$ at $\frac{\partial^2 v_3}{\partial x_3^2}$:

$$C^{(3),\text{SRT}}_{\text{D}_z^2 v_3} = (-2 + 2cs^2 - cs^2\omega - 3v_3^2\omega + 6v_3^2 + \omega)\frac{\rho}{2\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}_z^2 v_3} = (-2 - 3v_3^2\omega_{11} + 2cs^2 + \omega_{11} + 6v_3^2 - cs^2\omega_{11})\frac{\rho}{2\omega_{11}}$$

$$C^{(3),\text{MRT2}}_{\text{D}_z^2 v_3} = (-2 - 3v_3^2\omega_{11} + 2cs^2 - \omega_{11}cs^2 + \omega_{11} + 6v_3^2)\frac{\rho}{2\omega_{11}}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_z^2 v_3} = (-2 - 3v_3^2\omega_{11} - cs^2\omega_{11} + \omega_{11} + 6v_3^2 + 2cs^2)\frac{\rho}{2\omega_{11}}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_z^2 v_3} = (-2 - 3v_3^2\omega_{11} - cs^2\omega_{11} + 2cs^2 + \omega_{11} + 6v_3^2)\frac{\rho}{2\omega_{11}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_z^2 v_3} = (-2 + 2cs^2 + \omega_6 - \omega_6 cs^2 - 3\omega_6 v_3^2 + 6v_3^2)\frac{\rho}{2\omega_6}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_z^2 v_3} = (2cs^2\omega_1 - 9v_3^2\omega_1\omega_2 + 3\omega_1\omega_2 + 6v_3^2\omega_1 + 4cs^2\omega_2 - 2\omega_1 - 3cs^2\omega_1\omega_2 + 12v_3^2\omega_2 - 4\omega_2)\frac{\rho}{6\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_x^3 \rho}$ at $\frac{\partial^3 \rho}{\partial x_1^3}$:

$$C^{(3),\text{SRT}}_{\text{D}_x^3 \rho} = (-1 + 3cs^2 + v_1^2)\frac{v_1 v_3}{12}$$

$$C^{(3),\text{MRT1}}_{\text{D}_x^3 \rho} = (-6\omega_9\omega_6 - 36\omega_9 cs^2 + 12\omega_9 - 6v_1^2\omega_6\omega_{13} + 12v_1^2\omega_{13} + 6v_1^2\omega_9\omega_6 + 18\omega_9\omega_6 cs^2 + v_1^2\omega_9\omega_6\omega_{13} + 6\omega_6\omega_{13} - 12\omega_{13} - 12v_1^2\omega_9 - 18\omega_6\omega_{13}cs^2 + 36\omega_{13}cs^2 + 3\omega_9\omega_6\omega_{13}cs^2 - \omega_9\omega_6\omega_{13})\frac{v_1 v_3}{12\omega_9\omega_6\omega_{13}}$$

$$C^{(3),\text{MRT2}}_{\text{D}_x^3 \rho} = (-6\omega_9\omega_6 + 12\omega_9 - 6v_1^2\omega_6\omega_{13} + 3\omega_9\omega_6\omega_{13}cs^2 + 12v_1^2\omega_{13} + 36\omega_{13}cs^2 + 6v_1^2\omega_9\omega_6 + v_1^2\omega_9\omega_6\omega_{13} + 6\omega_6\omega_{13} - 12\omega_{13} - 18\omega_6\omega_{13}cs^2 + 18\omega_9\omega_6 cs^2 - 12v_1^2\omega_9 - \omega_9\omega_6\omega_{13} - 36\omega_9 cs^2)\frac{v_1 v_3}{12\omega_9\omega_6\omega_{13}}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x^3 \rho} = (-1 + v_1^2 + 3cs^2)\frac{v_1 v_3}{12}$$

$$C_{\mathrm{D}_x^3 \rho}^{(3),\mathrm{CLBM2}} = (-1 + v_1^2 + 3cs^2)\frac{v_1 v_3}{12}$$

$$C_{\mathrm{D}_x^3 \rho}^{(3),\mathrm{CuLBM1}} = (-1 + 3cs^2 + v_1^2)\frac{v_1 v_3}{12}$$

$$C_{\mathrm{D}_x^3 \rho}^{(3),\mathrm{CuLBM2}} = (-1 + v_1^2 + 3cs^2)\frac{v_1 v_3}{12}$$

coefficient $C_{\mathrm{D}_x^3 v_1}^{(3)}$ **at** $\frac{\partial^3 v_1}{\partial x_1^3}$:

$$C_{\mathrm{D}_x^3 v_1}^{(3),\mathrm{SRT}} = (-1 + cs^2 + 3v_1^2)\frac{\rho v_3}{12}$$

$$C_{\mathrm{D}_x^3 v_1}^{(3),\mathrm{MRT1}} = (-6\omega_9\omega_6 - 12\omega_9 cs^2 + 12\omega_9 - 18v_1^2\omega_6\omega_{13} + 36v_1^2\omega_{13} + 18v_1^2\omega_9\omega_6 + 6\omega_9\omega_6 cs^2 + 3v_1^2\omega_9\omega_6\omega_{13} + 6\omega_6\omega_{13} - 12\omega_{13} - 36v_1^2\omega_9 - 6\omega_6\omega_{13}cs^2 + 12\omega_{13}cs^2 + \omega_9\omega_6\omega_{13}cs^2 - \omega_9\omega_6\omega_{13})\frac{\rho v_3}{12\omega_9\omega_6\omega_{13}}$$

$$C_{\mathrm{D}_x^3 v_1}^{(3),\mathrm{MRT2}} = (-6\omega_9\omega_6 + 12\omega_9 - 18v_1^2\omega_6\omega_{13} + \omega_9\omega_6\omega_{13}cs^2 + 36v_1^2\omega_{13} + 12\omega_{13}cs^2 + 18v_1^2\omega_9\omega_6 + 3v_1^2\omega_9\omega_6\omega_{13} + 6\omega_6\omega_{13} - 12\omega_{13} - 6\omega_6\omega_{13}cs^2 + 6\omega_9\omega_6 cs^2 - 36v_1^2\omega_9 - \omega_9\omega_6\omega_{13} - 12\omega_9 cs^2)\frac{\rho v_3}{12\omega_9\omega_6\omega_{13}}$$

$$C_{\mathrm{D}_x^3 v_1}^{(3),\mathrm{CLBM1}} = (-1 + 3v_1^2 + cs^2)\frac{\rho v_3}{12}$$

$$C_{\mathrm{D}_x^3 v_1}^{(3),\mathrm{CLBM2}} = (-1 + 3v_1^2 + cs^2)\frac{\rho v_3}{12}$$

$$C_{\mathrm{D}_x^3 v_1}^{(3),\mathrm{CuLBM1}} = (-1 + cs^2 + 3v_1^2)\frac{\rho v_3}{12}$$

$$C_{\mathrm{D}_x^3 v_1}^{(3),\mathrm{CuLBM2}} = (-1 + 3v_1^2 + cs^2)\frac{\rho v_3}{12}$$

coefficient $C_{\mathrm{D}_x^3 v_3}^{(3)}$ **at** $\frac{\partial^3 v_3}{\partial x_1^3}$:

$$C_{\mathrm{D}_x^3 v_3}^{(3),\mathrm{SRT}} = (6 - 3cs^2\omega^2 + 6v_1^2\omega + \omega^2 - 18cs^2 + 18cs^2\omega - v_1^2\omega^2 - 6v_1^2 - 6\omega)\frac{\rho v_1}{6\omega^2}$$

$$C_{\mathrm{D}_x^3 v_3}^{(3),\mathrm{MRT1}} =$$
$$(3\omega_6^2 cs^2 + 3v_1^2\omega_6\omega_{13} + 6\omega_6 - 3\omega_6^2\omega_{13}cs^2 - 3\omega_6\omega_{13} + 3v_1^2\omega_6^2 + 15\omega_6\omega_{13}cs^2 + \omega_6^2\omega_{13} - 12\omega_{13}cs^2 - 6\omega_6 cs^2 - v_1^2\omega_6^2\omega_{13} - 3\omega_6^2 - 6v_1^2\omega_6)\frac{\rho v_1}{6\omega_6^2\omega_{13}}$$

$$C_{\mathrm{D}_x^3 v_3}^{(3),\mathrm{MRT2}} =$$
$$(-6\omega_6 cs^2 + 3v_1^2\omega_6\omega_{13} + 6\omega_6 - 12\omega_{13}cs^2 - 3\omega_6\omega_{13} + 15\omega_6\omega_{13}cs^2 + 3v_1^2\omega_6^2 + \omega_6^2\omega_{13} - 3\omega_6^2\omega_{13}cs^2 - v_1^2\omega_6^2\omega_{13} + 3\omega_6^2 cs^2 - 3\omega_6^2 - 6v_1^2\omega_6)\frac{\rho v_1}{6\omega_6^2\omega_{13}}$$

$$C_{\mathrm{D}_x^3 v_3}^{(3),\mathrm{CLBM1}} = (6 - v_1^2\omega_6\omega_{13} - 3\omega_6 + 3v_1^2\omega_{13} + \omega_6\omega_{13} - 3\omega_{13} - 6v_1^2 + 9\omega_6 cs^2 - 18cs^2 - 3\omega_6 cs^2\omega_{13} + 9cs^2\omega_{13} + 3v_1^2\omega_6)\frac{\rho v_1}{6\omega_6\omega_{13}}$$

$$C_{\mathrm{D}_x^3 v_3}^{(3),\mathrm{CLBM2}} = (6 - v_1^2\omega_6\omega_{13} - 3\omega_6 + 3v_1^2\omega_{13} + \omega_6\omega_{13} - 3\omega_{13} - 6v_1^2 + 9\omega_{13}cs^2 - 18cs^2 - 3\omega_6\omega_{13}cs^2 + 9\omega_6 cs^2 + 3v_1^2\omega_6)\frac{\rho v_1}{6\omega_6\omega_{13}}$$

$$C_{\mathrm{D}_x^3 v_3}^{(3),\mathrm{CuLBM1}} = (6 - v_1^2\omega_{12}\omega_2 - 3\omega_{12}cs^2\omega_2 - 18cs^2 - 3\omega_{12} + 3v_1^2\omega_2 + \omega_{12}\omega_2 + 9cs^2\omega_2 + 9\omega_{12}cs^2 - 6v_1^2 + 3v_1^2\omega_{12} - 3\omega_2)\frac{\rho v_1}{6\omega_{12}\omega_2}$$

$$C_{\mathrm{D}_x^3 v_3}^{(3),\mathrm{CuLBM2}} = (-6\omega_3\omega_4 - 3\omega_4\omega_1 - 6v_1^2\omega_3 + 3v_1^2\omega_3\omega_1 + 6\omega_3 + 6v_1^2\omega_3\omega_4 - 3\omega_3\omega_1 - 18cs^2\omega_4 + 2\omega_3\omega_4\omega_1 + 3v_1^2\omega_4\omega_1 - 6cs^2\omega_3\omega_4\omega_1 - 6v_1^2\omega_4 + 18cs^2\omega_3\omega_4 + 6\omega_4 + 9cs^2\omega_4\omega_1 - 18cs^2\omega_3 - 2v_1^2\omega_3\omega_4\omega_1 + 9cs^2\omega_3\omega_1)\frac{\rho v_1}{12\omega_3\omega_4\omega_1}$$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_y v_2}^{(3)}$ **at** $\frac{\partial^3 v_2}{\partial x_1^2 \partial x_2}$:

$$C_{\mathrm{D}_x^2 \mathrm{D}_y v_2}^{(3),\mathrm{SRT}} = \frac{-\rho v_3 cs^2}{6}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_y v_2}^{(3),\mathrm{MRT1}} = (-6\omega_6\omega_8 - \omega_6\omega_7\omega_8\omega_5 + 6\omega_7\omega_5 - 6\omega_6\omega_7\omega_5 - 6\omega_7\omega_8 + 6\omega_6\omega_5 + 6\omega_6\omega_7\omega_8)\frac{\rho v_3 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_y v_2}^{(3),\mathrm{MRT2}} = (-6\omega_6\omega_8 - \omega_6\omega_7\omega_8\omega_5 + 6\omega_7\omega_5 - 6\omega_6\omega_7\omega_5 - 6\omega_7\omega_8 + 6\omega_6\omega_5 + 6\omega_6\omega_7\omega_8)\frac{\rho v_3 cs^2}{6\omega_6\omega_7\omega_8\omega_5}$$

$$C_{\mathrm{D}_x^2 \mathrm{D}_y v_2}^{(3),\mathrm{CLBM1}} = \frac{-\rho cs^2 v_3}{6}$$

$C^{(3),\text{CLBM2}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{CuLBM1}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{CuLBM2}}_{\text{D}^2_x \text{D}_y v_2} = \frac{-\rho cs^2 v_3}{6}$

coefficient $C^{(3)}_{\text{D}^2_x \text{D}_y v_3}$ **at** $\frac{\partial^3 v_3}{\partial x_1^2 \partial x_2}$:

$C^{(3),\text{SRT}}_{\text{D}^2_x \text{D}_y v_3} = 0$

$C^{(3),\text{MRT1}}_{\text{D}^2_x \text{D}_y v_3} = (-\omega_6 \omega_8 - \omega_7 \omega_8 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8 - \omega_6^2 \omega_7 + \omega_6^2) \frac{\rho v_2 cs^2}{\omega_6^2 \omega_7 \omega_8}$

$C^{(3),\text{MRT2}}_{\text{D}^2_x \text{D}_y v_3} = (-\omega_6 \omega_8 - \omega_7 \omega_8 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8 - \omega_6^2 \omega_7 + \omega_6^2) \frac{\rho v_2 cs^2}{\omega_6^2 \omega_7 \omega_8}$

$C^{(3),\text{CLBM1}}_{\text{D}^2_x \text{D}_y v_3} = 0$

$C^{(3),\text{CLBM2}}_{\text{D}^2_x \text{D}_y v_3} = 0$

$C^{(3),\text{CuLBM1}}_{\text{D}^2_x \text{D}_y v_3} = 0$

$C^{(3),\text{CuLBM2}}_{\text{D}^2_x \text{D}_y v_3} = (-\omega_4 \omega_1 - 2\omega_3 - 2v_2^2 \omega_4 + \omega_3 \omega_1 - 6cs^2 \omega_4 + 2\omega_4 + 3cs^2 \omega_4 \omega_1 - v_2^2 \omega_3 \omega_1 + 6cs^2 \omega_3 - 3cs^2 \omega_3 \omega_1 + 2v_2^2 \omega_3 + v_2^2 \omega_4 \omega_1) \frac{\rho v_2}{4\omega_3 \omega_4 \omega_1}$

coefficient $C^{(3)}_{\text{D}_x \text{D}^2_y v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x_2^2}$:

$C^{(3),\text{SRT}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{MRT1}}_{\text{D}_x \text{D}^2_y v_1} = (-6\omega_6 \omega_8 - \omega_6 \omega_7 \omega_8 \omega_5 + 6\omega_7 \omega_5 - 6\omega_6 \omega_7 \omega_5 - 6\omega_7 \omega_8 + 6\omega_6 \omega_5 + 6\omega_6 \omega_7 \omega_8) \frac{\rho v_3 cs^2}{6\omega_6 \omega_7 \omega_8 \omega_5}$

$C^{(3),\text{MRT2}}_{\text{D}_x \text{D}^2_y v_1} = (-6\omega_6 \omega_8 - \omega_6 \omega_7 \omega_8 \omega_5 + 6\omega_7 \omega_5 - 6\omega_6 \omega_7 \omega_5 - 6\omega_7 \omega_8 + 6\omega_6 \omega_5 + 6\omega_6 \omega_7 \omega_8) \frac{\rho v_3 cs^2}{6\omega_6 \omega_7 \omega_8 \omega_5}$

$C^{(3),\text{CLBM1}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho cs^2 v_3}{6}$

$C^{(3),\text{CLBM2}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{CuLBM1}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{CuLBM2}}_{\text{D}_x \text{D}^2_y v_1} = \frac{-\rho cs^2 v_3}{6}$

coefficient $C^{(3)}_{\text{D}_x \text{D}^2_y v_3}$ **at** $\frac{\partial^3 v_3}{\partial x_1 \partial x_2^2}$:

$C^{(3),\text{SRT}}_{\text{D}_x \text{D}^2_y v_3} = 0$

$C^{(3),\text{MRT1}}_{\text{D}_x \text{D}^2_y v_3} = (-\omega_6 \omega_8 - \omega_6 \omega_7^2 - \omega_7 \omega_8 + \omega_7^2 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8) \frac{\rho v_1 cs^2}{\omega_6 \omega_7^2 \omega_8}$

$C^{(3),\text{MRT2}}_{\text{D}_x \text{D}^2_y v_3} = (-\omega_6 \omega_8 - \omega_6 \omega_7^2 - \omega_7 \omega_8 + \omega_7^2 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8) \frac{\rho v_1 cs^2}{\omega_6 \omega_7^2 \omega_8}$

$C^{(3),\text{CLBM1}}_{\text{D}_x \text{D}^2_y v_3} = 0$

$C^{(3),\text{CLBM2}}_{\text{D}_x \text{D}^2_y v_3} = 0$

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$C^{(3),\text{CuLBM1}}_{\text{D}_x\text{D}_y^2 v_3} = 0$

$C^{(3),\text{CuLBM2}}_{\text{D}_x\text{D}_y^2 v_3} = (-\omega_4\omega_1 + 2v_1^2\omega_3 - v_1^2\omega_3\omega_1 - 2\omega_3 + \omega_3\omega_1 - 6cs^2\omega_4 + v_1^2\omega_4\omega_1 - 2v_1^2\omega_4 + 2\omega_4 + 3cs^2\omega_4\omega_1 + 6cs^2\omega_3 - 3cs^2\omega_3\omega_1)\frac{\rho v_1}{4\omega_3\omega_4\omega_1}$

coefficient $C^{(3)}_{\text{D}_y^3\rho}$ at $\frac{\partial^3\rho}{\partial x_2^3}$:

$C^{(3),\text{SRT}}_{\text{D}_y^3\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2 v_3}{12}$

$C^{(3),\text{MRT1}}_{\text{D}_y^3\rho} = (3\omega_{16}\omega_{10}\omega_7 cs^2 - \omega_{16}\omega_{10}\omega_7 + 6\omega_{16}\omega_7 - 12\omega_{16} + 12\omega_{10} - 6\omega_{10}\omega_7 - 6v_2^2\omega_{16}\omega_7 + v_2^2\omega_{16}\omega_{10}\omega_7 + 18\omega_{10}\omega_7 cs^2 + 12v_2^2\omega_{16} - 12v_2^2\omega_{10} + 6v_2^2\omega_{10}\omega_7 - 36\omega_{10}cs^2 - 18\omega_{16}\omega_7 cs^2 + 36\omega_{16}cs^2)\frac{v_2 v_3}{12\omega_{16}\omega_{10}\omega_7}$

$C^{(3),\text{MRT2}}_{\text{D}_y^3\rho} = (36\omega_{16}cs^2 - 36\omega_{10}cs^2 - 18\omega_{16}\omega_7 cs^2 - \omega_{16}\omega_{10}\omega_7 + 18\omega_{10}\omega_7 cs^2 + 6\omega_{16}\omega_7 - 12\omega_{16} + 12\omega_{10} - 6\omega_{10}\omega_7 - 6v_2^2\omega_{16}\omega_7 + v_2^2\omega_{16}\omega_{10}\omega_7 + 12v_2^2\omega_{16} - 12v_2^2\omega_{10} + 6v_2^2\omega_{10}\omega_7 + 3\omega_{16}\omega_{10}\omega_7 cs^2)\frac{v_2 v_3}{12\omega_{16}\omega_{10}\omega_7}$

$C^{(3),\text{CLBM1}}_{\text{D}_y^3\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2 v_3}{12}$

$C^{(3),\text{CLBM2}}_{\text{D}_y^3\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2 v_3}{12}$

$C^{(3),\text{CuLBM1}}_{\text{D}_y^3\rho} = (-1 + 3cs^2 + v_2^2)\frac{v_2 v_3}{12}$

$C^{(3),\text{CuLBM2}}_{\text{D}_y^3\rho} = (-1 + v_2^2 + 3cs^2)\frac{v_2 v_3}{12}$

coefficient $C^{(3)}_{\text{D}_y^3 v_2}$ at $\frac{\partial^3 v_2}{\partial x_2^3}$:

$C^{(3),\text{SRT}}_{\text{D}_y^3 v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_3}{12}$

$C^{(3),\text{MRT1}}_{\text{D}_y^3 v_2} = (\omega_{16}\omega_{10}\omega_7 cs^2 - \omega_{16}\omega_{10}\omega_7 + 6\omega_{16}\omega_7 - 12\omega_{16} + 12\omega_{10} - 6\omega_{10}\omega_7 - 18v_2^2\omega_{16}\omega_7 + 3v_2^2\omega_{16}\omega_{10}\omega_7 + 6\omega_{10}\omega_7 cs^2 + 36v_2^2\omega_{16} - 36v_2^2\omega_{10} + 18v_2^2\omega_{10}\omega_7 - 12\omega_{10}cs^2 - 6\omega_{16}\omega_7 cs^2 + 12\omega_{16}cs^2)\frac{\rho v_3}{12\omega_{16}\omega_{10}\omega_7}$

$C^{(3),\text{MRT2}}_{\text{D}_y^3 v_2} = (12\omega_{16}cs^2 - 12\omega_{10}cs^2 - 6\omega_{16}\omega_7 cs^2 - \omega_{16}\omega_{10}\omega_7 + 6\omega_{10}\omega_7 cs^2 + 6\omega_{16}\omega_7 - 12\omega_{16} + 12\omega_{10} - 6\omega_{10}\omega_7 - 18v_2^2\omega_{16}\omega_7 + 3v_2^2\omega_{16}\omega_{10}\omega_7 + 36v_2^2\omega_{16} - 36v_2^2\omega_{10} + 18v_2^2\omega_{10}\omega_7 + \omega_{16}\omega_{10}\omega_7 cs^2)\frac{\rho v_3}{12\omega_{16}\omega_{10}\omega_7}$

$C^{(3),\text{CLBM1}}_{\text{D}_y^3 v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_3}{12}$

$C^{(3),\text{CLBM2}}_{\text{D}_y^3 v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_3}{12}$

$C^{(3),\text{CuLBM1}}_{\text{D}_y^3 v_2} = (-1 + cs^2 + 3v_2^2)\frac{\rho v_3}{12}$

$C^{(3),\text{CuLBM2}}_{\text{D}_y^3 v_2} = (-1 + 3v_2^2 + cs^2)\frac{\rho v_3}{12}$

coefficient $C^{(3)}_{\text{D}_y^3 v_3}$ at $\frac{\partial^3 v_3}{\partial x_2^3}$:

$C^{(3),\text{SRT}}_{\text{D}_y^3 v_3} = (6 - 3cs^2\omega^2 + \omega^2 - 18cs^2 + 18cs^2\omega - v_2^2\omega^2 + 6v_2^2\omega - 6\omega - 6v_2^2)\frac{\rho v_2}{6\omega^2}$

$C^{(3),\text{MRT1}}_{\text{D}_y^3 v_3} =$
$(\omega_{16}\omega_7^2 - 3\omega_{16}\omega_7^2 cs^2 - 3\omega_7^2 - 3\omega_{16}\omega_7 + 3\omega_7^2 cs^2 + 6\omega_7 - 6\omega_7 cs^2 + 3v_2^2\omega_{16}\omega_7 - 6v_2^2\omega_7 + 15\omega_{16}\omega_7 cs^2 + 3v_2^2\omega_7^2 - 12\omega_{16}cs^2 - v_2^2\omega_{16}\omega_7^2)\frac{\rho v_2}{6\omega_{16}\omega_7^2}$

$C^{(3),\text{MRT2}}_{\text{D}_y^3 v_3} =$
$(-12\omega_{16}cs^2 + \omega_{16}\omega_7^2 + 15\omega_{16}\omega_7 cs^2 - 3\omega_7^2 - 3\omega_{16}\omega_7 - 6\omega_7 cs^2 + 6\omega_7 + 3v_2^2\omega_{16}\omega_7 + 3\omega_7^2 cs^2 - 6v_2^2\omega_7 - 3\omega_{16}\omega_7^2 cs^2 + 3v_2^2\omega_7^2 - v_2^2\omega_{16}\omega_7^2)\frac{\rho v_2}{6\omega_{16}\omega_7^2}$

$C^{(3),\text{CLBM1}}_{\text{D}^3_y v_3} = (6 - 3cs^2\omega_{16}\omega_7 + \omega_{16}\omega_7 - 3\omega_{16} - 3\omega_7 - v_2^2\omega_{16}\omega_7 + 3v_2^2\omega_7 + 3v_2^2\omega_{16} + 9cs^2\omega_{16} - 18cs^2 - 6v_2^2 + 9cs^2\omega_7)\frac{\rho v_2}{6\omega_{16}\omega_7}$

$C^{(3),\text{CLBM2}}_{\text{D}^3_y v_3} = (6 + \omega_{16}\omega_7 - 3\omega_{16} - 3\omega_7 - v_2^2\omega_{16}\omega_7 + 3v_2^2\omega_7 + 9\omega_7 cs^2 + 3v_2^2\omega_{16} - 18cs^2 + 9\omega_{16}cs^2 - 6v_2^2 - 3\omega_{16}\omega_7 cs^2)\frac{\rho v_2}{6\omega_{16}\omega_7}$

$C^{(3),\text{CuLBM1}}_{\text{D}^3_y v_3} = (6 - 18cs^2 + 3v_2^2\omega_{11} + 9\omega_{11}cs^2 - 3\omega_3 - 3\omega_3\omega_{11}cs^2 + \omega_3\omega_{11} - v_2^2\omega_3\omega_{11} - 3\omega_{11} - 6v_2^2 + 3v_2^2\omega_3 + 9\omega_3 cs^2)\frac{\rho v_2}{6\omega_3\omega_{11}}$

$C^{(3),\text{CuLBM2}}_{\text{D}^3_y v_3} = (-6\omega_3\omega_4 - 3\omega_4\omega_1 + 6\omega_3 - 6v_2^2\omega_4 - 3\omega_3\omega_1 - 18cs^2\omega_4 + 2\omega_3\omega_4\omega_1 - 6cs^2\omega_3\omega_4\omega_1 + 18cs^2\omega_3\omega_4 + 6\omega_4 + 9cs^2\omega_4\omega_1 + 3v_2^2\omega_3\omega_1 - 18cs^2\omega_3 - 2v_2^2\omega_3\omega_4\omega_1 + 6v_2^2\omega_3\omega_4 + 9cs^2\omega_3\omega_1 - 6v_2^2\omega_3 + 3v_2^2\omega_4\omega_1)\frac{\rho v_2}{12\omega_3\omega_4\omega_1}$

coefficient $C^{(3)}_{\text{D}^2_x \text{D}_z \rho}$ at $\frac{\partial^3 \rho}{\partial x_1^2 \partial x_3}$:

$C^{(3),\text{SRT}}_{\text{D}^2_x \text{D}_z \rho} = (-12 - \omega^2 + 12\omega)\frac{cs^4}{6\omega^2}$

$C^{(3),\text{MRT1}}_{\text{D}^2_x \text{D}_z \rho} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$

$C^{(3),\text{MRT2}}_{\text{D}^2_x \text{D}_z \rho} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$

$C^{(3),\text{CLBM1}}_{\text{D}^2_x \text{D}_z \rho} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$

$C^{(3),\text{CLBM2}}_{\text{D}^2_x \text{D}_z \rho} = (-12 + 12\omega_6 - \omega_6^2)\frac{cs^4}{6\omega_6^2}$

$C^{(3),\text{CuLBM1}}_{\text{D}^2_x \text{D}_z \rho} = (-12 - \omega_2^2 + 12\omega_2)\frac{cs^4}{6\omega_2^2}$

$C^{(3),\text{CuLBM2}}_{\text{D}^2_x \text{D}_z \rho} =$
$(-cs^4\omega_1^2\omega_2^2 - 2v_1^2\omega_1\omega_2 + 15v_1^2 cs^2\omega_1\omega_2^2 + 12v_1^2 cs^2\omega_1^2 + 2v_1^4\omega_1^2 + 2cs^2\omega_1^2\omega_2 + 3v_1^4\omega_1\omega_2^2 + 4v_1^2\omega_2^2 + 2v_1^4\omega_1\omega_2 + 6v_1^2 cs^2\omega_1\omega_2 - 2cs^4\omega_1^2\omega_2 - 14cs^4\omega_2^2 - 3v_1^2\omega_1\omega_2^2 - 2cs^2\omega_1^2 - 15v_1^2 cs^2\omega_1^2\omega_2 - 18v_1^2 cs^2\omega_2^2 - 2v_1^2\omega_1^2 - 4v_1^4\omega_2^2 - 2cs^2\omega_1\omega_2^2 - 3v_1^4\omega_1^2\omega_2 + 2cs^2\omega_2^2 + 2cs^4\omega_1^2 + 14cs^4\omega_1\omega_2^2 + 3v_1^2\omega_1^2\omega_2)\frac{1}{6\omega_1^2\omega_2^2}$

coefficient $C^{(3)}_{\text{D}^2_x \text{D}_z v_1}$ at $\frac{\partial^3 v_1}{\partial x_1^2 \partial x_3}$:

$C^{(3),\text{SRT}}_{\text{D}^2_x \text{D}_z v_1} = 0$

$C^{(3),\text{MRT1}}_{\text{D}^2_x \text{D}_z v_1} = (2\omega_6 + \omega_6\omega_{13} - 2\omega_{13} - \omega_6^2)\frac{\rho v_1 cs^2}{\omega_6^2\omega_{13}}$

$C^{(3),\text{MRT2}}_{\text{D}^2_x \text{D}_z v_1} = (2\omega_6 + \omega_6\omega_{13} - 2\omega_{13} - \omega_6^2)\frac{\rho v_1 cs^2}{\omega_6^2\omega_{13}}$

$C^{(3),\text{CLBM1}}_{\text{D}^2_x \text{D}_z v_1} = 0$

$C^{(3),\text{CLBM2}}_{\text{D}^2_x \text{D}_z v_1} = 0$

$C^{(3),\text{CuLBM1}}_{\text{D}^2_x \text{D}_z v_1} = 0$

$C^{(3),\text{CuLBM2}}_{\text{D}^2_x \text{D}_z v_1} = (6v_1^2\omega_1\omega_2 - 5\omega_1\omega_2^2 - 9cs^2\omega_1^2\omega_2 - 14v_1^2\omega_2^2 + 6\omega_2^2 - 2\omega_1\omega_2 + 11v_1^2\omega_1\omega_2^2 + 8cs^2\omega_1^2 + 8v_1^2\omega_1^2 + 9cs^2\omega_1\omega_2^2 + 5\omega_1\omega_2 - 10cs^2\omega_2^2 + 2cs^2\omega_1\omega_2 - 11v_1^2\omega_1^2\omega_2 - 4\omega_1^2)\frac{\rho v_1}{6\omega_1^2\omega_2^2}$

coefficient $C^{(3)}_{\text{D}^2_x \text{D}_z v_3}$ at $\frac{\partial^3 v_3}{\partial x_1^2 \partial x_3}$:

$C^{(3),\text{SRT}}_{\text{D}^2_x \text{D}_z v_3} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{MRT1}}_{\text{D}^2_x \text{D}_z v_3} = (-12\omega_6^2\omega_{11} - \omega_{18}\omega_6^2\omega_{11} - 12\omega_{18}\omega_{11} - 12\omega_{18}\omega_6 + 12\omega_{18}\omega_6\omega_{11} + 12\omega_6^2 + 12\omega_6\omega_{11})\frac{\rho v_3 cs^2}{6\omega_{18}\omega_6^2\omega_{11}}$

$C^{(3),\text{MRT2}}_{\text{D}^2_x \text{D}_z v_3} = (-12\omega_6^2\omega_{11} - \omega_{18}\omega_6^2\omega_{11} - 12\omega_{18}\omega_{11} - 12\omega_{18}\omega_6 + 12\omega_{18}\omega_6\omega_{11} + 12\omega_6^2 + 12\omega_6\omega_{11})\frac{\rho v_3 cs^2}{6\omega_{18}\omega_6^2\omega_{11}}$

$$C^{(3),\text{CLBM1}}_{\text{D}^2_x \text{D}_z v_3} = \frac{-\rho c s^2 v_3}{6}$$

$$C^{(3),\text{CLBM2}}_{\text{D}^2_x \text{D}_z v_3} = \frac{-\rho v_3 c s^2}{6}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}^2_x \text{D}_z v_3} = \frac{-\rho v_3 c s^2}{6}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}^2_x \text{D}_z v_3} = \frac{-\rho c s^2 v_3}{6}$$

coefficient $C^{(3)}_{\text{D}_x \text{D}_y \text{D}_z \rho}$ **at** $\frac{\partial^3 \rho}{\partial x_1 \partial x_2 \partial x_3}$:

$$C^{(3),\text{SRT}}_{\text{D}_x \text{D}_y \text{D}_z \rho} = 0$$

$$C^{(3),\text{MRT1}}_{\text{D}_x \text{D}_y \text{D}_z \rho} = 0$$

$$C^{(3),\text{MRT2}}_{\text{D}_x \text{D}_y \text{D}_z \rho} = 0$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x \text{D}_y \text{D}_z \rho} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x \text{D}_y \text{D}_z \rho} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_x \text{D}_y \text{D}_z \rho} = 0$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_x \text{D}_y \text{D}_z \rho} = (-2v_1^2 \omega_1 \omega_2 + v_1^2 \omega_2^2 - 2\omega_2^2 + 4\omega_1 \omega_2 + v_2^2 \omega_1^2 + 6cs^2 \omega_1^2 - 2v_2^2 \omega_1 \omega_2 + v_1^2 \omega_1^2 + 6cs^2 \omega_2^2 - 12cs^2 \omega_1 \omega_2 + v_2^2 \omega_2^2 - 2\omega_1^2) \frac{v_1 v_2}{3\omega_1^2 \omega_2^2}$$

coefficient $C^{(3)}_{\text{D}_x \text{D}_y \text{D}_z v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x_2 \partial x_3}$:

$$C^{(3),\text{SRT}}_{\text{D}_x \text{D}_y \text{D}_z v_1} = 0$$

$$C^{(3),\text{MRT1}}_{\text{D}_x \text{D}_y \text{D}_z v_1} = (-\omega_6 \omega_8 - \omega_7 \omega_8 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8 - \omega_6^2 \omega_7 + \omega_6^2) \frac{\rho v_2 c s^2}{\omega_6^2 \omega_7 \omega_8}$$

$$C^{(3),\text{MRT2}}_{\text{D}_x \text{D}_y \text{D}_z v_1} = (-\omega_6 \omega_8 - \omega_7 \omega_8 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8 - \omega_6^2 \omega_7 + \omega_6^2) \frac{\rho v_2 c s^2}{\omega_6^2 \omega_7 \omega_8}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x \text{D}_y \text{D}_z v_1} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x \text{D}_y \text{D}_z v_1} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_x \text{D}_y \text{D}_z v_1} = 0$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_x \text{D}_y \text{D}_z v_1} = (-4\omega_3 \omega_4 \omega_1^2 - 2v_2^2 \omega_3 \omega_4 \omega_2^2 - 3\omega_4 \omega_1^2 \omega_2^2 + 9cs^2 \omega_4 \omega_1^2 \omega_2^2 + 8cs^2 \omega_3 \omega_4 \omega_1^2 + v_2^2 \omega_3 \omega_4 \omega_1 \omega_2^2 + 6v_1^2 \omega_3 \omega_4 \omega_2^2 + 4\omega_3 \omega_4 \omega_1 \omega_2 - 4cs^2 \omega_3 \omega_4 \omega_1 \omega_2 - 3v_2^2 \omega_3 \omega_4^2 \omega_2^2 + 3cs^2 \omega_3 \omega_4 \omega_1 \omega_2^2 - 12v_1^2 \omega_3 \omega_4 \omega_1 \omega_2 - 4v_2^2 \omega_4 \omega_1 \omega_2^2 - \omega_3 \omega_4 \omega_1 \omega_2^2 + 2\omega_4 \omega_1^2 \omega_2 + 18cs^2 \omega_3 \omega_1 \omega_2^2 - 6\omega_3 \omega_1 \omega_2^2 - 6cs^2 \omega_4 \omega_1^2 \omega_2 - 9cs^2 \omega_3 \omega_4^2 \omega_2^2 - v_2^2 \omega_3 \omega_4 \omega_1^2 \omega_2 + 3\omega_3 \omega_1^2 \omega_2^2 - 4cs^2 \omega_3 \omega_4 \omega_2^2 + 2v_2^2 \omega_3 \omega_4 \omega_1^2 + 3v_2^2 \omega_4 \omega_1^2 \omega_2^2 + 6v_1^2 \omega_3 \omega_4 \omega_1^2 + \omega_3 \omega_4 \omega_1^2 \omega_2 + 6v_2^2 \omega_3 \omega_1 \omega_2^2 - 3cs^2 \omega_3 \omega_4 \omega_1^2 \omega_2 - 2v_2^2 \omega_4 \omega_1^2 \omega_2 + 4\omega_4 \omega_1 \omega_2^2 - 12cs^2 \omega_4 \omega_1 \omega_2^2) \frac{\rho v_2}{6\omega_3 \omega_4 \omega_1^2 \omega_2^2}$$

coefficient $C^{(3)}_{\text{D}_x \text{D}_y \text{D}_z v_2}$ **at** $\frac{\partial^3 v_2}{\partial x_1 \partial x_2 \partial x_3}$:

$$C^{(3),\text{SRT}}_{\text{D}_x \text{D}_y \text{D}_z v_2} = 0$$

$$C^{(3),\text{MRT1}}_{\text{D}_x \text{D}_y \text{D}_z v_2} = (-\omega_6 \omega_8 - \omega_6 \omega_7^2 - \omega_7 \omega_8 + \omega_7^2 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8) \frac{\rho v_1 c s^2}{\omega_6 \omega_7^2 \omega_8}$$

$$C^{(3),\text{MRT2}}_{\text{D}_x \text{D}_y \text{D}_z v_2} = (-\omega_6 \omega_8 - \omega_6 \omega_7^2 - \omega_7 \omega_8 + \omega_7^2 + \omega_6 \omega_7 + \omega_6 \omega_7 \omega_8) \frac{\rho v_1 c s^2}{\omega_6 \omega_7^2 \omega_8}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x \text{D}_y \text{D}_z v_2} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x \text{D}_y \text{D}_z v_2} = 0$$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z v_2}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y \mathrm{D}_z v_2}^{(3),\mathrm{CuLBM2}} = (-4\omega_3\omega_4\omega_1^2 + 6v_2^2\omega_3\omega_4\omega_2^2 - 3\omega_4\omega_1^2\omega_2^2 + 9cs^2\omega_4\omega_1^2\omega_2^2 + 8cs^2\omega_3\omega_4\omega_1^2 - 2v_1^2\omega_3\omega_4\omega_2^2 - 3v_1^2\omega_3\omega_1^2\omega_2^2 + 4\omega_3\omega_4\omega_1\omega_2 - 4cs^2\omega_3\omega_4\omega_1\omega_2 + v_1^2\omega_3\omega_4\omega_1\omega_2 + 3cs^2\omega_3\omega_4\omega_1\omega_2 - 4v_1^2\omega_4\omega_1\omega_2^2 - \omega_3\omega_4\omega_1\omega_2^2 + 2\omega_4\omega_1^2\omega_2 + 18cs^2\omega_3\omega_1\omega_2^2 - 6\omega_3\omega_1\omega_2^2 - 6cs^2\omega_4\omega_1^2\omega_2 - 12v_2^2\omega_3\omega_4\omega_1\omega_2 - 9cs^2\omega_3\omega_1^2\omega_2^2 + 3\omega_3\omega_1^2\omega_2^2 - 4cs^2\omega_3\omega_4\omega_2^2 - v_1^2\omega_3\omega_4\omega_1^2\omega_2 + 6v_2^2\omega_3\omega_4\omega_1^2 + 3v_1^2\omega_4\omega_1^2\omega_2^2 + 2v_1^2\omega_3\omega_4\omega_1^2 - 2v_1^2\omega_4\omega_1^2\omega_2 + \omega_3\omega_4\omega_1^2\omega_2 + 6v_1^2\omega_3\omega_1\omega_2^2 - 3cs^2\omega_3\omega_4\omega_1^2\omega_2 + 4\omega_4\omega_1\omega_2^2 - 12cs^2\omega_4\omega_1\omega_2^2)\frac{\rho v_1}{6\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3)}$ at $\frac{\partial^3 \rho}{\partial x_2^2 \partial x_3}$:

$C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{SRT}} = (-12 - \omega^2 + 12\omega)\frac{cs^4}{6\omega^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{MRT1}} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{MRT2}} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{CLBM1}} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{CLBM2}} = (-12 - \omega_7^2 + 12\omega_7)\frac{cs^4}{6\omega_7^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM1}} = (-12 - \omega_3^2 + 12\omega_3)\frac{cs^4}{6\omega_3^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM2}} =$
$(-cs^4\omega_1^2\omega_2^2 - 3v_2^4\omega_1^2\omega_2 + 2cs^2\omega_1^2\omega_2 - 2v_2^2\omega_1^4 - 4v_2^2\omega_2^2 + 3v_2^2\omega_1^2\omega_2 - 15cs^2v_2^2\omega_1^2\omega_2 - 2cs^4\omega_1^2\omega_2 - 14cs^4\omega_2^2 - 2cs^2\omega_1^2 - 18cs^2v_2^2\omega_2^2 - 2v_2^2\omega_1\omega_2 + 6cs^2v_2^2\omega_1\omega_2 - 2cs^2\omega_1\omega_2^2 + 3v_2^2\omega_1\omega_2^2 + 2v_2^2\omega_1\omega_2 + 2cs^2\omega_2^2 + 12cs^2v_2^2\omega_1^2 + 2cs^4\omega_1^4 + 14cs^4\omega_1\omega_2^2 - 3v_2^2\omega_1\omega_2^2 + 2v_2^2\omega_1^4 + 4v_2^2\omega_2^2 + 15cs^2v_2^2\omega_1\omega_2^2)\frac{1}{6\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3)}$ at $\frac{\partial^3 v_2}{\partial x_2^2 \partial x_3}$:

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3),\mathrm{MRT1}} = (-\omega_7^2 + \omega_{16}\omega_7 - 2\omega_{16} + 2\omega_7)\frac{\rho v_2 cs^2}{\omega_{16}\omega_7^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3),\mathrm{MRT2}} = (-\omega_7^2 + \omega_{16}\omega_7 - 2\omega_{16} + 2\omega_7)\frac{\rho v_2 cs^2}{\omega_{16}\omega_7^2}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_2}^{(3),\mathrm{CuLBM2}} = (-5\omega_1\omega_2^2 - 9cs^2\omega_1^2\omega_2 + 6\omega_2^2 - 2\omega_1\omega_2 + 8v_2^2\omega_1^2 - 11v_2^2\omega_1^2\omega_2 + 8cs^2\omega_1^2 + 6v_2^2\omega_1\omega_2 + 9cs^2\omega_1\omega_2^2 + 5\omega_1^2\omega_2 - 10cs^2\omega_2^2 + 2cs^2\omega_1\omega_2 + 11v_2^2\omega_1\omega_2^2 - 14v_2^2\omega_2^2 - 4\omega_1^2)\frac{\rho v_2}{6\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(3)}$ at $\frac{\partial^3 v_3}{\partial x_2^2 \partial x_3}$:

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(3),\mathrm{SRT}} = \frac{-\rho v_3 cs^2}{6}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(3),\mathrm{MRT1}} = (-12\omega_{19}\omega_{11} + 12\omega_7^2 - 12\omega_7^2\omega_{11} + 12\omega_{19}\omega_7\omega_{11} - \omega_{19}\omega_7^2\omega_{11} - 12\omega_{19}\omega_7 + 12\omega_7\omega_{11})\frac{\rho v_3 cs^2}{6\omega_{19}\omega_7^2\omega_{11}}$

$C_{\mathrm{D}_y^2 \mathrm{D}_z v_3}^{(3),\mathrm{MRT2}} = (-12\omega_{19}\omega_{11} + 12\omega_7^2 - 12\omega_7^2\omega_{11} + 12\omega_{19}\omega_7\omega_{11} - \omega_{19}\omega_7^2\omega_{11} - 12\omega_{19}\omega_7 + 12\omega_7\omega_{11})\frac{\rho v_3 cs^2}{6\omega_{19}\omega_7^2\omega_{11}}$

$C^{(3),\text{CLBM1}}_{\text{D}_y^2 \text{D}_z v_3} = \frac{-\rho cs^2 v_3}{6}$

$C^{(3),\text{CLBM2}}_{\text{D}_y^2 \text{D}_z v_3} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{CuLBM1}}_{\text{D}_y^2 \text{D}_z v_3} = \frac{-\rho v_3 cs^2}{6}$

$C^{(3),\text{CuLBM2}}_{\text{D}_y^2 \text{D}_z v_3} = \frac{-\rho cs^2 v_3}{6}$

coefficient $C^{(3)}_{\text{D}_x \text{D}_z^2 \rho}$ **at** $\frac{\partial^3 \rho}{\partial x_1 \partial x_3^2}$:

$C^{(3),\text{SRT}}_{\text{D}_x \text{D}_z^2 \rho} = 0$

$C^{(3),\text{MRT1}}_{\text{D}_x \text{D}_z^2 \rho} = (\omega_{18} v_3^2 \omega_{11} + \omega_6 v_3^2 \omega_1^2 - v_3^2 \omega_{11}^2 - \omega_{18} \omega_{11} - 3\omega_{18} \omega_6 cs^2 \omega_{11} - \omega_6 v_3^2 \omega_{11} - \omega_{18} \omega_6 + 3\omega_{18} \omega_6 cs^2 - 3cs^2 \omega_{11}^2 - \omega_6 \omega_{11}^2 + 3\omega_{18} cs^2 \omega_{11} + 3\omega_6 cs^2 \omega_{11}^2 + \omega_{18} \omega_6 \omega_{11} + \omega_{11}^2 + \omega_{18} \omega_6 v_3^2 - 3\omega_6 cs^2 \omega_{11} + \omega_6 \omega_{11} - \omega_{18} \omega_6 v_3^2 \omega_{11}) \frac{v_1 v_3}{\omega_{18} \omega_6 \omega_{11}^2}$

$C^{(3),\text{MRT2}}_{\text{D}_x \text{D}_z^2 \rho} = (\omega_{18} v_3^2 \omega_{11} + \omega_6 v_3^2 \omega_{11}^2 - v_3^2 \omega_{11}^2 + 3\omega_{18} \omega_{11} cs^2 - 3\omega_6 \omega_{11} cs^2 - \omega_{18} \omega_{11} + 3\omega_{18} \omega_6 cs^2 - \omega_6 v_3^2 \omega_{11} - \omega_{18} \omega_6 - \omega_6 \omega_{11}^2 - 3\omega_{11}^2 cs^2 + 3\omega_6 \omega_{11}^2 cs^2 + \omega_{18} \omega_6 \omega_{11} + \omega_{11}^2 - 3\omega_{18} \omega_6 \omega_{11} cs^2 + \omega_{18} \omega_6 v_3^2 + \omega_6 \omega_{11} - \omega_{18} \omega_6 v_3^2 \omega_{11}) \frac{v_1 v_3}{\omega_{18} \omega_6 \omega_{11}^2}$

$C^{(3),\text{CLBM1}}_{\text{D}_x \text{D}_z^2 \rho} = 0$

$C^{(3),\text{CLBM2}}_{\text{D}_x \text{D}_z^2 \rho} = 0$

$C^{(3),\text{CuLBM1}}_{\text{D}_x \text{D}_z^2 \rho} = 0$

$C^{(3),\text{CuLBM2}}_{\text{D}_x \text{D}_z^2 \rho} = (2v_1^2 \omega_1 \omega_2 + 2v_3^2 \omega_1^2 - 3\omega_1 \omega_2^2 - 4v_3^2 \omega_1 \omega_2 - 9cs^2 \omega_1^2 \omega_2 - 4v_1^2 \omega_2^2 + 2\omega_2^2 + 2\omega_1 \omega_2 + 3v_1^2 \omega_1 \omega_2^2 + 12cs^2 \omega_1^2 + 2v_1^2 \omega_1^2 + 9cs^2 \omega_1 \omega_2^2 + 2v_3^2 \omega_2^2 + 3\omega_1^2 \omega_2 - 6cs^2 \omega_2^2 - 6cs^2 \omega_1 \omega_2 - 3v_1^2 \omega_1^2 \omega_2 - 4\omega_1^2) \frac{v_1 v_3}{6\omega_1^2 \omega_2^2}$

coefficient $C^{(3)}_{\text{D}_x \text{D}_z^2 v_1}$ **at** $\frac{\partial^3 v_1}{\partial x_1 \partial x_3^2}$:

$C^{(3),\text{SRT}}_{\text{D}_x \text{D}_z^2 v_1} = (12 - 11cs^2 \omega^2 + 3\omega^2 - 36cs^2 + 36cs^2 \omega + 12v_3^2 \omega - 12v_3^2 - 12\omega - 3v_3^2 \omega^2) \frac{\rho v_3}{12\omega^2}$

$C^{(3),\text{MRT1}}_{\text{D}_x \text{D}_z^2 v_1} = (-12\omega_6 v_3^2 \omega_{11}^2 - 12\omega_{18} \omega_6^2 + 12\omega_6^2 \omega_{11} - 12\omega_6^2 cs^2 \omega_{11} + 42\omega_{18} \omega_6 cs^2 \omega_{11}^2 - 6\omega_{18} \omega_6^2 v_3^2 \omega_{11} + 12\omega_{18} \omega_6^2 v_3^2 + 3\omega_{18} \omega_6^2 \omega_{11}^2 - 3\omega_{18} \omega_6^2 v_3^2 \omega_{11}^2 + 6\omega_{18} \omega_6^2 \omega_{11} - 24\omega_{18} \omega_6 cs^2 \omega_{11} + 36\omega_{18} \omega_6^2 cs^2 + 12\omega_6^2 cs^2 \omega_{11}^2 - 12\omega_6^2 \omega_{11}^2 + 6\omega_{18} \omega_6 v_3^2 \omega_{11}^2 - 18\omega_{18} \omega_6^2 cs^2 \omega_{11} + 12\omega_6 \omega_{11}^2 - 12\omega_6 cs^2 \omega_{11}^2 - 12\omega_6^2 v_3^2 \omega_{11} + 12\omega_6^2 v_3^2 \omega_{11}^2 - 24\omega_{18} cs^2 \omega_{11}^2 - 6\omega_{18} \omega_6 \omega_{11}^2 - 11\omega_{18} \omega_6^2 cs^2 \omega_{11}^2) \frac{\rho v_3}{12\omega_{18} \omega_6^2 \omega_{11}^2}$

$C^{(3),\text{MRT2}}_{\text{D}_x \text{D}_z^2 v_1} = (-12\omega_6 v_3^2 \omega_{11}^2 - 12\omega_{18} \omega_6^2 + 12\omega_6^2 \omega_{11} - 18\omega_{18} \omega_6^2 \omega_{11} cs^2 + 42\omega_{18} \omega_6 \omega_{11}^2 cs^2 - 6\omega_{18} \omega_6^2 v_3^2 \omega_{11} + 12\omega_{18} \omega_6^2 v_3^2 + 3\omega_{18} \omega_6^2 \omega_{11}^2 - 3\omega_{18} \omega_6^2 v_3^2 \omega_{11}^2 + 6\omega_{18} \omega_6^2 \omega_{11} + 12\omega_6^2 \omega_{11}^2 cs^2 - 12\omega_6^2 \omega_{11}^2 - 12\omega_6^2 \omega_{11} cs^2 + 36\omega_{18} \omega_6^2 cs^2 + 6\omega_{18} \omega_6 v_3^2 \omega_{11}^2 + 12\omega_6 \omega_{11}^2 - 12\omega_6 \omega_{11}^2 cs^2 - 12\omega_6^2 v_3^2 \omega_{11} - 24\omega_{18} \omega_6 \omega_{11} cs^2 + 12\omega_6^2 v_3^2 \omega_{11}^2 - 24\omega_{18} \omega_{11}^2 cs^2 - 6\omega_{18} \omega_6 \omega_{11}^2 - 11\omega_{18} \omega_6^2 \omega_{11}^2 cs^2) \frac{\rho v_3}{12\omega_{18} \omega_6^2 \omega_{11}^2}$

$C^{(3),\text{CLBM1}}_{\text{D}_x \text{D}_z^2 v_1} = (12\omega_6 v_3^2 \omega_{11}^2 - 36cs^2 \omega_{11}^2 - 6\omega_{18} \omega_{11}^2 - 12v_3^2 \omega_{11}^2 + 36\omega_6 cs^2 \omega_{11}^2 + 18\omega_{18} cs^2 \omega_{11}^2 - 36\omega_6 cs^2 \omega_{11} + 6\omega_{18} v_3^2 \omega_{11}^2 - 12\omega_6 v_3^2 \omega_{11} - 12\omega_{18} \omega_6 - 3\omega_{18} \omega_6 v_3^2 \omega_{11}^2 - 12\omega_6 \omega_{11}^2 + 6\omega_{18} \omega_6 \omega_{11} - 11\omega_{18} \omega_6 cs^2 \omega_{11}^2 - 18\omega_{18} \omega_6 cs^2 \omega_{11} + 12\omega_{11}^2 + 36\omega_{18} \omega_6 cs^2 + 12\omega_{18} \omega_6 v_3^2 + 3\omega_{18} \omega_6 \omega_{11}^2 + 12\omega_6 \omega_{11} - 6\omega_{18} \omega_6 v_3^2 \omega_{11}) \frac{\rho v_3}{12\omega_{18} \omega_6 \omega_{11}^2}$

$C^{(3),\text{CLBM2}}_{\text{D}_x \text{D}_z^2 v_1} = (12\omega_6 v_3^2 \omega_{11}^2 - 18\omega_{18} \omega_6 cs^2 \omega_{11} - 6\omega_{18} \omega_{11}^2 - 12v_3^2 \omega_{11}^2 + 6\omega_{18} v_3^2 \omega_{11}^2 - 12\omega_6 v_3^2 \omega_{11} - 12\omega_{18} \omega_6 - 11\omega_{18} \omega_6 cs^2 \omega_{11}^2 - 36\omega_6 cs^2 \omega_{11} + 18\omega_{18} cs^2 \omega_{11}^2 - 3\omega_{18} \omega_6 v_3^2 \omega_{11}^2 - 12\omega_6 \omega_{11}^2 + 36\omega_{18} \omega_6 cs^2 + 6\omega_{18} \omega_6 \omega_{11} + 12\omega_{11}^2 - 36cs^2 \omega_{11}^2 + 12\omega_{18} \omega_6 v_3^2 + 3\omega_{18} \omega_6 \omega_{11}^2 + 12\omega_6 \omega_{11} + 36\omega_6 cs^2 \omega_{11}^2 - 6\omega_{18} \omega_6 v_3^2 \omega_{11}) \frac{\rho v_3}{12\omega_{18} \omega_6 \omega_{11}^2}$

$C^{(3),\text{CuLBM1}}_{\text{D}_x \text{D}_z^2 v_1} = (3\omega_6^2 \omega_8 \omega_2 + 12\omega_6^2 v_3^2 \omega_2 - 18\omega_6 \omega_8 cs^2 \omega_2 + 18\omega_6^2 \omega_8 cs^2 + 6\omega_6^2 v_3^2 \omega_8 - 36\omega_6 cs^2 \omega_2 + 36\omega_8 cs^2 \omega_2 - 3\omega_6^2 v_3^2 \omega_8 \omega_2 - 12\omega_6^2 v_3^2 + 12\omega_6 \omega_2 + 36\omega_6^2 cs^2 \omega_2 + 12v_3^2 \omega_8 \omega_2 - 12\omega_6^2 \omega_2 - 36\omega_6^2 cs^2 - 11\omega_6^2 \omega_8 cs^2 \omega_2 + 6\omega_6 \omega_8 \omega_2 - 12\omega_6 v_3^2 \omega_2 - 6\omega_6^2 \omega_8 + 12\omega_6^2 - 6\omega_6 v_3^2 \omega_8 \omega_2 - 12\omega_8 \omega_2) \frac{\rho v_3}{12\omega_6^2 \omega_8 \omega_2}$

$C^{(3),\text{CuLBM2}}_{\text{D}_x \text{D}_z^2 v_1} =$

$(-8\omega_3\omega_4\omega_1^2 - 6\omega_4\omega_1^2\omega_2^2 + 18cs^2\omega_4\omega_1^2\omega_2^2 + 16cs^2\omega_3\omega_4\omega_1^2 - 24v_1^2\omega_3\omega_4\omega_2^2 - 3v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 - 8v_3^2\omega_4\omega_1\omega_2^2 - 4\omega_3\omega_4\omega_1\omega_2 + 4cs^2\omega_3\omega_4\omega_1\omega_2 + 18v_1^2\omega_3\omega_4\omega_1\omega_2^2 + 12cs^2\omega_3\omega_4\omega_1\omega_2^2 + 12v_1^2\omega_3\omega_4\omega_1\omega_2 - 2v_3^2\omega_3\omega_4\omega_1^2\omega_2 + 6v_3^2\omega_3\omega_1^2\omega_2^2 - 8\omega_3\omega_4\omega_1\omega_2^2 + 8v_3^2\omega_3\omega_4\omega_2^2 + 4\omega_4\omega_1^2\omega_2 - 36cs^2\omega_3\omega_1\omega_2^2 + 12\omega_3\omega_1\omega_2^2 - 12cs^2\omega_4\omega_1^2\omega_2 + 18\omega_3\omega_1^2\omega_2^2 - 6\omega_3\omega_1^2\omega_2^2 + 16cs^2\omega_3\omega_4\omega_2^2 - 18v_1^2\omega_3\omega_4\omega_1\omega_2 - 11cs^2\omega_3\omega_4\omega_1^2\omega_2^2 - 12v_3^2\omega_3\omega_1\omega_2^2 + 12v_1^2\omega_3\omega_4\omega_1^2 + 3\omega_3\omega_4\omega_1^2\omega_2^2 - 4v_3^2\omega_4\omega_1^2\omega_2 + 2v_3^2\omega_3\omega_4\omega_1\omega_2^2 + 6v_3^2\omega_4\omega_1^2\omega_2^2 + 8\omega_3\omega_4\omega_1^2\omega_2 + 4v_3^2\omega_3\omega_4\omega_1^2 - 12cs^2\omega_3\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1\omega_2^2 - 24cs^2\omega_4\omega_1\omega_2)\frac{\rho v_3}{12\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C^{(3)}_{\mathrm{D}_x\mathrm{D}_z^2 v_3}$ at $\frac{\partial^3 v_3}{\partial x_1 \partial x_3^2}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_z^2 v_3} = (3\omega_{18}v_3^2\omega_{11} + 3\omega_6 v_3^2\omega_{11}^2 - 3v_3^2\omega_{11}^2 - \omega_{18}\omega_{11} - \omega_{18}\omega_6 cs^2\omega_{11} - 3\omega_6 v_3^2\omega_{11} - \omega_{18}\omega_6 + \omega_{18}\omega_6 cs^2 - cs^2\omega_{11}^2 - \omega_6\omega_{11}^2 + \omega_{18}cs^2\omega_{11} + \omega_6 cs^2\omega_{11}^2 + \omega_{18}\omega_6\omega_{11} + \omega_{11}^2 + 3\omega_{18}\omega_6 v_3^2 - \omega_6 cs^2\omega_{11} + \omega_6\omega_{11} - 3\omega_{18}\omega_6 v_3^2\omega_{11})\frac{\rho v_1}{\omega_{18}\omega_6\omega_{11}^2}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_z^2 v_3} = (3\omega_{18}v_3^2\omega_{11} + 3\omega_6 v_3^2\omega_{11}^2 - 3v_3^2\omega_{11}^2 + \omega_{18}\omega_{11}cs^2 - \omega_6\omega_{11}cs^2 - \omega_{18}\omega_{11} + \omega_{18}\omega_6 cs^2 - 3\omega_6 v_3^2\omega_{11} - \omega_{18}\omega_6 - \omega_6\omega_{11}^2 - \omega_{11}^2 cs^2 + \omega_6\omega_{11}^2 cs^2 + \omega_{18}\omega_6\omega_{11} + \omega_{11}^2 - \omega_{18}\omega_6\omega_{11}cs^2 + 3\omega_{18}\omega_6 v_3^2 + \omega_6\omega_{11} - 3\omega_{18}\omega_6 v_3^2\omega_{11})\frac{\rho v_1}{\omega_{18}\omega_6\omega_{11}^2}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_z^2 v_3} = (-4cs^2\omega_3\omega_1\omega_2 + 4\omega_3\omega_1\omega_2 - 4\omega_3\omega_1^2 - 2\omega_1\omega_2^2 - 6cs^2\omega_1^2\omega_2 - 4cs^2\omega_3\omega_2^2 + 2v_1^2\omega_3\omega_1^2 - v_1^2\omega_3\omega_1^2\omega_2 + 6v_3^2\omega_3\omega_1^2 + 3cs^2\omega_3\omega_1\omega_2^2 - \omega_3\omega_1\omega_2^2 + 2v_1^2\omega_1\omega_2^2 + 8cs^2\omega_3\omega_1^2 + 6cs^2\omega_1\omega_2^2 + 2\omega_1^2\omega_2 - 12v_3^2\omega_3\omega_1\omega_2 + v_1^2\omega_3\omega_1\omega_2^2 + 6v_3^2\omega_3\omega_2^2 - 3cs^2\omega_3\omega_1^2\omega_2 - 2v_1^2\omega_3\omega_2^2 - 2v_1^2\omega_1^2\omega_2 + \omega_3\omega_1^2\omega_2)\frac{\rho v_1}{6\omega_3\omega_1^2\omega_2^2}$

coefficient $C^{(3)}_{\mathrm{D}_y\mathrm{D}_z^2 \rho}$ at $\frac{\partial^3 \rho}{\partial x_2 \partial x_3^2}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_z^2 \rho} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^2 \rho} = (-\omega_{19}\omega_{11} + 3\omega_7 cs^2\omega_{11}^2 + 3\omega_{19}cs^2\omega_{11} - v_3^2\omega_{11}^2 + 3\omega_{19}\omega_7 cs^2 - 3\omega_7 cs^2\omega_{11} + \omega_{19}\omega_7\omega_{11} + v_3^2\omega_{19}\omega_{11} - 3cs^2\omega_{11}^2 - \omega_{19}\omega_7 + \omega_7\omega_{11} - v_3^2\omega_{19}\omega_7\omega_{11} + v_3^2\omega_7\omega_{11}^2 + \omega_{11}^2 - 3\omega_{19}\omega_7 cs^2\omega_{11} - v_3^2\omega_7\omega_{11} - \omega_7\omega_{11}^2 + v_3^2\omega_{19}\omega_7)\frac{v_2 v_3}{\omega_{19}\omega_7\omega_{11}^2}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^2 \rho} = (-\omega_{19}\omega_{11} + 3\omega_7\omega_{11}^2 cs^2 - v_3^2\omega_{11}^2 - 3\omega_{19}\omega_7\omega_{11}cs^2 + \omega_{19}\omega_7\omega_{11} + v_3^2\omega_{19}\omega_{11} - \omega_{19}\omega_7 - 3\omega_{11}^2 cs^2 + 3\omega_{19}\omega_7 cs^2 + \omega_7\omega_{11} - v_3^2\omega_{19}\omega_7\omega_{11} + 3\omega_{19}\omega_{11}cs^2 + v_3^2\omega_7\omega_{11}^2 + \omega_{11}^2 - 3\omega_7\omega_{11}cs^2 - v_3^2\omega_7\omega_{11} - \omega_7\omega_{11}^2 + v_3^2\omega_{19}\omega_7)\frac{v_2 v_3}{\omega_{19}\omega_7\omega_{11}^2}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 \rho} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 \rho} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 \rho} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 \rho} = (2v_3^2\omega_1^2 - 3\omega_1\omega_2^2 - 4v_3^2\omega_1\omega_2 - 9cs^2\omega_1^2\omega_2 + 2\omega_2^2 + 2\omega_1\omega_2 + 2v_2^2\omega_1^2 - 3v_2^2\omega_1^2\omega_2 + 12cs^2\omega_1^2 + 2v_2^2\omega_1\omega_2 + 9cs^2\omega_1\omega_2^2 + 2v_3^2\omega_2^2 + 3\omega_1^2\omega_2 - 6cs^2\omega_2^2 - 6cs^2\omega_1\omega_2 + 3v_2^2\omega_1\omega_2^2 - 4v_2^2\omega_2^2 - 4\omega_1^2)\frac{v_2 v_3}{6\omega_1^2\omega_2^2}$

coefficient $C^{(3)}_{\mathrm{D}_y\mathrm{D}_z^2 v_2}$ at $\frac{\partial^3 v_2}{\partial x_2 \partial x_3^2}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (12 - 11cs^2\omega^2 + 3\omega^2 - 36cs^2 + 36cs^2\omega + 12v_3^2\omega - 12v_3^2 - 12\omega - 3v_3^2\omega^2)\frac{\rho v_3}{12\omega^2}$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-18\omega_{19}\omega_7^2 cs^2\omega_{11} - 6\omega_{19}\omega_7\omega_{11}^2 - 12\omega_7 cs^2\omega_{11}^2 - 12v_3^2\omega_7^2\omega_{11} - 3v_3^2\omega_{19}\omega_7^2\omega_{11} - 12\omega_7^2\omega_{11}^2 + 12\omega_7^2\omega_{11} - 6v_3^2\omega_{19}\omega_7\omega_{11} + 12v_3^2\omega_7\omega_{11}^2 - 24\omega_{19}cs^2\omega_{11}^2 - 11\omega_{19}\omega_7^2 cs^2\omega_{11}^2 + 6\omega_{19}\omega_7\omega_{11}^2 + 12v_3^2\omega_{19}\omega_7^2 - 12\omega_7^2 cs^2\omega_{11} + 36\omega_{19}\omega_7^2 cs^2 + 42\omega_{19}cs^2\omega_{11}^2 - 12v_3^2\omega_7\omega_{11} - 24\omega_{19}\omega_7 cs^2\omega_{11} + 6v_3^2\omega_{19}\omega_7\omega_{11} + 12\omega_7\omega_{11}^2 + 12\omega_7^2 cs^2\omega_{11} - 12\omega_{19}\omega_7 + 3\omega_{19}\omega_7^2\omega_{11})\frac{\rho v_3}{12\omega_{19}\omega_7^2\omega_{11}^2}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (-12\omega_7^2\omega_{11}cs^2 - 6\omega_{19}\omega_7\omega_{11}^2 - 12\omega_7\omega_{11}^2 cs^2 - 12v_3^2\omega_7\omega_{11} - 3v_3^2\omega_{19}\omega_7^2\omega_{11} - 12\omega_7^2\omega_{11}^2 + 36\omega_{19}\omega_7^2 cs^2 + 12\omega_7^2\omega_{11} -$

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$6v_3^2\omega_{19}\omega_7\omega_{11}^2 - 24\omega_{19}\omega_{11}^2cs^2 + 12v_3^2\omega_7^2\omega_{11}^2 - 24\omega_{19}\omega_7\omega_{11}cs^2 - 11\omega_{19}\omega_7^2\omega_{11}^2cs^2 + 6\omega_{19}\omega_7^2\omega_{11} + 12v_3^2\omega_{19}\omega_7^2 - 18\omega_{19}\omega_7^2\omega_{11}cs^2 - 12v_3^2\omega_7\omega_{11}^2 + 42\omega_{19}\omega_7\omega_{11}^2cs^2 + 6v_3^2\omega_{19}\omega_7\omega_{11}^2 + 12\omega_7\omega_{11}^2 + 12\omega_7^2\omega_{11}^2cs^2 - 12\omega_{19}\omega_7^2 + 3\omega_{19}\omega_7^2\omega_{11}^2)\frac{\rho v_3}{12\omega_{19}\omega_7^2\omega_{11}^2}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (6v_3^2\omega_{19}\omega_{11}^2 - 36cs^2\omega_{11}^2 + 3\omega_{19}\omega_7\omega_{11}^2 - 12v_3^2\omega_{11}^2 - 11cs^2\omega_{19}\omega_7\omega_{11}^2 - 18cs^2\omega_{19}\omega_7\omega_{11} + 6\omega_{19}\omega_7\omega_{11} - 6\omega_{19}\omega_{11}^2 + 18cs^2\omega_{19}\omega_{11}^2 + 36cs^2\omega_{19}\omega_7 - 12\omega_{19}\omega_7 + 12\omega_7\omega_{11} - 6v_3^2\omega_{19}\omega_7\omega_{11} + 12v_3^2\omega_7\omega_{11}^2 - 36cs^2\omega_7\omega_{11} + 12\omega_{11}^2 - 12v_3^2\omega_7\omega_{11} + 36cs^2\omega_7\omega_{11}^2 - 3v_3^2\omega_{19}\omega_7\omega_{11}^2 - 12\omega_7\omega_{11}^2 + 12v_3^2\omega_{19}\omega_7)\frac{\rho v_3}{12\omega_{19}\omega_7\omega_{11}^2}$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (6v_3^2\omega_{19}\omega_{11} - 36\omega_7cs^2\omega_{11} + 18\omega_{19}cs^2\omega_{11}^2 + 3\omega_{19}\omega_7\omega_{11}^2 - 12v_3^2\omega_{11}^2 + 6\omega_{19}\omega_7\omega_{11} + 36\omega_{19}\omega_7cs^2 - 6\omega_{19}\omega_{11}^2 + 36\omega_7cs^2\omega_{11}^2 - 18\omega_{19}\omega_7cs^2\omega_{11} - 12\omega_{19}\omega_7 + 12\omega_7\omega_{11} - 6v_3^2\omega_{19}\omega_7\omega_{11} + 12v_3^2\omega_7\omega_{11}^2 + 12\omega_{11}^2 - 36cs^2\omega_{11}^2 - 12v_3^2\omega_7\omega_{11} - 3v_3^2\omega_{19}\omega_7\omega_{11}^2 - 12\omega_7\omega_{11}^2 - 11\omega_{19}\omega_7cs^2\omega_{11}^2 + 12v_3^2\omega_{19}\omega_7)\frac{\rho v_3}{12\omega_{19}\omega_7\omega_{11}^2}$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} = (36\omega_6^2\omega_3cs^2 + 3\omega_6^2\omega_3\omega_{10} + 6\omega_6v_3^2\omega_{10} + 12\omega_6\omega_3 + 36\omega_3\omega_{10}cs^2 + 12\omega_6^2v_3^2\omega_3 - 3\omega_6^2v_3^2\omega_3\omega_{10} - 12\omega_6^2v_3^2 - 18\omega_6\omega_3\omega_{10}cs^2 - 12\omega_6v_3^2\omega_3 + 12v_3^2\omega_3\omega_{10} - 6\omega_6^2\omega_{10} - 36\omega_6^2cs^2 + 18\omega_6^2\omega_{10}cs^2 + 6\omega_6\omega_3\omega_{10} - 36\omega_6\omega_3cs^2 + 12\omega_6^2 - 11\omega_6^2\omega_3\omega_{10}cs^2 - 12\omega_3\omega_{10} - 6\omega_6v_3^2\omega_3\omega_{10} - 12\omega_6^2\omega_3)\frac{\rho v_3}{12\omega_6^2\omega_3\omega_{10}}$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_2} =$
$(-8\omega_3\omega_4\omega_1^2 - 24v_2^2\omega_3\omega_4\omega_2^2 - 6\omega_4\omega_1^2\omega_2^2 + 18cs^2\omega_4\omega_1^2\omega_2^2 + 16cs^2\omega_3\omega_4\omega_1^2 + 18v_2^2\omega_3\omega_4\omega_1\omega_2^2 - 3v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 - 8v_3^2\omega_4\omega_1\omega_2^2 - 4\omega_3\omega_4\omega_1\omega_2 + 4cs^2\omega_3\omega_4\omega_1\omega_2 + 12cs^2\omega_3\omega_4\omega_1\omega_2^2 - 2v_3^2\omega_3\omega_4\omega_1^2\omega_2 + 6v_3^2\omega_3\omega_1^2\omega_2^2 - 8\omega_3\omega_4\omega_1\omega_2^2 + 8v_3^2\omega_3\omega_4\omega_2^2 + 4\omega_4\omega_1^2\omega_2 - 36cs^2\omega_3\omega_1\omega_2^2 + 12\omega_3\omega_1\omega_2^2 - 12cs^2\omega_4\omega_1^2\omega_2 + 12v_2^2\omega_3\omega_4\omega_1\omega_2 + 18cs^2\omega_3\omega_1^2\omega_2^2 - 18v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 6\omega_3\omega_1^2\omega_2^2 + 16cs^2\omega_3\omega_4\omega_2^2 - 11cs^2\omega_3\omega_4\omega_1^2\omega_2^2 + 12v_2^2\omega_3\omega_4\omega_1 - 12v_3^2\omega_3\omega_1\omega_2^2 + 3\omega_3\omega_4\omega_1^2\omega_2^2 - 4v_3^2\omega_4\omega_1^2\omega_2 + 2v_3^2\omega_3\omega_4\omega_1\omega_2^2 + 6v_3^2\omega_4\omega_1^2\omega_2^2 + 8\omega_3\omega_4\omega_1^2\omega_2 + 4v_3^2\omega_3\omega_4\omega_1^2 - 12cs^2\omega_3\omega_4\omega_1^2\omega_2 + 8\omega_4\omega_1\omega_2^2 - 24cs^2\omega_4\omega_1\omega_2^2)\frac{\rho v_3}{12\omega_3\omega_4\omega_1^2\omega_2^2}$

coefficient $C^{(3)}_{\mathrm{D}_y\mathrm{D}_z^2 v_3}$ **at** $\frac{\partial^3 v_3}{\partial x_2 \partial x_3^2}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = (-\omega_{19}\omega_{11} + \omega_7cs^2\omega_{11}^2 + \omega_{19}cs^2\omega_{11} - 3v_3^2\omega_{11}^2 + \omega_{19}\omega_7cs^2 - \omega_7cs^2\omega_{11} + \omega_{19}\omega_7\omega_{11} + 3v_3^2\omega_{19}\omega_{11} - cs^2\omega_{11}^2 - \omega_{19}\omega_7 + \omega_7\omega_{11} - 3v_3^2\omega_{19}\omega_7\omega_{11} + 3v_3^2\omega_7\omega_{11}^2 + \omega_{11}^2 - \omega_{19}\omega_7cs^2\omega_{11} - 3v_3^2\omega_7\omega_{11} - \omega_7\omega_{11}^2 + 3v_3^2\omega_{19}\omega_7)\frac{\rho v_2}{\omega_{19}\omega_7\omega_{11}^2}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = (-\omega_{19}\omega_{11} + \omega_7\omega_{11}^2cs^2 - 3v_3^2\omega_{11}^2 - \omega_{19}\omega_7\omega_{11}cs^2 + \omega_{19}\omega_7\omega_{11} + 3v_3^2\omega_{19}\omega_{11} - \omega_{19}\omega_7 - \omega_{11}^2cs^2 + \omega_{19}\omega_7cs^2 + \omega_7\omega_{11} - 3v_3^2\omega_{19}\omega_7\omega_{11} + \omega_{19}\omega_{11}cs^2 + 3v_3^2\omega_7\omega_{11}^2 + \omega_{11}^2 - \omega_7\omega_{11}cs^2 - 3v_3^2\omega_7\omega_{11} - \omega_7\omega_{11}^2 + 3v_3^2\omega_{19}\omega_7)\frac{\rho v_2}{\omega_{19}\omega_7\omega_{11}^2}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^2 v_3} =$
$(-4cs^2\omega_3\omega_1\omega_2 + 4\omega_3\omega_1\omega_2 - 4\omega_3\omega_1^2 - 2\omega_1\omega_2^2 - 6cs^2\omega_1^2\omega_2 - 4cs^2\omega_3\omega_2^2 - v_2^2\omega_3\omega_1^2\omega_2 - 2v_2^2\omega_1^2\omega_2 - 2v_2^2\omega_3\omega_2^2 + 6v_3^2\omega_3\omega_1^2 + 3cs^2\omega_3\omega_1\omega_2^2 - \omega_3\omega_1\omega_2^2 + 8cs^2\omega_3\omega_1^2 + 6cs^2\omega_1\omega_2^2 + 2\omega_1^2\omega_2 + 2v_2^2\omega_3\omega_1^2 - 12v_3^2\omega_3\omega_1\omega_2 + v_2^2\omega_3\omega_1\omega_2^2 + 6v_3^2\omega_3\omega_2^2 - 3cs^2\omega_3\omega_1^2\omega_2 + \omega_3\omega_1^2\omega_2 + 2v_2^2\omega_1\omega_2^2)\frac{\rho v_2}{6\omega_3\omega_1^2\omega_2^2}$

coefficient $C^{(3)}_{\mathrm{D}_z^3 \rho}$ **at** $\frac{\partial^3 \rho}{\partial x_3^3}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_z^3 \rho} =$
$(-cs^2\omega^2 - 144v_3^2cs^2\omega + 36v_3^4\omega - 36v_3^4\omega - 12cs^2 + 7v_3^4\omega^2 + 24v_3^2cs^2\omega^2 + 12cs^2\omega + 36v_3^2\omega + cs^4\omega^2 - 36v_3^2 + 144v_3^2cs^2 - 12cs^4\omega - 7v_3^2\omega^2 + 12cs^4)\frac{1}{12\omega^2}$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_z^3 \rho} = (36v_3^4 - 7v_3^4\omega_{11}^2 + cs^4\omega_{11}^2 - 12cs^4\omega_{11} + 36v_3^2\omega_{11} + 12cs^4 + 144v_3^2cs^2 - 144v_3^2cs^2\omega_{11} - cs^2\omega_{11}^2 + 7v_3^4\omega_{11}^2 - 12cs^2 - 36v_3^2 - 36v_3^4\omega_{11} + 12cs^2\omega_{11} + 24v_3^2cs^2\omega_{11}^2)\frac{1}{12\omega_{11}^2}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_z^3 \rho} = (-144v_3^2\omega_{11}cs^2 + 36v_3^4 - 7v_3^4\omega_{11}^2 + 36v_3^2\omega_{11} + \omega_{11}^2cs^4 - 12cs^2 + 12\omega_{11}cs^2 + 144v_3^2cs^2 + 7v_3^4\omega_{11}^2 - \omega_{11}^2cs^2 + 12cs^4 - 12\omega_{11}cs^4 - 36v_3^2 - 36v_3^4\omega_{11} + 24v_3^2\omega_{11}^2cs^2)\frac{1}{12\omega_{11}^2}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_z^3 \rho} = (12cs^4 + 144cs^2v_3^2 - cs^2\omega_{11}^2 + 36v_3^4 + 24cs^2v_3^2\omega_{11}^2 - 7v_3^4\omega_{11}^2 + 36v_3^2\omega_{11} - 144cs^2v_3^2\omega_{11} + 12cs^2\omega_{11} + 7v_3^4\omega_{11}^2 + cs^4\omega_{11}^2 -$

$36v_3^2 - 12cs^2 - 12cs^4\omega_{11} - 36v_3^4\omega_{11})\frac{1}{12\omega_{11}^2}$

$C_{\mathrm{D}_3^3\rho}^{(3),\mathrm{CLBM2}} = (-12cs^4\omega_{11} + 36v_3^4 - 7v_3^2\omega_{11}^2 + 36v_3^2\omega_{11} + 144v_3^2cs^2 + cs^4\omega_{11}^2 + 12cs^4 + 7v_3^4\omega_{11}^2 + 24v_3^2cs^2\omega_{11}^2 + 12cs^2\omega_{11} - 12cs^2 - cs^2\omega_{11}^2 - 36v_3^2 - 144v_3^2cs^2\omega_{11} - 36v_3^4\omega_{11})\frac{1}{12\omega_{11}^2}$

$C_{\mathrm{D}_z^3\rho}^{(3),\mathrm{CuLBM1}} = (-12cs^2 + 36v_3^4 + 24\omega_6^2v_3^2cs^2 - 36\omega_6v_3^4 + 12\omega_6cs^2 - 7\omega_6^2v_3^2 + \omega_6^2cs^4 + 36\omega_6v_3^2 - 12\omega_6cs^4 + 7\omega_6^2v_3^4 - \omega_6^2cs^2 + 12cs^4 - 36v_3^2 - 144\omega_6v_3^2cs^2 + 144v_3^2cs^2)\frac{1}{12\omega_6^2}$

$C_{\mathrm{D}_z^3\rho}^{(3),\mathrm{CuLBM2}} = (cs^4\omega_1^2\omega_2^2 + 16v_3^4\omega_2^2 - 24v_3^4\omega_1\omega_2^2 - 4v_3^2\omega_1^2 + 72cs^2v_3^2\omega_2^2 - 16v_3^2\omega_1\omega_2 + 4cs^2\omega_1^2\omega_2 + 48cs^2v_3^2\omega_1\omega_2 + 24v_3^2\omega_1\omega_2^2 - cs^2\omega_1^2\omega_2^2 - 96cs^2v_3^2\omega_1\omega_2^2 - 4cs^4\omega_1^2\omega_2 + 8cs^4\omega_2^2 + 16v_3^4\omega_1\omega_2 - 4cs^2\omega_1^2 + 24cs^2v_3^2\omega_1^2 - 12v_3^4\omega_1^2\omega_2 + 8cs^2\omega_1\omega_2^2 - 16v_3^2\omega_2^2 - 7v_3^2\omega_1^2\omega_2^2 + 24cs^2v_3^2\omega_1^2\omega_2^2 + 4v_3^4\omega_1^2 - 8cs^2\omega_2^2 + 12v_3^4\omega_1^2\omega_2 - 48cs^2v_3^4\omega_1^2\omega_2 + 4cs^4\omega_1^2 + 7v_3^4\omega_1^2\omega_2^2 - 8cs^4\omega_1\omega_2^2)\frac{1}{12\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_z^3v_3}^{(3)}$ at $\frac{\partial^3 v_3}{\partial x_3^3}$:

$C_{\mathrm{D}_z^3v_3}^{(3),\mathrm{SRT}} = (-24 + 5cs^2\omega^2 - 4\omega^2 + 36cs^2 - 36cs^2\omega - 60v_3^2\omega + 60v_3^2 + 24\omega + 11v_3^2\omega^2)\frac{\rho v_3}{6\omega^2}$

$C_{\mathrm{D}_z^3v_3}^{(3),\mathrm{MRT1}} = (-24 + 11v_3^2\omega_{11}^2 - 60v_3^2\omega_{11} + 5cs^2\omega_{11}^2 + 36cs^2 + 24\omega_{11} - 4\omega_{11}^2 + 60v_3^2 - 36cs^2\omega_{11})\frac{\rho v_3}{6\omega_{11}^2}$

$C_{\mathrm{D}_z^3v_3}^{(3),\mathrm{MRT2}} = (-24 + 11v_3^2\omega_{11}^2 - 60v_3^2\omega_{11} + 36cs^2 - 36\omega_{11}cs^2 + 5\omega_{11}^2cs^2 + 24\omega_{11} - 4\omega_{11}^2 + 60v_3^2)\frac{\rho v_3}{6\omega_{11}^2}$

$C_{\mathrm{D}_z^3v_3}^{(3),\mathrm{CLBM1}} = (-24 + 5cs^2\omega_{11}^2 + 11v_3^2\omega_{11}^2 - 60v_3^2\omega_{11} - 36cs^2\omega_{11} + 24\omega_{11} - 4\omega_{11}^2 + 60v_3^2 + 36cs^2)\frac{\rho v_3}{6\omega_{11}^2}$

$C_{\mathrm{D}_z^3v_3}^{(3),\mathrm{CLBM2}} = (-24 + 11v_3^2\omega_{11}^2 - 60v_3^2\omega_{11} - 36cs^2\omega_{11} + 36cs^2 + 24\omega_{11} - 4\omega_{11}^2 + 5cs^2\omega_{11}^2 + 60v_3^2)\frac{\rho v_3}{6\omega_{11}^2}$

$C_{\mathrm{D}_z^3v_3}^{(3),\mathrm{CuLBM1}} = (-24 + 36cs^2 + 24\omega_6 - 36\omega_6cs^2 + 11\omega_6^2v_3^2 - 60\omega_6v_3^2 + 5\omega_6^2cs^2 + 60v_3^2 - 4\omega_6^2)\frac{\rho v_3}{6\omega_6^2}$

$C_{\mathrm{D}_z^3v_3}^{(3),\mathrm{CuLBM2}} = (8v_3^2\omega_1^2 + 16\omega_1\omega_2^2 + 24v_3^2\omega_1\omega_2 - 12cs^2\omega_1^2\omega_2 - 40v_3^2\omega_1\omega_2^2 + 5cs^2\omega_1^2\omega_2^2 - 12\omega_2^2 - 8\omega_1\omega_2 + 8cs^2\omega_1^2 - 24cs^2\omega_1\omega_2^2 + 28v_3^2\omega_2^2 + 11v_3^2\omega_1^2\omega_2^2 + 8\omega_1^2\omega_2 - 4\omega_1^2\omega_2^2 + 20cs^2\omega_2^2 + 8cs^2\omega_1\omega_2 - 20v_3^2\omega_1^2\omega_2 - 4\omega_1^2)\frac{\rho v_3}{6\omega_1^2\omega_2^2}$

coefficient $C_{\mathrm{D}_x^4\rho}^{(3)}$ at $\frac{\partial^4\rho}{\partial x_1^4}$:

$C_{\mathrm{D}_x^4\rho}^{(3),\mathrm{SRT}} = (3v_1^2\omega - 12v_1^2cs^2\omega - 2cs^2 + 6v_1^4 + 24v_1^2cs^2 + cs^2\omega - 6v_1^2 - 3v_1^4\omega - cs^4\omega + 2cs^4)\frac{v_3}{24\omega}$

$C_{\mathrm{D}_x^4\rho}^{(3),\mathrm{MRT1}} = (48v_1^2\omega_9^2\omega_{13} + 24v_1^4\omega_9\omega_6^2\omega_{13} - 12v_1^2\omega_9\omega_6^2\omega_{13}^2cs^2 - 144v_1^2\omega_6^2\omega_{13}^2cs^2 + 96v_1^2\omega_9\omega_6\omega_{13}^2 - 144v_1^2\omega_9^2\omega_6cs^2 + 72v_1^4\omega_6\omega_{13}^2 - 24\omega_9^2\omega_{13}cs^4 + 432v_1^2\omega_9^2\omega_6\omega_{13}cs^2 + 96v_1^4\omega_9\omega_6\omega_{13} + 14\omega_9\omega_6^2\omega_{13}^2cs^4 + 24\omega_9\omega_{13}^2cs^4 + 48\omega_6\omega_{13}^2cs^2 + 3v_1^2\omega_9\omega_6^2\omega_{13}^2 - 48v_1^4\omega_9\omega_{13} - 48\omega_9\omega_6\omega_{13}cs^2 + 30v_1^2\omega_9^2\omega_6^2\omega_{13} - 12\omega_9^2\omega_6^2cs^2 + 216v_1^2\omega_9\omega_{13}^2cs^2 - 12\omega_9\omega_6^2\omega_{13}cs^4 - 72v_1^2\omega_6\omega_{13}^2 - 432v_1^2\omega_9\omega_6\omega_{13}^2cs^2 + \omega_9^2\omega_6^2\omega_{13}^2cs^2 + 48v_1^2\omega_9\omega_6\omega_{13} - 12\omega_6^2\omega_{13}^2cs^4 - 24\omega_6\omega_{13}^2cs^2 + 72v_1^4\omega_9\omega_6^2\omega_{13} + 36v_1^4\omega_9\omega_6^2\omega_{13} - 24\omega_9^2\omega_6cs^4 - 216v_1^2\omega_9^2\omega_{13}cs^2 - 24v_1^4\omega_9\omega_6^2\omega_{13} + 12v_1^4\omega_9^2\omega_6^2 + 12\omega_9^2\omega_6^2\omega_{13}cs^2 - 48v_1^2\omega_9\omega_{13}^2 + 150v_1^2\omega_9\omega_6^2\omega_{13}cs^2 + 48\omega_9^2\omega_6\omega_{13}cs^4 + 12\omega_9^2\omega_6^2cs^4 - 96v_1^4\omega_9\omega_6\omega_{13}^2 + 24\omega_6\omega_{13}^2cs^4 + 24\omega_9^2\omega_6cs^2 - 96v_1^2\omega_9^2\omega_6\omega_{13} - \omega_9^2\omega_6^2\omega_{13}^2cs^4 - 3v_1^4\omega_9^2\omega_6^2\omega_{13}^2 + 24v_1^2\omega_9^2\omega_6 - 144v_1^2\omega_9\omega_6\omega_{13}cs^2 + 12\omega_6^2\omega_{13}^2cs^2 + 36v_1^2\omega_6^2\omega_{13}^2 + 288v_1^2\omega_6\omega_{13}^2cs^2 - 30v_1^4\omega_9^2\omega_6^2\omega_{13} - 12v_1^2\omega_9^2\omega_6^2 + 24\omega_9\omega_{13}cs^2 + 48v_1^4\omega_9\omega_{13}^2 - 24\omega_9\omega_{13}^2cs^2 - 48\omega_9\omega_6\omega_{13}^2cs^4 - 48v_1^4\omega_9\omega_6\omega_{13} - 126v_1^2\omega_9\omega_6^2\omega_{13}cs^2 - 24v_1^4\omega_9\omega_6 - 36v_1^2\omega_9\omega_6^2\omega_{13} + 72v_1^2\omega_9^2\omega_6^2cs^2 - 36v_1^4\omega_6^2\omega_{13} - 14\omega_9\omega_6^2\omega_{13}^2cs^2)\frac{v_3}{24\omega_9^2\omega_6^2\omega_{13}^2}$

$C_{\mathrm{D}_x^4\rho}^{(3),\mathrm{MRT2}} =$
$(-126v_1^2\omega_9\omega_6^2\omega_{13}cs^2 + 48v_1^2\omega_9^2\omega_{13} - 48\omega_9\omega_6\omega_{13}^2cs^4 + 24v_1^4\omega_9\omega_6^2\omega_{13} - 24\omega_9\omega_{13}^2cs^2 + 96v_1^2\omega_9\omega_6\omega_{13}^2 - 14\omega_9\omega_6^2\omega_{13}^2cs^2 + 72v_1^2\omega_9^2\omega_6^2cs^2 + 72v_1^4\omega_6\omega_{13}^2 + 24\omega_9^2\omega_{13}cs^2 + 96v_1^4\omega_9\omega_6\omega_{13} + 288v_1^2\omega_6\omega_{13}^2cs^2 + 3v_1^2\omega_9\omega_6^2\omega_{13}^2 - 48v_1^4\omega_9\omega_{13} + 24\omega_9\omega_6cs^2 + 24\omega_6\omega_{13}^2cs^4 + 30v_1^2\omega_9^2\omega_6\omega_{13} + 12\omega_6^2\omega_{13}^2cs^2 - 144v_1^2\omega_9\omega_6\omega_{13}cs^2 - 72v_1^2\omega_6\omega_{13}^2 - \omega_9^2\omega_{13}^2cs^4 + 48v_1^2\omega_9\omega_6\omega_{13} + 12\omega_9^2\omega_6\omega_{13}cs^2 + 12\omega_9^2\omega_6cs^4 + 48\omega_9^2\omega_6\omega_{13}cs^4 + 36v_1^4\omega_9\omega_6^2\omega_{13} + 150v_1^2\omega_9\omega_6^2\omega_{13}cs^2 - 12\omega_6^2\omega_{13}cs^4 - 24v_1^4\omega_9\omega_6^2\omega_{13} + 12v_1^4\omega_9^2\omega_6^2 + \omega_9^2\omega_6^2\omega_{13}^2cs^2 - 48v_1^2\omega_9\omega_{13}^2 - 216v_1^2\omega_9^2\omega_{13}cs^2 - 24\omega_9^2\omega_6cs^4 + 72v_1^2\omega_9\omega_6^2\omega_{13}cs^2 - 24\omega_6\omega_{13}^2cs^2 - 96v_1^4\omega_9\omega_6\omega_{13}^2 - 12\omega_9^2\omega_6^2cs^2 - 48\omega_9\omega_6\omega_{13}cs^2 - 96v_1^2\omega_9^2\omega_6\omega_{13} - 432v_1^2\omega_9\omega_6\omega_{13}^2cs^2 - 3v_1^4\omega_9^2\omega_6^2\omega_{13}^2 + 24v_1^4\omega_9\omega_6 - 12\omega_9^2\omega_6^2\omega_{13}cs^4 + 216v_1^2\omega_9\omega_{13}^2cs^2 + 36v_1^2\omega_6^2\omega_{13}^2 + 14\omega_9\omega_6^2\omega_{13}^2cs^4 - 30v_1^4\omega_9^2\omega_6\omega_{13} - 12v_1^2\omega_9^2\omega_6^2 + 432v_1^2\omega_9^2\omega_6\omega_{13}cs^2 + 48v_1^4\omega_9\omega_{13}^2 + 48\omega_9\omega_6\omega_{13}^2cs^2 + 24\omega_9\omega_{13}^2cs^4 - 12v_1^2\omega_9\omega_6^2\omega_{13}^2cs^2 - 144v_1^2\omega_6^2\omega_{13}^2cs^2 - 48v_1^4\omega_9\omega_6\omega_{13} - 24v_1^4\omega_9\omega_6 - 24\omega_9^2\omega_{13}cs^4 - 36v_1^2\omega_9\omega_6^2\omega_{13} - 144v_1^2\omega_9^2\omega_6cs^2 - 36v_1^4\omega_6^2\omega_{13})\frac{v_3}{24\omega_9^2\omega_6^2\omega_{13}^2}$

$C_{\mathrm{D}_x^4\rho}^{(3),\mathrm{CLBM1}} = (2cs^4 - 12v_1^2\omega_9cs^2 - 3v_1^4\omega_9 + \omega_9cs^2 + 6v_1^4 - 6v_1^2 + 3v_1^2\omega_9 - \omega_9cs^4 + 24v_1^2cs^2 - 2cs^2)\frac{v_3}{24\omega_9}$

$C_{\mathrm{D}_x^4\rho}^{(3),\mathrm{CLBM2}} = (\omega_9cs^2 - 3v_1^4\omega_9 + 6v_1^4 + 2cs^4 - 12v_1^2\omega_9cs^2 - 6v_1^2 + 3v_1^2\omega_9 - 2cs^2 + 24v_1^2cs^2 - \omega_9cs^4)\frac{v_3}{24\omega_9}$

$$C^{(3),\text{CuLBM1}}_{\text{D}^4_x \rho} = (-2cs^2 - 3v_1^4\omega_4 + 6v_1^4 - \omega_4 cs^4 + 24v_1^2 cs^2 - 6v_1^2 + 3v_1^2\omega_4 + \omega_4 cs^2 + 2cs^4 - 12v_1^2\omega_4 cs^2)\frac{v_3}{24\omega_4}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}^4_x \rho} = (4cs^4\omega_2 - 2cs^2\omega_1 + 9v_1^2\omega_1\omega_2 + 6v_1^4\omega_1 - 9v_1^4\omega_1\omega_2 - 12v_1^2\omega_2 + 24v_1^2 cs^2\omega_1 - 36v_1^2 cs^2\omega_1\omega_2 - 3cs^4\omega_1\omega_2 - 4cs^2\omega_2 + 2cs^4\omega_1 + 3cs^2\omega_1\omega_2 - 6v_1^2\omega_1 + 12v_1^4\omega_2 + 48v_1^2 cs^2\omega_2)\frac{v_3}{72\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}^4_x v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^4}$**:**

$$C^{(3),\text{SRT}}_{\text{D}^4_x v_1} = (-4 - 5v_1^2\omega + 6cs^2 - 3cs^2\omega + 10v_1^2 + 2\omega)\frac{\rho v_1 v_3}{12\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}^4_x v_1} = (-48\omega_6\omega_{13}^2 - 84v_1^2\omega_9^2\omega_{13} - 168v_1^2\omega_9\omega_6\omega_{13}^2 + 12\omega_9\omega_6^2\omega_{13}cs^2 - 72\omega_9^2\omega_6\omega_{13} - 12\omega_9\omega_6^2\omega_{13} - 120\omega_9\omega_6\omega_{13}^2 cs^2 - 5v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 25\omega_9\omega_6^2\omega_{13}^2 + 120\omega_9^2\omega_6\omega_{13}cs^2 - 51v_1^2\omega_9\omega_6^2\omega_{13} + 24\omega_9^2\omega_6^2 cs^2 + 120v_1^2\omega_6\omega_{13}^2 + 36\omega_9^2\omega_{13} - 3\omega_9^2\omega_6^2\omega_{13}cs^2 - 72v_1^2\omega_9\omega_6\omega_{13} + 72\omega_6\omega_{13}^2 cs^2 + 36v_1^2\omega_9\omega_6^2\omega_{13} - 33\omega_9^2\omega_6^2\omega_{13}cs^2 + 2\omega_9^2\omega_6^2\omega_{13}^2 + 84v_1^2\omega_9\omega_{13}^2 - 12\omega_9^2\omega_6^2 + 72\omega_9\omega_6\omega_{13}^2 - 48\omega_9^2\omega_6 cs^2 + 168v_1^2\omega_9^2\omega_6\omega_{13} - 48v_1^2\omega_9^2\omega_6 - 36\omega_6^2\omega_{13}^2 cs^2 - 60v_1^2\omega_6^2\omega_{13}^2 + 24v_1^2\omega_9^2\omega_6^2 - 36\omega_9\omega_{13}^2 - 60\omega_6^2\omega_{13}cs^2 - 24\omega_9\omega_6\omega_{13}cs^2 + 24\omega_9\omega_6\omega_{13} + 24\omega_6^2\omega_{13} + 60\omega_9\omega_{13}^2 cs^2 + 24\omega_9^2\omega_6 + 61v_1^2\omega_9\omega_6^2\omega_{13} + 21\omega_9^2\omega_6^2\omega_{13} + 39\omega_9\omega_6^2\omega_{13}^2 cs^2)\frac{\rho v_1 v_3}{12\omega_9^2\omega_6^2\omega_{13}^2}$$

$$C^{(3),\text{MRT2}}_{\text{D}^4_x v_1} =$$
$(-48\omega_6\omega_{13}^2 - 84v_1^2\omega_9^2\omega_{13} + 60\omega_9\omega_{13}^2 cs^2 - 168v_1^2\omega_9\omega_6\omega_{13}^2 + 39\omega_9\omega_6^2\omega_{13}^2 cs^2 - 72\omega_9^2\omega_6\omega_{13} - 60\omega_6^2\omega_{13}cs^2 - 12\omega_9\omega_6^2\omega_{13} - 24\omega_9\omega_6\omega_{13}cs^2 - 5v_1^2\omega_9^2\omega_6^2\omega_{13}^2 - 25\omega_9\omega_6^2\omega_{13}^2 - 48\omega_9^2\omega_6 cs^2 - 51v_1^2\omega_9\omega_6^2\omega_{13} - 36\omega_6^2\omega_{13}^2 cs^2 + 120v_1^2\omega_6\omega_{13}^2 + 36\omega_9^2\omega_{13} - 72v_1^2\omega_9\omega_6\omega_{13} - 33\omega_9^2\omega_6^2\omega_{13}cs^2 + 36v_1^2\omega_9\omega_6^2\omega_{13} + 2\omega_9\omega_6^2\omega_{13}^2 - 3\omega_9^2\omega_6^2\omega_{13}cs^2 + 84v_1^2\omega_9\omega_{13}^2 - 12\omega_9^2\omega_6^2 + 72\omega_6\omega_{13}^2 cs^2 + 72\omega_9\omega_6\omega_{13}^2 + 24\omega_9^2\omega_6^2 cs^2 + 120\omega_9\omega_6\omega_{13}cs^2 + 168v_1^2\omega_9^2\omega_6\omega_{13} - 48v_1^2\omega_9^2\omega_6 - 60v_1^2\omega_6^2\omega_{13}^2 + 24v_1^2\omega_9^2\omega_6^2 - 36\omega_9\omega_{13}^2 + 24\omega_9\omega_6\omega_{13} - 120\omega_9\omega_6\omega_{13}^2 cs^2 + 24\omega_6^2\omega_{13} + 24\omega_9^2\omega_6 + 61v_1^2\omega_9\omega_6^2\omega_{13} + 12\omega_9\omega_6^2\omega_{13}^2 cs^2 + 21\omega_9^2\omega_6^2\omega_{13})\frac{\rho v_1 v_3}{12\omega_9^2\omega_6^2\omega_{13}^2}$

$$C^{(3),\text{CLBM1}}_{\text{D}^4_x v_1} = (-4 + 2\omega_9 - 3\omega_9 cs^2 + 10v_1^2 - 5v_1^2\omega_9 + 6cs^2)\frac{\rho v_1 v_3}{12\omega_9}$$

$$C^{(3),\text{CLBM2}}_{\text{D}^4_x v_1} = (-4 + 2\omega_9 - 3\omega_9 cs^2 + 10v_1^2 - 5v_1^2\omega_9 + 6cs^2)\frac{\rho v_1 v_3}{12\omega_9}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}^4_x v_1} = (-4 + 6cs^2 + 10v_1^2 - 5v_1^2\omega_4 + 2\omega_4 - 3\omega_4 cs^2)\frac{\rho v_1 v_3}{12\omega_4}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}^4_x v_1} = (6cs^2\omega_1 - 15v_1^2\omega_1\omega_2 + 20v_1^2\omega_2 + 6\omega_1\omega_2 + 12cs^2\omega_2 - 4\omega_1 - 9cs^2\omega_1\omega_2 + 10v_1^2\omega_1 - 8\omega_2)\frac{\rho v_1 v_3}{36\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}^4_x v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^4}$**:**

$$C^{(3),\text{SRT}}_{\text{D}^4_x v_3} = (-14cs^2\omega^2 - 108v_1^2\omega + cs^2\omega^3 + 216v_1^2 cs^2\omega - 24cs^2 - 3v_1^2\omega^3 - 72v_1^4 - 144v_1^2 cs^2 - 84v_1^2 cs^2\omega^2 + 6v_1^2 cs^2\omega^3 + 36cs^2\omega + 42v_1^2\omega^2 + 72v_1^2 - 3cs^4\omega^3 + 30cs^4\omega^2 + 108v_1^4\omega - 72cs^4\omega - 42v_1^4\omega^2 + 48cs^4 + 3v_1^4\omega^3)\frac{\rho}{24\omega^3}$$

$$C^{(3),\text{MRT1}}_{\text{D}^4_x v_3} = (\omega_6^3\omega_{13}^2 cs^2 + 12v_1^4\omega_6^3 - 72v_1^2\omega_6^2\omega_{13}^2 cs^2 + 24v_1^4\omega_6\omega_{13} - 96v_1^2\omega_{13}^2 cs^2 - 24v_1^2\omega_6\omega_{13}cs^2 + 12v_1^4\omega_6^3 cs^2 - 24v_1^4\omega_6 + 48v_1^2\omega_6\omega_{13} + 6\omega_6^3\omega_{13}cs^4 + 24\omega_6\omega_{13}cs^4 - 24v_1^2\omega_6\omega_6^2 + 24\omega_6^2\omega_{13}cs^2 - 12v_1^2\omega_6^3\omega_{13}cs^2 - 48v_1^4\omega_6\omega_{13} + 24\omega_6^2\omega_{13}^2 cs^4 + 12\omega_6\omega_{13}^2 cs^2 - 24v_1^2\omega_6^2 cs^2 + 24v_1^2\omega_6^2 + 72v_1^4\omega_6^2\omega_{13} - 24\omega_6^2\omega_{13}cs^4 - 24\omega_6\omega_{13}cs^2 + 24\omega_{13}^2 cs^4 + 18v_1^2\omega_6^3\omega_{13} + 3v_1^4\omega_6^3\omega_{13}^2 - 48\omega_6\omega_{13}^2 cs^4 - 12v_1^2\omega_6^3 + 6v_1^2\omega_6^3\omega_{13}cs^2 - 8\omega_6^2\omega_{13}^2 cs^2 + 24v_1^2\omega_6^2\omega_{13}^2 + 156v_1^2\omega_6\omega_{13}^2 cs^2 - 72v_1^2\omega_6^2\omega_{13} - 18v_1^4\omega_6^3\omega_{13} - 3\omega_6^3\omega_{13}^2 cs^4 - 3v_1^2\omega_6^3\omega_{13}^2 + 48v_1^2\omega_6\omega_{13}^2 cs^2 - 6\omega_6^3\omega_{13}cs^2 - 24v_1^4\omega_6^2\omega_{13})\frac{\rho}{24\omega_6^3\omega_{13}^2}$$

$$C^{(3),\text{MRT2}}_{\text{D}^4_x v_3} = (-6\omega_6^3\omega_{13}cs^2 + 48v_1^2\omega_6^2\omega_{13}cs^2 + 12v_1^4\omega_6^3 + 24v_1^4\omega_6\omega_{13} - 24v_1^4\omega_6^2 + 156v_1^2\omega_6\omega_{13}^2 cs^2 + 48v_1^2\omega_6\omega_{13} - 3\omega_6^3\omega_{13}^2 cs^4 - 48\omega_6\omega_{13}^2 cs^4 - 8\omega_6^2\omega_{13}^2 cs^2 + 6v_1^2\omega_6^3\omega_{13}^2 cs^2 - 24v_1^2\omega_6\omega_{13} - 24\omega_6^2\omega_{13}cs^4 - 48v_1^4\omega_6\omega_{13} + 24\omega_{13}^2 cs^4 - 24\omega_6\omega_{13}cs^2 + 24\omega_6^2\omega_{13}cs^4 + 24v_1^2\omega_6^2 + 72v_1^4\omega_6^2\omega_{13} - 24v_1^2\omega_6^2 cs^2 + 18v_1^2\omega_6^3\omega_{13} + 12\omega_6\omega_{13}^2 cs^2 + 3v_1^4\omega_6^3\omega_{13}^2 + 24\omega_6\omega_{13}cs^4 - 12v_1^2\omega_6^3 - 12v_1^2\omega_6^3\omega_{13}cs^2 + 24\omega_6^2\omega_{13}cs^2 + 24v_1^2\omega_6^2\omega_{13} - 72v_1^2\omega_6^2\omega_{13} + 12v_1^2\omega_6^3 cs^2 - 24v_1^2\omega_6\omega_{13}cs^2 + 6\omega_6^3\omega_{13}cs^4 - 18v_1^4\omega_6^3\omega_{13} - 72v_1^2\omega_6^2\omega_{13}^2 cs^2 - 3v_1^2\omega_6^3\omega_{13}^2 + \omega_6^3\omega_{13}^2 cs^2 - 96v_1^2\omega_{13}^2 cs^2 - 24v_1^4\omega_6^2\omega_{13})\frac{\rho}{24\omega_6^3\omega_{13}^2}$$

$$C^{(3),\text{CLBM1}}_{\text{D}^4_x v_3} = (-48\omega_6 cs^4\omega_{13}^2 + 36v_1^4\omega_6^3 + 6\omega_6^3 cs^4\omega_{13} - 36v_1^2\omega_6 cs^2\omega_{13}^2 - 72v_1^2\omega_6^3 cs^2\omega_{13} + 24\omega_6^2 cs^2\omega_{13} - 72v_1^4\omega_6^2 + 24cs^4\omega_{13}^2 - 216v_1^2\omega_6^2 cs^2 + 72v_1^2\omega_6 cs^2\omega_{13} - 8\omega_6^2 cs^2\omega_{13}^2 + 6v_1^2\omega_6^3 cs^2\omega_{13}^2 + 108v_1^2\omega_6^3 cs^2 + 24\omega_6 cs^4\omega_{13} - 3\omega_6^3 cs^4\omega_{13}^2 + 72v_1^2\omega_6^2 + 72v_1^4\omega_6^2\omega_{13} + 30v_1^2\omega_6^3\omega_{13} + 3v_1^4\omega_6^3\omega_{13}^2 + 12\omega_6 cs^2\omega_{13}^2 - 36v_1^2\omega_6^3 - 6\omega_6^3 cs^2\omega_{13} + 144v_1^2\omega_6^2 cs^2\omega_{13} - 24\omega_6^2 cs^4\omega_{13} + 12v_1^2\omega_6^2\omega_{13} + 24\omega_6 cs^4\omega_{13}^2 - 72v_1^2\omega_6^2\omega_{13} - 30v_1^4\omega_6^3\omega_{13} - 24\omega_6 cs^2\omega_{13} - 12v_1^2\omega_6^2 cs^2\omega_{13} + \omega_6^3 cs^2\omega_{13}^2 - 3v_1^2\omega_6^3\omega_{13} - 12v_1^4\omega_6^2\omega_{13})\frac{\rho}{24\omega_6^3\omega_{13}^2}$$

$$C^{(3),\text{CLBM2}}_{\text{D}^4_x v_3} = (36v_1^4\omega_6^3 + 108v_1^2\omega_6^3 cs^2 + 72v_1^2\omega_6\omega_{13}cs^2 + 6\omega_6^3\omega_{13}cs^4 - 12v_1^2\omega_6^2\omega_{13}^2 cs^2 + \omega_6^3\omega_{13}^2 cs^2 - 72v_1^4\omega_6^2 + 24\omega_6^2\omega_{13}cs^4 - 216v_1^2\omega_6^2 cs^2 + 12\omega_6\omega_{13}^2 cs^2 + 24\omega_6\omega_{13}cs^4 - 72v_1^2\omega_6^3\omega_{13}cs^2 + 24\omega_6^2\omega_{13}cs^2 + 72v_1^2\omega_6^2 + 72v_1^4\omega_6^2\omega_{13} - 48\omega_6\omega_{13}^2 cs^4 - 8\omega_6^2\omega_{13}^2 cs^2 + 30v_1^2\omega_6^3\omega_{13} + 6v_1^2\omega_6^3\omega_{13}^2 cs^2 + 3v_1^4\omega_6^3\omega_{13} - 24\omega_6^2\omega_{13}cs^4 - 36v_1^2\omega_6^3 + 24\omega_{13}^2 cs^4 + 12v_1^2\omega_6^2\omega_{13} - 24\omega_6\omega_{13}cs^2 - 6\omega_6^3\omega_{13}cs^2 + 144v_1^2\omega_6^2\omega_{13}cs^2 - 72v_1^2\omega_6^2\omega_{13} - 30v_1^4\omega_6^3\omega_{13} - 3v_1^2\omega_6^3\omega_{13}^2 - 36v_1^2\omega_6\omega_{13}cs^2 - 3\omega_6^3\omega_{13}cs^4 - 12v_1^4\omega_6^2\omega_{13})\frac{\rho}{24\omega_6^3\omega_{13}^2}$$

$C_{\mathrm{D}_x^4 v_3}^{(3),\mathrm{CuLBM1}} = (24\omega_{12}^2 cs^4\omega_2^2 - 36v_1^2\omega_2^3 - 24\omega_{12}cs^2\omega_2 - 30v_1^4\omega_{12}\omega_2^3 - 12v_1^2\omega_{12}^2 cs^2\omega_2^2 - 3\omega_{12}^2 cs^4\omega_2^3 + 6v_1^2\omega_{12}^2 cs^2\omega_2^3 + 72v_1^4\omega_{12}\omega_2^2 + 72v_1^2\omega_2^2 - 216v_1^2 cs^2\omega_2^2 - 6\omega_{12}cs^2\omega_2^3 + 24\omega_{12}^2 cs^4 + 30v_1^2\omega_{12}\omega_2^3 + 24\omega_{12}cs^2\omega_2^2 + 108v_1^2 cs^2\omega_2^3 - 36v_1^2\omega_{12}^2 cs^2\omega_2 - 72v_1^2\omega_{12}\omega_2^2 - 48\omega_{12}^2 cs^4\omega_2 + \omega_{12}^2 cs^2\omega_2^3 + 12v_1^2\omega_{12}^2\omega_2^2 - 72v_1^4\omega_2^2 + 72v_1^2\omega_{12}cs^2\omega_2 - 8\omega_{12}^2 cs^2\omega_2^2 + 24\omega_{12}cs^4\omega_2 + 36v_1^4\omega_2^3 - 3v_1^2\omega_{12}\omega_2^3 - 24\omega_{12}cs^4\omega_2^2 - 12v_1^4\omega_{12}^2\omega_2^2 + 144v_1^2\omega_{12}cs^2\omega_2^2 + 12\omega_{12}^2 cs^2\omega_2 + 6\omega_{12}cs^4\omega_2^2 - 72v_1^2\omega_{12}cs^2\omega_2^3 + 3v_1^4\omega_{12}^2\omega_2^3)\frac{\rho}{24\omega_{12}^2\omega_2^3}$

$C_{\mathrm{D}_x^4 v_3}^{(3),\mathrm{CuLBM2}} = (cs^2\omega_3^2\omega_4^2\omega_1^3 + 12cs^4\omega_3\omega_4^2\omega_1 + 18v_1^4\omega_3\omega_4\omega_1^3 - 12v_1^4\omega_3^2\omega_4^2\omega_1 - 8cs^2\omega_3^2\omega_4^2\omega_1^2 + 3v_1^4\omega_3^2\omega_4^2\omega_1 + 12cs^4\omega_3\omega_4\omega_1 - 36v_1^2 cs^2\omega_3^2\omega_4^2\omega_1 - 36v_1^4\omega_3\omega_4\omega_1^2 - 12cs^4\omega_3^2\omega_4\omega_1^2 + 54v_1^2 cs^2\omega_3\omega_4\omega_1^3 - 12v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^2 + 3cs^4\omega_3\omega_4^2\omega_1^3 - 36v_1^2\omega_3\omega_4^2\omega_1^2 + 15v_1^2\omega_3^2\omega_4\omega_1^3 + 12cs^2\omega_3^2\omega_4^2\omega_1 + 24cs^4\omega_3^2\omega_4^2 + 6v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^3 - 12cs^4\omega_3\omega_4^2\omega_1^2 + 3cs^4\omega_3^2\omega_4\omega_1^3 - 108v_1^2 cs^2\omega_3\omega_4\omega_1^2 - 36v_1^2\omega_3^2\omega_4\omega_1^2 + 15v_1^2\omega_3\omega_4^2\omega_1^3 + 72v_1^2 cs^2\omega_3\omega_4^2\omega_1^2 - 3cs^4\omega_3^2\omega_4^2\omega_1^3 - 9v_1^2\omega_3^2\omega_1^3 - 36v_1^2 cs^2\omega_3^2\omega_4\omega_1^3 - 54v_1^2 cs^2\omega_4^2\omega_1^3 + 9v_1^4\omega_4^2\omega_1^3 - 18v_1^2\omega_3\omega_4\omega_1^3 - 12cs^2\omega_3^2\omega_4^2\omega_1 + 12v_1^2\omega_3^2\omega_4^2\omega_1^2 - 18v_1^4\omega_4^2\omega_1^2 + 27v_1^2 cs^2\omega_4^2\omega_1^3 + 72v_1^2 cs^2\omega_3^2\omega_4\omega_1^2 - 36v_1^2 cs^2\omega_3\omega_4^2\omega_1^3 + 18v_1^2\omega_3^2\omega_1^2 + 24cs^4\omega_3^2\omega_4^2\omega_1^2 - 12cs^2\omega_3^2\omega_4\omega_1 - 3v_1^2\omega_3^2\omega_4^2\omega_1^3 + 36v_1^2\omega_3\omega_4\omega_1^2 + 12cs^2\omega_3^2\omega_4\omega_1^2 - 3cs^2\omega_3\omega_4^2\omega_1^3 - 54v_1^2 cs^2\omega_3^2\omega_1^2 + 9v_1^4\omega_3^2\omega_1^3 - 9v_1^2\omega_4^2\omega_1^3 + 36v_1^2 cs^2\omega_3^2\omega_4\omega_1 + 36v_1^4\omega_3\omega_4^2\omega_1^2 - 48cs^4\omega_3^2\omega_4^2\omega_1 - 15v_1^4\omega_3\omega_4\omega_1^3 + 18v_1^2\omega_4^2\omega_1^2 + 12cs^2\omega_3\omega_4^2\omega_1^2 - 18v_1^4\omega_3^2\omega_1^2 + 27v_1^2 cs^2\omega_3^2\omega_1^3 - 3cs^2\omega_3^2\omega_4^2\omega_1^3 + 36v_1^4\omega_3^2\omega_4\omega_1^3 + 36v_1^2 cs^2\omega_3\omega_4^2\omega_1 - 15v_1^4\omega_3\omega_4^2\omega_1^3)\frac{\rho}{24\omega_3^2\omega_4^2\omega_1^3}$

coefficient $C_{\mathrm{D}_x^3 \mathrm{D}_y\rho}^{(3)}$ **at** $\frac{\partial^4\rho}{\partial x_1^3\partial x_2}$:

$C_{\mathrm{D}_x^3 \mathrm{D}_y\rho}^{(3),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x^3 \mathrm{D}_y\rho}^{(3),\mathrm{MRT1}} = (-2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + 12\omega_9^2\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_8\omega_5 + 6\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - 4v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 - 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 - 4v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 4v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_5 - 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 12\omega_9^2\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13} cs^2\omega_{14}\omega_8\omega_5 - 24\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_5 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 - 12\omega_9^2\omega_{12}\omega_{13}\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 3\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 cs^2\omega_8\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_{13} cs^2\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 - 2v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 + 4v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 - 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 cs^2\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 8v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 6\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_8\omega_5 + 24\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 - 12\omega_9^2\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 - 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 - 8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 - 12\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8 + 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 + 6\omega_9\omega_9^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 6\omega_9\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8\omega_5 - 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 - 4\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 + 2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - 2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 - 6\omega_9^2\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 - 4v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8 - 12\omega_9\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 12\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_5 - 4v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 - 2v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + 8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_5 + 12\omega_9\omega_{12}\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 4v_1^2\omega_9\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 + 2v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 + 9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}\omega_6\omega_{13}^2 cs^2\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 9\omega_9^2\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - 4\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 + 8v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5)\frac{v_1 v_2 v_3}{4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5}$

$C_{\mathrm{D}_x^3 \mathrm{D}_y\rho}^{(3),\mathrm{MRT2}} = (-2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 - 4v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - 4v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 - 4v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 4v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 12\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2 + 2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 6\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2 + 6\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 12\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 - 24\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 12\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 3\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 - 12\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2 + 12\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 3v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 + 12\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 6\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 12\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - 2v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 cs^2 + 4v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 - 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 8v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 cs^2 + 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 + 6\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 cs^2 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 cs^2 + 4\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 - 8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 3v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 + 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 24\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_5 - 4v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 cs^2 - 4\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 + 2v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 cs^2 + 8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - 6\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 cs^2 - 4v_1^2\omega_9\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 - 4v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 + 2v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 cs^2 + 4v_1^2\omega_9\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - 4\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -

$$9\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2 + 4v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + 9\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 +$$
$$8v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5)\frac{v_1 v_2 v_3}{4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5}$$

$C^{(3),\text{CLBM1}}_{\text{D}_x^3\text{D}_y\rho} = 0$

$C^{(3),\text{CLBM2}}_{\text{D}_x^3\text{D}_y\rho} = 0$

$C^{(3),\text{CuLBM1}}_{\text{D}_x^3\text{D}_y\rho} = 0$

$C^{(3),\text{CuLBM2}}_{\text{D}_x^3\text{D}_y\rho} = (3cs^2\omega_1 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{v_1 v_2 v_3}{12\omega_1\omega_2}$

coefficient $C^{(3)}_{\text{D}_x^3\text{D}_y v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^3 \partial x_2}$:

$C^{(3),\text{SRT}}_{\text{D}_x^3\text{D}_y v_1} = 0$

$C^{(3),\text{MRT1}}_{\text{D}_x^3\text{D}_y v_1} = (-6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + 4\omega_9^2\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_8\omega_5 + 2\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 -$
$12v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_5 - 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 +$
$4\omega_9^2\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13} cs^2\omega_{14}\omega_8\omega_5 - 8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 +$
$4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 - 4\omega_9^2\omega_{12}\omega_{13}\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 3\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 +$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 cs^2\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 9v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13} cs^2\omega_{14}\omega_8\omega_5 +$
$4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 - 2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 + 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 -$
$4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 cs^2\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 24v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_7\omega_{13}^2\omega_7\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_8\omega_5 +$
$8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 - 4\omega_9^2\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 - 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 -$
$8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 9v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 - 4\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 -$
$4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 + 2\omega_9\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8\omega_5 -$
$4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 - 4\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 -$
$6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 -$
$2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 - 6v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$
$4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_8 - 4\omega_9\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$
$4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 - 6v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 -$
$2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 + 8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_5 + 4\omega_9\omega_{12}\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 -$
$12v_1^2\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$
$4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 + 3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_{13}^2 cs^2\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$
$3\omega_9^2\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2 cs^2\omega_{14}\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - 4\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 + 24v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5)\frac{\rho v_2 v_3}{4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5}$

$C^{(3),\text{MRT2}}_{\text{D}_x^3\text{D}_y v_1} = (-6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 - 12v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 -$
$12v_1^2\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2 +$
$6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2 + 2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 -$
$12v_1^2\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 - 8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 3\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 - 4\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 cs^2 + 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 9v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 cs^2 -$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5 + 4\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 - 2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 -$
$4\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_5 cs^2 + 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 -$
$4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 - 24v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 - 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 cs^2 +$
$12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 + 2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 -$
$12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 cs^2 + 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 cs^2 + 4\omega_9^2\omega_{12}\omega_6\omega_7\omega_{14}\omega_8\omega_5 - 8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 -$
$9v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_8\omega_5 + 8\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 -$
$12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5 cs^2 - 4\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 +$
$4\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$
$2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2 + 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 +$
$12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_5 - 6v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 cs^2 -$
$3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8 + 6v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 -$
$12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 + 4\omega_9\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 6v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 +$
$6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 - 2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5 - 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 cs^2 + 8\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8 -$
$2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_8\omega_5 cs^2 - 12v_1^2\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 +$
$4\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_{14}\omega_8\omega_5 + 4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 cs^2 + 12v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_5 - 4\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 +$
$2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 3\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2 + 12v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 + 3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 -$

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$$4\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_5 + 24v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5)\frac{\rho v_2 v_3}{4\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x^3\text{D}_y v_1} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x^3\text{D}_y v_1} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_x^3\text{D}_y v_1} = 0$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_x^3\text{D}_y v_1} = (3cs^2\omega_1 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{\rho v_2 v_3}{36\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_x^3\text{D}_y v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^3 \partial x_2}$:

$$C^{(3),\text{SRT}}_{\text{D}_x^3\text{D}_y v_2} = (2 + v_1^2\omega - 6cs^2 + 3cs^2\omega - 2v_1^2 - \omega)\frac{\rho v_1 v_3}{12\omega}$$

$$
\begin{aligned}
C^{(3),\text{MRT1}}_{\text{D}_x^3\text{D}_y v_2} = (&6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_8^2\omega_5^2 + 24\omega_9^2\omega_{12}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5^2 - 12\omega_9^2\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - \\
&9\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2 + \\
&12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_8^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 3\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8\omega_5^2 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_8\omega_5^2 - 36\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 + \\
&12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 12v_1^2\omega_9^2\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5^2 - 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 - \\
&12v_1^2\omega_9^2\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 42\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - \omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8\omega_5^2 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_8\omega_5^2 + 12\omega_9\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8\omega_5 + \\
&4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2 + 36\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 + \\
&9\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2 cs^2\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_5^2 + \\
&6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 - 54\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - 6v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 - \\
&12\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 9\omega_9^2\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_8^2\omega_5 - \\
&18v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - \\
&6\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2 cs^2\omega_8^2\omega_5^2 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 - 24\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 + 12\omega_9^2\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13} cs^2\omega_{14}\omega_8\omega_5 - \\
&12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 - 12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 3\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2 cs^2\omega_8^2\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5^2 + \\
&12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5^2 + 36\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5^2 - 9v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - \\
&12\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5^2 - 12\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 - 36\omega_9^2\omega_{12}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5^2 - \\
&12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_8\omega_5^2 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5^2 + 30\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - 54\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 - \\
&12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 3v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_9\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 24\omega_9^2\omega_{12}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - 24\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8 + \\
&18\omega_9^2\omega_{12}\omega_6^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 - 12\omega_9\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_5 - \\
&6v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 6v_1^2\omega_9\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + \\
&24\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 42\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 - \\
&6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_5 + 54\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_9\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + \\
&12\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 18\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + \\
&6\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_9\omega_{12}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 + 6v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + \\
&12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_8\omega_5 + 18v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13} cs^2\omega_{14}\omega_8\omega_5 - 6\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - \\
&6\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7 cs^2\omega_8^2\omega_5 - 36\omega_9^2\omega_{12}\omega_6\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5 + 24\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8 - 24\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - \\
&12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_8\omega_5 - 18\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2\omega_5^2)\frac{\rho v_1 v_3}{12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5^2}
\end{aligned}
$$

$$
\begin{aligned}
C^{(3),\text{MRT2}}_{\text{D}_x^3\text{D}_y v_2} = (&30\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 cs^2 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 cs^2 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + \\
&12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8\omega_5 cs^2 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 + 6v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + \\
&42\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 3\omega_9^2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 + 12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + \\
&12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5 + 12\omega_9^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 - 6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 - \omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - \\
&36\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 - 54\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 + 24\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 - \\
&36\omega_9^2\omega_{12}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 12\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 cs^2 + \\
&4v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 42\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + 9\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 18\omega_9\omega_{12}\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 - 6\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - \\
&12\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 24\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 - 12\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + \\
&6v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 6\omega_9^2\omega_{12}\omega_6^2\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 cs^2 - \\
&18v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 cs^2 + 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + \\
&12\omega_9^2\omega_{12}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 18\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 - 12\omega_9\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 36\omega_9^2\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 + 12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 + \\
&54\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 12\omega_9^2\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 cs^2 - 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 - 12v_1^2\omega_9^2\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 - \\
&12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 - 18\omega_9^2\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 9v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 - 12\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + \\
&24\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 24\omega_9^2\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8^2\omega_5 + 36\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 - \\
&12v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 3v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_5 cs^2 - 6\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8^2\omega_5 cs^2 - \\
&6\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 - 12\omega_9\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + v_1^2\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - \\
&9\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 6\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_8\omega_5 cs^2 - 24\omega_9^2\omega_{12}\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 + \\
&6v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 12\omega_9\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 - 24\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 + 6v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -
\end{aligned}
$$

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$$12v_1^2\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 - 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$12\omega_9^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 - 54\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 + 3\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 - 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 -$$
$$24\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 - 6\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_8^2\omega_5 cs^2 - 12v_1^2\omega_9\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 -$$
$$12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 6v_1^2\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 +$$
$$18\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 + 6\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 cs^2 + 36\omega_9\omega_{12}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2 cs^2 + 12\omega_9\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 +$$
$$54\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 + 6\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_9\omega_{12}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5 cs^2 -$$
$$12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7\omega_8\omega_5 + 6v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 - 9\omega_9^2\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 cs^2 + 12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 18v_1^2\omega_9\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5 +$$
$$12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_5^2 cs^2 - 6\omega_9\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2\omega_5 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8\omega_5^2 cs^2 + 12\omega_9^2\omega_{12}\omega_6\omega_{13}^2\omega_7^2\omega_8^2\omega_5)\frac{\rho v_1 v_3}{12\omega_9^2\omega_{12}\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(3),\text{CLBM1}}_{\text{D}^3_x\text{D}_y v_2} = (3\omega_9\omega_{12} cs^2 - \omega_9\omega_{12} + 3\omega_9 - \omega_{12} - 9\omega_9 cs^2 + v_1^2\omega_9\omega_{12} - 3v_1^2\omega_9 + 3\omega_{12} cs^2 + v_1^2\omega_{12})\frac{\rho v_1 v_3}{12\omega_9\omega_{12}}$$

$$C^{(3),\text{CLBM2}}_{\text{D}^3_x\text{D}_y v_2} = (-\omega_9\omega_{12} + 3\omega_9 - 9\omega_9 cs^2 - \omega_{12} + v_1^2\omega_9\omega_{12} + 3\omega_9\omega_{12} cs^2 - 3v_1^2\omega_9 + 3\omega_{12} cs^2 + v_1^2\omega_{12})\frac{\rho v_1 v_3}{12\omega_9\omega_{12}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}^3_x\text{D}_y v_2} = (3\omega_9\omega_4 cs^2 - \omega_9 + v_1^2\omega_9\omega_4 - \omega_9\omega_4 + 3\omega_9 cs^2 - 3v_1^2\omega_4 + v_1^2\omega_9 + 3\omega_4 - 9\omega_4 cs^2)\frac{\rho v_1 v_3}{12\omega_9\omega_4}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}^3_x\text{D}_y v_2} = (-27cs^2\omega_3\omega_1\omega_2 + 9\omega_3\omega_1\omega_2 - 9v_1^2\omega_4\omega_1\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 + 18cs^2\omega_3\omega_4\omega_1\omega_2 + 6v_1^2\omega_3\omega_4\omega_1\omega_2 + 4v_1^2\omega_3\omega_4\omega_2 - 8\omega_3\omega_4\omega_1 -$$
$$18v_2^2\omega_3\omega_4\omega_2 + 12cs^2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 - 27cs^2\omega_4\omega_1\omega_2 - 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 + 6cs^2\omega_3\omega_4\omega_2 + 18v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_1 v_3}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}^3_x\text{D}_y v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^3\partial x_2}$**:**

$$C^{(3),\text{SRT}}_{\text{D}^3_x\text{D}_y v_3} = 0$$

$$C^{(3),\text{MRT1}}_{\text{D}^3_x\text{D}_y v_3} = (2\omega_6^3\omega_{13}^2\omega_7^2\omega_8 - 5\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 + 2v_1^2\omega_6^2\omega_{13}^2\omega_7^2\omega_8 + \omega_6^3\omega_{13}\omega_7 cs^2\omega_{14}\omega_8^2 + v_1^2\omega_6^3\omega_{13}^2\omega_7^2\omega_8 - \omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{13}^2\omega_7^2\omega_8^2 +$$
$$6\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8 + 2\omega_6^2\omega_{13}\omega_7^2 cs^2\omega_8^2 + \omega_7^3\omega_7^2 cs^2\omega_{14}\omega_8 + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - 2\omega_6^3\omega_{13}\omega_7^2 cs^2\omega_8 - 2v_1^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 - \omega_6^3\omega_7\omega_{14}\omega_8^2 -$$
$$2\omega_6^3\omega_{13}^2\omega_7^2 cs^2\omega_{14} + v_1^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 + 4\omega_6^2\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 + \omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 - 7\omega_6^3\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 + v_1^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8^2 +$$
$$\omega_6^3\omega_{13}^2\omega_7^2 cs^2\omega_8^2 + 2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 - 2\omega_6\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 - 2v_1^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + v_1^2\omega_6^3\omega_7^2\omega_{14}\omega_8^2 - 2v_1^2\omega_6^3\omega_{13}^2\omega_7^2\omega_8 + \omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 -$$
$$2\omega_6^3\omega_{13}^2\omega_7^2\omega_8 + 4v_1^2\omega_6^3\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 + 13\omega_6\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 - 2\omega_6^2\omega_{13} cs^2\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}^2\omega_7^2\omega_8^2 - 2v_1^2\omega_6^3\omega_{13}^2\omega_7^2\omega_8^2 +$$
$$v_1^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 - 11\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8 - 2\omega_6^2\omega_7^2 cs^2\omega_8^2 - v_1^2\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8 + 2v_1^2\omega_6^3\omega_{13}\omega_7\omega_8 - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 - \omega_6^3\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8^2 +$$
$$2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - v_1^2\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 + 7\omega_6^2\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}\omega_7 cs^2\omega_8^2 + \omega_6^3\omega_{13}^2\omega_7\omega_8^2 - 2v_1^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 - 2\omega_6^2\omega_{13}\omega_7 cs^2\omega_{14}\omega_8^2 -$$
$$\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 + 2v_1^2\omega_6^2\omega_{13}\omega_7\omega_8^2 - v_1^2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + \omega_6^3\omega_{13}\omega_7^2\omega_8^2 - 4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}\omega_7^2 cs^2\omega_8^2 - 8\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 +$$
$$v_1^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 + 5\omega_6^3\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8 - 2\omega_6^2\omega_{13}\omega_7^2\omega_8^2 + 2\omega_6^3\omega_{13}^2 cs^2\omega_{14}\omega_8 - v_1^2\omega_6^3\omega_{13}\omega_7^2\omega_8^2 + 4\omega_6^2\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{13}^2\omega_7 cs^2\omega_8 +$$
$$2\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_{14} - 2\omega_6^3\omega_{13}^2\omega_7\omega_8 - \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - v_1^2\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{13}^2\omega_7 cs^2\omega_{14} - 6\omega_6\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{13}^2\omega_7^2 cs^2\omega_8 -$$
$$v_1^2\omega_6^3\omega_{13}^2\omega_7\omega_8 - 2\omega_6^2\omega_7^2 cs^2\omega_{14}\omega_8^2)\frac{\rho v_1 v_2}{2\omega_6^3\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2}$$

$$C^{(3),\text{MRT2}}_{\text{D}^3_x\text{D}_y v_3} =$$
$$(2\omega_6^3\omega_{13}^2\omega_7\omega_8 + 2v_1^2\omega_6^2\omega_{13}^2\omega_7\omega_8 + v_1^2\omega_6^3\omega_{13}^2\omega_7^2\omega_8 - \omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - 7\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 + 2\omega_6^2\omega_{13}^2\omega_7^2\omega_8 - 8\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 -$$
$$6\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 + 2\omega_6\omega_{13}\omega_7^2\omega_8^2 cs^2 - 2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 cs^2 - 2v_1^2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 - \omega_6^3\omega_7^2\omega_{14}\omega_8^2 + v_1^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - 11\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8 cs^2 +$$
$$2\omega_6^3\omega_{13}^2\omega_7\omega_8 cs^2 + 7\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 + \omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_6^2\omega_{13}^2\omega_7\omega_8 cs^2 + 6\omega_6\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 + v_1^2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8 +$$
$$2\omega_6^2\omega_7^2\omega_{14}\omega_8^2 - 2v_1^2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 + v_1^2\omega_6^3\omega_7^2\omega_{14}\omega_8^2 - 2v_1^2\omega_6^3\omega_{13}^2\omega_7\omega_8 + \omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 2\omega_6^3\omega_{13}^2\omega_7\omega_8 + 4v_1^2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 +$$
$$\omega_6^3\omega_{13}^2\omega_7^2\omega_8^2 cs^2 + 2\omega_6^3\omega_{13}^2\omega_7\omega_{14} cs^2 - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2 + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}^2\omega_7^2\omega_8^2 + 2\omega_6^2\omega_{13}^2\omega_7\omega_{14} cs^2 - 2v_1^2\omega_6^2\omega_{13}^2\omega_7\omega_8^2 +$$
$$v_1^2\omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 - v_1^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2v_1^2\omega_6^3\omega_{13}^2\omega_7\omega_8 - \omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8 + 5\omega_6^3\omega_{13}^2\omega_7\omega_{14}\omega_8 cs^2 - 2\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_6^2\omega_{13}^2\omega_7\omega_8 cs^2 - v_1^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8 + 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2 + \omega_6^3\omega_{13}^2\omega_7\omega_8^2 - 2\omega_6^2\omega_{13}\omega_7\omega_{14} cs^2 - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2 + 4\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 cs^2 -$$
$$2v_1^2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}^2\omega_7\omega_8 cs^2 - \omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 - 2\omega_6^2\omega_{13}^2\omega_7\omega_8^2 cs^2 + 2v_1^2\omega_6^2\omega_{13}\omega_7\omega_8^2 - v_1^2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + \omega_6^3\omega_{13}\omega_7^2\omega_8^2 -$$
$$4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + 13\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 + v_1^2\omega_6\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 + \omega_6^3\omega_{13}\omega_7\omega_{14}\omega_8^2 cs^2 - 2\omega_6^2\omega_{13}\omega_7^2\omega_8^2 - 5\omega_6^2\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 - v_1^2\omega_6^3\omega_{13}^2\omega_7^2\omega_8^2 +$$
$$4\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 - 2\omega_6^3\omega_{13}^2\omega_7\omega_8 - \omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - v_1^2\omega_6^2\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - \omega_6^3\omega_{13}\omega_7^2 cs^2\omega_8^2 - v_1^2\omega_6^3\omega_{13}^2\omega_7\omega_8 + \omega_6^3\omega_7^2\omega_{14}\omega_8^2 cs^2)\frac{\rho v_1 v_2}{2\omega_6^3\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2}$$

$$C^{(3),\text{CLBM1}}_{\text{D}^3_x\text{D}_y v_3} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}^3_x\text{D}_y v_3} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}^3_x\text{D}_y v_3} = 0$$

$$C^{(3),\text{CuLBM2}}_{\text{D}^3_x\text{D}_y v_3} = (-12\omega_3\omega_4 - 36cs^2\omega_4^2 + 2v_2^2\omega_3^2\omega_4\omega_1 + 3v_2^2\omega_4^2\omega_1 - 6v_2^2\omega_3^2\omega_4 - 6v_2^2\omega_4^2 - 2v_2^2\omega_3\omega_4^2\omega_1 + 18cs^2\omega_4^2\omega_1 + 12v_1^2\omega_3\omega_4 - 3v_2^2\omega_3^2\omega_1 -$$
$$6v_1^2\omega_3^2 - 18cs^2\omega_3^2\omega_4 + 6\omega_3\omega_4\omega_1 - 6\omega_3\omega_4^2 - 18cs^2\omega_3\omega_4\omega_1 + 36cs^2\omega_3\omega_4 + 3v_1^2\omega_4^2\omega_1 + 2\omega_3\omega_4^2\omega_1 + 12\omega_4^2 - 6cs^2\omega_3\omega_4\omega_1 + 6v_2^2\omega_3^2 + 6v_2^2\omega_3\omega_4^2 +$$
$$6cs^2\omega_3^2\omega_4\omega_1 - 2\omega_3^2\omega_4\omega_1 - 6v_1^2\omega_3\omega_4\omega_1 - 6\omega_4^2\omega_1 + 3v_1^2\omega_3^2\omega_1 + 6\omega_3\omega_4 - 6v_1^2\omega_4^2 + 18cs^2\omega_3\omega_4^2)\frac{\rho v_1 v_2}{8\omega_3^2\omega_4^2\omega_1}$$

coefficient $C^{(3)}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1^2\partial x_2^2}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho} = (-2+\omega)\frac{v_3 cs^4}{6\omega}$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho} = (24\omega_6\omega_7^2\omega_8^2\omega_5 + 12\omega_6^2\omega_7^2\omega_8^2 + 12\omega_6^2\omega_7^2\omega_8\omega_5 - 12\omega_7^2\omega_8^2\omega_5 + 12\omega_6^2\omega_8^2\omega_5 + 24\omega_6^2\omega_7\omega_8^2\omega_5 - 12\omega_6^2\omega_7^2\omega_5 + 12\omega_6^2\omega_7\omega_5^2 - 24\omega_6\omega_7^2\omega_8\omega_5^2 + 12\omega_6^2\omega_7^2\omega_5^2 - 14\omega_6^2\omega_7^2\omega_8^2\omega_5 - 12\omega_6^2\omega_8^2\omega_5 + \omega_6^2\omega_7^2\omega_8^2\omega_5^2 - 12\omega_6^2\omega_7\omega_8^2 + 12\omega_7^2\omega_8^2\omega_5 - 12\omega_6\omega_7^2\omega_8^2 - 24\omega_6^2\omega_7\omega_8\omega_5)\frac{v_3 cs^4}{6\omega_6^2\omega_7^2\omega_8^2\omega_5^2}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho} = (24\omega_6\omega_7^2\omega_8^2\omega_5 + 12\omega_6^2\omega_7^2\omega_8^2 + 12\omega_6^2\omega_7^2\omega_8\omega_5 - 12\omega_7^2\omega_8^2\omega_5 + 12\omega_6^2\omega_8^2\omega_5 + 24\omega_6^2\omega_7\omega_8^2\omega_5 - 12\omega_6^2\omega_7^2\omega_5 + 12\omega_6^2\omega_7\omega_5^2 - 24\omega_6\omega_7^2\omega_8\omega_5^2 + 12\omega_6^2\omega_7\omega_5^2 - 14\omega_6^2\omega_7^2\omega_8^2\omega_5 - 12\omega_6^2\omega_8^2\omega_5 + \omega_6^2\omega_7^2\omega_8^2\omega_5^2 - 12\omega_6^2\omega_7\omega_8^2 + 12\omega_7^2\omega_8^2\omega_5 - 12\omega_6\omega_7^2\omega_8^2 - 24\omega_6^2\omega_7\omega_8\omega_5)\frac{v_3 cs^4}{6\omega_6^2\omega_7^2\omega_8^2\omega_5^2}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho} = (-2+\omega_5)\frac{cs^4 v_3}{6\omega_5}$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho} = (-2+\omega_5)\frac{v_3 cs^4}{6\omega_5}$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho} = (-2+\omega_1)\frac{v_3 cs^4}{6\omega_1}$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2\rho} = (2cs^2\omega_1 + 3v_2^2\omega_1 - 3v_1^2\omega_2 - 3v_2^2\omega_2 - 14cs^2\omega_2 - 2\omega_1 + 6cs^2\omega_1\omega_2 + 3v_1^2\omega_1 + 2\omega_2)\frac{cs^2 v_3}{36\omega_1\omega_2}$

coefficient $C^{(3)}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2\partial x_2^2}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = (-2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 6\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12}\omega_6^2\omega_7^2\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2 - 2\omega_9\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_5^2 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4\omega_9\omega_{12}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2 + 2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 6\omega_9\omega_{12}\omega_6\omega_7^2\omega_8^2\omega_5^2 + 2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 6\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2 + 2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5^2 - 4\omega_9\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + 3\omega_9\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 - 4\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_{12}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 - 3\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5)\frac{\rho v_1 v_3 cs^2}{2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = (-2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 6\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12}\omega_6^2\omega_7^2\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 4\omega_9\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8^2\omega_5^2 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2 - 2\omega_9\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8\omega_5^2 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8\omega_5^2 + 4\omega_9\omega_{12}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8\omega_5^2 + 2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8\omega_5 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2 + 4\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6\omega_7^2\omega_8^2\omega_5^2 + 2\omega_9\omega_{12}\omega_6\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 + 6\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_5^2 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_8^2\omega_5^2 + 2\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 + 4\omega_9\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_8^2\omega_5^2 - 4\omega_9\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_8\omega_5^2 + 3\omega_9\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2 - 4\omega_{12}\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_6\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 + 4\omega_9\omega_{12}\omega_6\omega_7^2\omega_{14}\omega_8^2\omega_5 - 4\omega_9\omega_{12}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}\omega_6^2\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 - 4\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5 - 3\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5 - 2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_{14}\omega_8^2\omega_5)\frac{\rho v_1 v_3 cs^2}{2\omega_9\omega_{12}\omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_1} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{\rho v_1 v_3}{36\omega_1\omega_2}$

coefficient $C^{(3)}_{\mathrm{D}_x^2\mathrm{D}_y^2 v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2\partial x_2^2}$:

$$C^{(3),\text{SRT}}_{D_x^2 D_y^2 v_2} = 0$$

$$C^{(3),\text{MRT1}}_{D_x^2 D_y^2 v_2} = (-2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2 - 4\omega_{15}\omega_6^2\omega_{10}\omega_7\omega_8^2\omega_5^2 +$$
$$6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5 + 2\omega_{15}\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 - 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 +$$
$$4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2 - 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2 + 4\omega_{15}\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 4\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^2 -$$
$$3\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 2\omega_{15}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2 - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6^2\omega_{10}\omega_7^2\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$$
$$4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 3\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5 -$$
$$2\omega_{15}\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5) \frac{\rho v_2 v_3 cs^2}{2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(3),\text{MRT2}}_{D_x^2 D_y^2 v_2} = (-2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2 - 4\omega_{15}\omega_6^2\omega_{10}\omega_7\omega_8^2\omega_5^2 +$$
$$6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5 + 2\omega_{15}\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5^2 +$$
$$4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5^2 + 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 - 4\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2 +$$
$$4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2 - 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5^2 + 4\omega_{15}\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 + 4\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5^2 -$$
$$2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5^2 - 4\omega_{15}\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5 + 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5^2 -$$
$$3\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5^2 - 2\omega_{15}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2 - 4\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6^2\omega_{10}\omega_7^2\omega_8^2\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$$
$$4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 3\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8^2\omega_5 -$$
$$2\omega_{15}\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2\omega_5) \frac{\rho v_2 v_3 cs^2}{2\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2}$$

$$C^{(3),\text{CLBM1}}_{D_x^2 D_y^2 v_2} = 0$$

$$C^{(3),\text{CLBM2}}_{D_x^2 D_y^2 v_2} = 0$$

$$C^{(3),\text{CuLBM1}}_{D_x^2 D_y^2 v_2} = 0$$

$$C^{(3),\text{CuLBM2}}_{D_x^2 D_y^2 v_2} = (3cs^2\omega_1 + v_2^2\omega_1 - v_2^2\omega_2 - 3cs^2\omega_2 - \omega_1 + \omega_2)\frac{\rho v_2 v_3}{36\omega_1\omega_2}$$

coefficient $C^{(3)}_{D_x^2 D_y^2 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^2 \partial x_2^2}$:

$$C^{(3),\text{SRT}}_{D_x^2 D_y^2 v_3} = (-2 - \omega^2 + 3\omega)\frac{\rho cs^4}{\omega^3}$$

$$C^{(3),\text{MRT1}}_{D_x^2 D_y^2 v_3} = (-4v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 - \omega_6^2\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_{14}\omega_8^2 + 4v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8^2 +$$
$$2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_{14}\omega_8 - 2\omega_6^2\omega_{16}\omega_7^3 cs^2\omega_{17}\omega_8^2 + 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 -$$
$$\omega_6\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14} - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_8 -$$
$$2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_8 + 3v_2^2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 - \omega_6^3\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_8^2 - v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_8 +$$
$$2v_2^2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 - 6v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 - 4v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + 4v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 - 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{14}\omega_8 -$$
$$2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 - 2v_1^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7 cs^2\omega_{17}\omega_{14}\omega_8^2 - 2v_2^2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_8^2 +$$
$$\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_8^2 - 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8 - 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_8 - 6\omega_6^2\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 - 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_{17}\omega_{14}\omega_8^2 +$$
$$v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{14}\omega_8^2 - v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_7\omega_{14}\omega_8 + 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 +$$
$$\omega_6^2\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 + 4v_1^2\omega_6\omega_{16}\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 - \omega_6^3\omega_{16}\omega_{13}\omega_7 cs^2\omega_{17}\omega_{14}\omega_8^2 - 2\omega_6^3\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 -$$
$$4v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 - 6v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + v_1^2\omega_6^3\omega_{16}\omega_7^2\omega_{17}\omega_8^2 - v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 +$$
$$\omega_6^3\omega_{16}\omega_7^2 cs^2\omega_{17}\omega_8^2 + 4v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 - 4v_1^2\omega_6\omega_{16}\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14} + 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} +$$
$$2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8 + 3v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 - 2v_2^2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 - v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2 + \omega_6^2\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_{14}\omega_8^2 +$$
$$\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 -$$
$$2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} - 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 + 2v_1^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 + 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8 +$$
$$2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 + 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + \omega_6^3\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 + 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 - v_2^2\omega_6^2\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 -$$
$$\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3 cs^2\omega_{17}\omega_{14}\omega_8 - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 - v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 - \omega_6^3\omega_{16}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2 +$$
$$2\omega_6\omega_{16}\omega_{13}\omega_7^2 cs^2\omega_{17}\omega_{14}\omega_8^2) \frac{\rho cs^2}{2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2}$$

$$C^{(3),\text{MRT2}}_{D_x^2 D_y^2 v_3} = (-2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8\omega_{14}\omega_8^2 cs^2 - 4v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2 cs^2 + 2\omega_6^2\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2 +$$
$$4v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8^2 + 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2 + 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + \omega_6^3\omega_{16}\omega_7^3\omega_{17}\omega_8^2 cs^2 +$$
$$2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 + 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2 - \omega_6^3\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2 + 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2 -$$
$$2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14} + 3v_2^2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 + \omega_6^3\omega_{13}\omega_7^3\omega_{14}\omega_8^2 cs^2 - \omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8^2 cs^2 - v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 +$$

$$2v_2^2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 + 2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2 - 6v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 - 4v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 cs^2 +$$
$$4v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 + \omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2 - 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14} - 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} - 2v_1^2\omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8^2 +$$
$$2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 - 2v_2^2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 - 2\omega_6^3\omega_{13}\omega_7^3\omega_{14}\omega_8^2 cs^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8 cs^2 +$$
$$\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2 - 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8 - 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8 - 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_{17}\omega_{14}\omega_8^2 + \omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2 +$$
$$v_2^2\omega_6^3\omega_{13}\omega_7^3\omega_{14}\omega_8^2 - v_1^2\omega_6^3\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 + 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14} + 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} + 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2 +$$
$$2v_2^2\omega_6^3\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 + 4v_1^2\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 - \omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2 cs^2 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 cs^2 - 4v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 -$$
$$6v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + v_1^2\omega_6^3\omega_{16}\omega_7^3\omega_{17}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8 cs^2 - v_2^2\omega_6^3\omega_{13}\omega_{16}\omega_7^3\omega_{14}\omega_8^2 - 2\omega_6^2\omega_{16}\omega_3^3\omega_{17}\omega_8^2 cs^2 +$$
$$4v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 - 4v_1^2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14} + 2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} + 3v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 -$$
$$2v_2^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 - v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 cs^2 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8 cs^2 - 6\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 cs^2 -$$
$$2v_2^2\omega_6^3\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - \omega_6^2\omega_{13}\omega_3^3\omega_7\omega_{17}\omega_{14}\omega_8^2 cs^2 - 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} - 2v_1^2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8^2 + 2v_1^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_{14}\omega_8^2 +$$
$$2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + 2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{14}\omega_8 cs^2 + 2v_1^2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8 + 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 + 2v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 - v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_8^2 cs^2 + \omega_6^3\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8^2 cs^2 - v_2^2\omega_6^2\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 -$$
$$\omega_6\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2 cs^2)\frac{\rho cs^2}{2\omega_6^3\omega_{16}\omega_{13}\omega_7^3\omega_{17}\omega_{14}\omega_8^2}$$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2 v_3}^{(3),\text{CLBM1}} = (-2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{14} - \omega_6^2\omega_{16}\omega_{13}\omega_{17}\omega_{14}\omega_8 + 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} +$

$2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8 - 6\omega_6\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 - 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{14} + \omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8 + 2\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + 2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 +$

$2\omega_6\omega_{16}\omega_{13}\omega_{17}\omega_{14}\omega_8 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} + 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_7\omega_{17}\omega_{14}\omega_8 -$

$\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14} + \omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + \omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_8 + \omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 + \omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 -$

$\omega_6\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 - 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17} + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17} + 2\omega_6\omega_{16}\omega_7\omega_{17}\omega_{14}\omega_8 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{14} - \omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 +$

$\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8)\frac{\rho cs^4}{2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8}$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2 v_3}^{(3),\text{CLBM2}} = (-2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17} - 2\omega_6^2\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{14} - \omega_6^2\omega_{16}\omega_{13}\omega_{17}\omega_{14}\omega_8 + 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} +$

$2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8 - 6\omega_6\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 - 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{14} + \omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8 + 2\omega_6\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 + 2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8 +$

$2\omega_6\omega_{16}\omega_{13}\omega_{17}\omega_{14}\omega_8 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14} + 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_7\omega_{17}\omega_{14}\omega_8 -$

$\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 + 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14} + \omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 + \omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_8 + \omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{14}\omega_8 + \omega_6^2\omega_{13}\omega_7^2\omega_{14}\omega_8 -$

$\omega_6\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 - 2\omega_6\omega_{16}\omega_{13}\omega_7^2\omega_{17} + 2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17} + 2\omega_6\omega_{16}\omega_7\omega_{17}\omega_{14}\omega_8 - 2\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{14} - \omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8 +$

$\omega_6^2\omega_{16}\omega_{13}\omega_7\omega_{17}\omega_{14}\omega_8)\frac{\rho cs^4}{2\omega_6^2\omega_{16}\omega_{13}\omega_7^2\omega_{17}\omega_{14}\omega_8}$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2 v_3}^{(3),\text{CuLBM1}} = (\omega_{13}\omega_2 + 2\omega_3^2\omega_2 - \omega_3^2 - \omega_3\omega_{13}\omega_2 - \omega_2^2 - \omega_3^2\omega_2^2 + 2\omega_3\omega_2^2 + \omega_3\omega_{13} - 2\omega_3\omega_2)\frac{\rho cs^4}{\omega_3^2\omega_{13}\omega_2^2}$

$C_{\mathrm{D}_x^2\mathrm{D}_y^2 v_3}^{(3),\text{CuLBM2}} = (-3v_1^4\omega_3\omega_4^2\omega_1^3\omega_5 + 12v_1^2 cs^2\omega_3\omega_4^2\omega_1\omega_5 - 6v_1^4\omega_3\omega_4\omega_1^2\omega_5 - 6cs^2 v_2^2\omega_3\omega_4^2\omega_1^3\omega_5 + 3v_1^2\omega_3\omega_4^2\omega_1^3\omega_5 + 6v_1^2\omega_3^2\omega_4\omega_1^2\omega_5 -$

$6cs^2 v_2^2\omega_3^2\omega_4\omega_1^2\omega_5 + 6v_2^4\omega_3^2\omega_1^2\omega_5 + 6v_2^2\omega_3^2\omega_4\omega_1^2\omega_5 - 2cs^4\omega_3\omega_4\omega_1^3\omega_5 - 18cs^2 v_2^2\omega_4^2\omega_1^2\omega_5 + 6v_1^2\omega_4^2\omega_1^2\omega_5 + 3v_2^2\omega_3\omega_4^2\omega_1^3\omega_5 - 8cs^4\omega_3\omega_4^2\omega_1^2\omega_5 +$

$2cs^2\omega_3^2\omega_4\omega_1^3\omega_5 - 6v_2^4\omega_3^2\omega_4\omega_1^2\omega_5 + 6v_2^2\omega_3^2\omega_4\omega_1^2\omega_5 + 6v_1^4\omega_3^3\omega_1^2\omega_5 - 9v_1^2 cs^2\omega_3^2\omega_3^2\omega_1^3\omega_5 + 8cs^2\omega_3\omega_4^2\omega_1^2\omega_5 - 3v_1^4\omega_3\omega_4^2\omega_1^3\omega_5 + 6cs^2 v_2^2\omega_3\omega_4\omega_1^3\omega_5 -$

$3v_1^2\omega_3^2\omega_4\omega_1^3\omega_5 - 6v_1^2\omega_3\omega_4^2\omega_1^2\omega_5 + 6cs^2 v_2^2\omega_3\omega_4^2\omega_1^2\omega_5 + 3v_1^4\omega_3^2\omega_4\omega_1^3\omega_5 - 8cs^4\omega_3^2\omega_4\omega_1^2\omega_5 + 16cs^4\omega_3^2\omega_4^2\omega_5 + 6v_1^4\omega_3\omega_4^2\omega_1^2\omega_5 - 12v_1^2 cs^2\omega_3^2\omega_4\omega_1\omega_5 +$

$18v_1^2 cs^2\omega_3^2\omega_1^2\omega_5 - 3v_1^4\omega_3^2\omega_1^3\omega_5 + 6v_2^4\omega_3^2\omega_4\omega_1^2\omega_5 - 2cs^2\omega_3\omega_4^2\omega_1^3\omega_5 + 3v_2^4\omega_3\omega_4^3\omega_5 - 8cs^2\omega_3\omega_4\omega_1^3\omega_5 - 3v_2^2\omega_3^2\omega_1^3\omega_5 - 3v_1^2\omega_4^2\omega_1^3\omega_5 +$

$2cs^4\omega_3\omega_4^2\omega_1^3\omega_5 - 6v_2^2\omega_3\omega_4^2\omega_1^2\omega_5 + 9cs^2 v_2^2\omega_4^2\omega_1^3\omega_5 + 8cs^4\omega_3^2\omega_4\omega_1^2\omega_5 - 3v_2^2\omega_3\omega_4\omega_1^3\omega_5 - 3v_2^2\omega_3^2\omega_1^3\omega_5 - 8cs^4\omega_3^2\omega_4^2\omega_1^3 + 8cs^2\omega_3^2\omega_4\omega_1\omega_5 -$

$8cs^4\omega_3^2\omega_4\omega_1\omega_5 - 6v_1^4\omega_2^2\omega_1^2\omega_5 + 9v_1^2 cs^2\omega_4^2\omega_1^3\omega_5 + 12cs^2 v_2^2\omega_3\omega_4^2\omega_1\omega_5 + 32cs^4\omega_3^2\omega_4^2\omega_1^2 - 6v_2^2\omega_3^2\omega_1^2\omega_5 + 18cs^2 v_2^2\omega_3^2\omega_1^2\omega_5 - 6v_1^2\omega_3^2\omega_1^2\omega_5 -$

$6v_1^2 cs^2\omega_3\omega_4^2\omega_1^3\omega_5 - 6v_1^2 cs^2\omega_3^2\omega_4\omega_1^2\omega_5 - 6v_2^4\omega_4^2\omega_1^2\omega_5 + 8cs^4\omega_3\omega_4^2\omega_1\omega_5 - 8cs^2\omega_3^2\omega_4\omega_1\omega_5 - 32cs^4\omega_3^2\omega_4^2\omega_1 + 6v_1^2 cs^2\omega_3^2\omega_4\omega_1^3\omega_5 + 3v_2^4\omega_4^2\omega_1^3\omega_5 +$

$3v_1^2\omega_3^2\omega_1^3\omega_5 - 9cs^2 v_2^2\omega_3^2\omega_1^3\omega_5 + 6v_1^2 cs^2\omega_3\omega_4^2\omega_1^2\omega_5 + 3v_2^2\omega_3^2\omega_1^3\omega_5 - 12cs^2 v_2^2\omega_3\omega_4\omega_1\omega_5 - 18v_1^2 cs^2\omega_4^2\omega_1^2\omega_5 + 3v_1^4\omega_4^2\omega_1^3\omega_5)\frac{\rho}{8\omega_3^2\omega_4^2\omega_1^3\omega_5}$

coefficient $C_{\mathrm{D}_x\mathrm{D}_y^3\rho}^{(3)}$ **at** $\frac{\partial^4\rho}{\partial x_1 \partial x_2^3}$:

$C_{\mathrm{D}_x\mathrm{D}_y^3\rho}^{(3),\text{SRT}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y^3\rho}^{(3),\text{MRT1}} = (-4\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8\omega_5 +$

$4\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 - 6\omega_{15}\omega_6\omega_{16}^2\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2 cs^2\omega_8\omega_5 -$

$4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 4v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 +$

$12\omega_{15}\omega_6\omega_{16}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2 cs^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5 +$

$3\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 - 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 +$

$4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_5 - 12\omega_{15}\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_5 -$

$3v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 + 8\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 -$

$12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_5 - 4\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 - 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 +$

$4v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 + 2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5 - 2\omega_{15}\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 +$

$24\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8 + 6\omega_{16}^2\omega_{10}^2\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_{14}\omega_8\omega_5 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_5 -$

$4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 + 2v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 + 12\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_{10} cs^2\omega_{17}\omega_8\omega_5 -$

$2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 - 4\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8 +$

$6\omega_{15}\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_8\omega_5 - 12\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8 - 2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 -$

$$4v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 2\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_5 + 6\omega_6\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 8\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{16}^2\omega_{10}^2\omega_{17}\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_5 +$$
$$4\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - 12\omega_{15}\omega_{16}\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5 + 3\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_5 -$$
$$12\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{17}\omega_8 - 9\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 - 24\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_{10}\omega_7cs^2\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 + 12\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_5 +$$
$$2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{17}\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 4v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 6\omega_{15}\omega_6\omega_{10}^2\omega_7^2cs^2\omega_{17}\omega_8\omega_5 -$$
$$3\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 - 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_8\omega_5 +$$
$$8\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7cs^2\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 +$$
$$12\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8\omega_5 + 9\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_8\omega_5 + 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5)\frac{v_1v_2v_3}{4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5}$$

$$C^{(3),\text{MRT2}}_{\text{D}_x\text{D}_y^3\rho} = (6\omega_{15}\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5cs^2 - 4\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5cs^2 +$$
$$4\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - 24\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2 - 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 - 9\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5cs^2 +$$
$$4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 4v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - 2\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 +$$
$$9\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5cs^2 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_5 + 3\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5cs^2 + 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 +$$
$$12\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 - 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5cs^2 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 - 4\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 -$$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8cs^2 - 4\omega_{15}\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 +$$
$$2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_5 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5cs^2 - 3v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 +$$
$$12\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8cs^2 + 8\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2 -$$
$$4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 - 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 6\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 + 4\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 +$$
$$2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5cs^2 - 12\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 -$$
$$2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 + 2v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 +$$
$$6\omega_6v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5cs^2 - 2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5cs^2 +$$
$$2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5cs^2 + 12\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7\omega_5cs^2 - 2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 +$$
$$2\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5cs^2 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2 + 2\omega_{15}\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5cs^2 - 8\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5 + 12\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2 + 2\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 +$$
$$6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 + 24\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_5 + 4\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 +$$
$$3\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5 + 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5cs^2 - 2\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2 - 6\omega_{15}\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5cs^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 2\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 -$$
$$4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 + 2v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 + 4v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5cs^2 - 4\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8 + 4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 - 12\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8cs^2 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 -$$
$$2\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 + 8\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5cs^2 -$$
$$12\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5cs^2 + 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5cs^2 - 6\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5cs^2)\frac{v_1v_2v_3}{4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x\text{D}_y^3\rho} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x\text{D}_y^3\rho} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_x\text{D}_y^3\rho} = 0$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_x\text{D}_y^3\rho} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{v_1v_2v_3}{12\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_x\text{D}_y^3v_1}$ at $\frac{\partial^4 v_1}{\partial x_1\partial x_2^3}$:

$$C^{(3),\text{SRT}}_{\text{D}_x\text{D}_y^3v_1} = (2 - 6cs^2 + 3cs^2\omega + v_2^2\omega - \omega - 2v_2^2)\frac{\rho v_2v_3}{12\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}_x\text{D}_y^3v_1} = (24\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{17}\omega_8^2 - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^2 + 24\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 -$$
$$6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_8^2\omega_5^2 + 18\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 - 9v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 3\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5^2 -$$
$$12\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^2 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2cs^2\omega_{17}\omega_8\omega_5 +$$
$$12\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 36\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}cs^2\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7^2cs^2\omega_8^2\omega_5 + 6v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$$
$$12\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{17}\omega_8\omega_5^2 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_8\omega_5^2 + 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5^2 + 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5^2 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5^2 +$$
$$\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_8^2\omega_5 -$$
$$54\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8\omega_5 - 18\omega_{15}\omega_6^2\omega_{16}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 - 18\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 -$$
$$6\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 9\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7cs^2\omega_{17}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5 -$$
$$12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_5 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_8\omega_5^2 + 54\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 -$$
$$6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5^2 - 24\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}cs^2\omega_{17}\omega_8^2\omega_5 + 12v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$$
$$4\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5^2 + 30\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 42\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 36\omega_{15}\omega_6^2\omega_{16}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 -$$

$36\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2cs^2\omega_{17}\omega_8^2\omega_5 - 4\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 + 18\omega_{15}\omega_6^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_8^2\omega_5 +$
$12v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 - 12\omega_6^2\omega_{16}\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 +$
$12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{17}\omega_5 - 24\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8\omega_5 + 9\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 +$
$3\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 12\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$
$6\omega_6^2\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5^2 - 12v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8^2\omega_5 - 6\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2 +$
$6\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_8^2\omega_5 - 36\omega_{15}\omega_6^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 - \omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$
$12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7cs^2\omega_8^2\omega_5 - 12v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5 +$
$18\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 24\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8\omega_5 + 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8^2\omega_5 - 6\omega_{15}\omega_6^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8^2\omega_5 +$
$6\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_5 - 9\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 -$
$54\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 - 24\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2 + 6\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 +$
$6v_2^2\omega_6\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 3\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_8^2\omega_5 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 +$
$54\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_{17}\omega_8^2\omega_5 -$
$36\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 - 12\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 42\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{17}\omega_8\omega_5 -$
$18\omega_{15}v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 - 12v_2^2\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$
$12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7cs^2\omega_{17}\omega_8^2\omega_5 + 24\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2cs^2\omega_{17}\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5)\frac{\rho v_2 v_3}{12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5}$

$C^{(3),\text{MRT2}}_{D_x D_y^3 v_1} = (-54\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2cs^2 + 54\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2cs^2 - 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 +$
$12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_5cs^2 + 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 -$
$6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 + 18\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 36\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 9v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$
$36\omega_{15}\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 - 36\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8^2\omega_5^2cs^2 - 3v_2^2\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 +$
$12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5^2cs^2 + 12\omega_{15}\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5 + 6\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5^2cs^2 + 12\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$
$54\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2cs^2 - 24\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8cs^2 - 18\omega_{15}\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 + 6v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$
$30\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 + 6\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$
$9\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 + 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 +$
$12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 -$
$6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2cs^2 + \omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 36\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 -$
$24\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 18\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 6\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$
$12\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 6\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8^2\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$
$12v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5cs^2 + 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$
$4\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 24\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2cs^2 -$
$4\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 12v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 42\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2cs^2 +$
$12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5cs^2 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 24\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5cs^2 +$
$9\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$
$9\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5^2 - 54\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2cs^2 -$
$6\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 6\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - \omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 24\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2cs^2 +$
$24\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5^2cs^2 - 12v_2^2\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8^2\omega_5 + 18\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 +$
$6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 - 6\omega_{15}\omega_6^2\omega_{10}\omega_7^2\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5^2cs^2 + 6\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 +$
$6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2cs^2 + 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 -$
$36\omega_{15}\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5^2cs^2 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 12\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 12\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2 +$
$6v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2cs^2 + 12\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 - 6\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 -$
$12\omega_{15}v_2^2\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 18\omega_{15}\omega_6^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 24\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5cs^2 -$
$12\omega_{15}\omega_6^2\omega_{16}\omega_{10}^2\omega_7\omega_8^2\omega_5 - 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5^2cs^2 + 6\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_8^2\omega_5 -$
$12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 18\omega_{15}v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 - 12\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 - 12\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_8\omega_5 -$
$12v_2^2\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5 + 3\omega_{15}\omega_6^2\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5cs^2 + 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8^2\omega_5)\frac{\rho v_2 v_3}{12\omega_{15}\omega_6^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8^2\omega_5}$

$C^{(3),\text{CLBM1}}_{D_x D_y^3 v_1} = (-\omega_{15} + 3\omega_{15}cs^2\omega_{10} + \omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10} + 3\omega_{15}cs^2 + 3\omega_{10} - \omega_{15}\omega_{10} - 3v_2^2\omega_{10} - 9cs^2\omega_{10})\frac{\rho v_2 v_3}{12\omega_{15}\omega_{10}}$

$C^{(3),\text{CLBM2}}_{D_x D_y^3 v_1} = (3\omega_{15}cs^2 + 3\omega_{15}\omega_{10}cs^2 - \omega_{15} + \omega_{15}v_2^2 + \omega_{15}v_2^2\omega_{10} + 3\omega_{10} - \omega_{15}\omega_{10} - 3v_2^2\omega_{10} - 9\omega_{10}cs^2)\frac{\rho v_2 v_3}{12\omega_{15}\omega_{10}}$

$C^{(3),\text{CuLBM1}}_{D_x D_y^3 v_1} = (3\omega_7cs^2 - \omega_7\omega_5 - 9cs^2\omega_5 - \omega_7 + v_2^2\omega_7 - 3v_2^2\omega_5 + v_2^2\omega_7\omega_5 + 3\omega_5 + 3\omega_7cs^2\omega_5)\frac{\rho v_2 v_3}{12\omega_7\omega_5}$

$C^{(3),\text{CuLBM2}}_{D_x D_y^3 v_1} = (-27cs^2\omega_3\omega_1\omega_2 + 9\omega_3\omega_1\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 + 18cs^2\omega_3\omega_4\omega_1\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 - 18v_1^2\omega_3\omega_4\omega_2 - 8\omega_3\omega_4\omega_1 + 4v_2^2\omega_3\omega_4\omega_2 +$
$12cs^2\omega_3\omega_4\omega_1 + 6v_2^2\omega_3\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 - 27cs^2\omega_4\omega_1\omega_2 - 9v_2^2\omega_3\omega_1\omega_2 + 18v_1^2\omega_3\omega_4\omega_1 + 6cs^2\omega_3\omega_4\omega_2 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_2 v_3}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(3)}_{D_x D_y^3 v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1 \partial x_2^3}$**:**

$C^{(3),\text{SRT}}_{D_x D_y^3 v_2} = 0$

$C^{(3),\text{MRT1}}_{D_x D_y^3 v_2} =$

$(-12\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 - 2\omega_{15}\omega_6\omega_{16}^2\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 - 12v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 4\omega_{15}\omega_6\omega_{16}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2 cs^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5 + 9\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 - 12\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_5 - 9v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 + 8\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_5 - 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 12v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5 - 2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8 + 2\omega_{16}^2\omega_{10}^2\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_5 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 + 6v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 cs^2\omega_{17}\omega_8 + 2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_8\omega_5 - 4\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8 - 2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 + 6\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_5 + 2\omega_6\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 24\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_5 + 4\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 - 4\omega_{15}\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 + 3\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_5 - 4\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8 - 3\omega_6\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_5 + 6v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 + 12v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 - 3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 24\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7 cs^2\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7 cs^2\omega_{17}\omega_8\omega_5 + 3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2 cs^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_8\omega_5 + 4\omega_{15}\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5)\frac{\rho v_1 v_3}{4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5}$

$C^{(3),\text{MRT2}}_{D_x D_y^3 v_2} = (2\omega_{15}\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 - 12\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 cs^2 + 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 - 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 - 8\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2 - 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 - 3\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_8\omega_5 - 12v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_8\omega_5 + 3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_5 + 9\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_8\omega_5 cs^2 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2 - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8 cs^2 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_5 cs^2 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 - 12\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2 - 4\omega_{15}\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 cs^2 - 9v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_5 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2 + 8\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2 - 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 2\omega_{15}\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 + 12\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 12v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 2\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 - 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_5 - 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 cs^2 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2 - 2\omega_{15}\omega_6\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 + 6v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 + 2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 - 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_5 cs^2 + 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7^2\omega_5 cs^2 - 2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 6\omega_{15}v_2^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 2\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 cs^2 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 cs^2 + 2\omega_{15}\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_{17}\omega_8\omega_5 cs^2 - 24\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8 cs^2 + 6\omega_{15}v_2^2\omega_6\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 2\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 + 8\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_5 + 4\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 + 3\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5 - 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_5 + 2\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_8\omega_5 cs^2 - 6\omega_{15}v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 + 12\omega_{15}v_2^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 cs^2 - 2\omega_{15}\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8\omega_5 cs^2 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 6v_2^2\omega_6\omega_{16}^2\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 4\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 6v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 + 12v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 3\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7^2\omega_5 cs^2 - 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 12\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 - 4\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8 cs^2 + 4\omega_{15}\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_8\omega_5 - 6\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_8\omega_5 + 24\omega_{15}v_2^2\omega_6\omega_{16}\omega_{10}^2\omega_7\omega_{17}\omega_8\omega_5 - 12v_2^2\omega_6\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_8\omega_5 - 2\omega_6\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 - 4\omega_{15}\omega_6\omega_{16}\omega_{10}\omega_{17}\omega_8\omega_5 cs^2 - 4\omega_{15}\omega_{16}^2\omega_{10}\omega_7\omega_{17}\omega_5 cs^2 + 4\omega_{15}\omega_{16}\omega_{10}\omega_7\omega_{17}\omega_8 + 4\omega_{15}\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8\omega_5 cs^2 - 2\omega_{15}\omega_{16}\omega_{10}\omega_7^2\omega_{17}\omega_8\omega_5 cs^2)\frac{\rho v_1 v_3}{4\omega_{15}\omega_6\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{17}\omega_8\omega_5}$

$C^{(3),\text{CLBM1}}_{D_x D_y^3 v_2} = 0$

$C^{(3),\text{CLBM2}}_{D_x D_y^3 v_2} = 0$

$C^{(3),\text{CuLBM1}}_{D_x D_y^3 v_2} = 0$

$C^{(3),\text{CuLBM2}}_{D_x D_y^3 v_2} = (3cs^2\omega_1 - v_1^2\omega_2 - 3cs^2\omega_2 - \omega_1 + v_1^2\omega_1 + \omega_2)\frac{\rho v_1 v_3}{36\omega_1\omega_2}$

coefficient $C^{(3)}_{D_x D_y^3 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1 \partial x_2^3}$:

$C^{(3),\text{SRT}}_{D_x D_y^3 v_3} = 0$

$C^{(3),\text{MRT1}}_{D_x D_y^3 v_3} =$

$(2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2 - 7\omega_6\omega_{16}^2\omega_7^3 cs^2\omega_{17}\omega_8 - v_2^2\omega_6^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 - 11\omega_6^2\omega_{16}^2\omega_7^2 cs^2\omega_{17}\omega_8 - 2\omega_6\omega_{16}^2\omega_7^3\omega_8^2 - 2\omega_6^2\omega_{16}^2\omega_7^3 cs^2\omega_8 + v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 +$
$7\omega_6\omega_{16}^2\omega_7^2 cs^2\omega_{17}\omega_8^2 + 2\omega_6\omega_{16}^2\omega_7^3 cs^2\omega_8 - \omega_6^2\omega_{16}\omega_7^3 cs^2\omega_{17}\omega_8^2 + 2\omega_6\omega_{16}^2\omega_7^3 cs^2\omega_8 - 2v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_8^2 - 2\omega_6^2\omega_7^2 cs^2\omega_{17}\omega_8 - v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6\omega_{16}\omega_7^2 cs^2\omega_{17}\omega_8^2 +$
$\omega_6^2\omega_{16}\omega_7^3\omega_8^2 - v_2^2\omega_6\omega_{16}\omega_7^3\omega_8^2 - 4\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2 - \omega_6^2\omega_7^3\omega_{17}\omega_8^2 + v_2^2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2 + \omega_6\omega_{16}\omega_7^3 cs^2\omega_{17}\omega_8^2 + 2\omega_6\omega_{16}\omega_7^2 cs^2\omega_8^2 +$
$4\omega_6^2\omega_{16}\omega_7^2 cs^2\omega_{17}\omega_8^2 - \omega_6\omega_{16}^2\omega_7^3 cs^2\omega_8^2 - 2v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 + 2\omega_6^2\omega_{16}^2\omega_7^2 cs^2\omega_{17} + 2v_2^2\omega_6\omega_{16}^2\omega_7^3\omega_8 + \omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8 + 5\omega_6^2\omega_{16}^2\omega_7^3 cs^2\omega_{17}\omega_8 +$
$v_2^2\omega_6^2\omega_7^3\omega_{17}\omega_8 + \omega_6^2\omega_{16}\omega_7^3 cs^2\omega_8 - \omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 + 4\omega_6\omega_{16}^2\omega_7^2 cs^2\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8 - 2\omega_6\omega_{16}\omega_7^2\omega_8^2 - v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_8^2 - v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8 +$
$\omega_6\omega_{16}\omega_7^3\omega_8^2 - 5\omega_6^2\omega_{16}^2\omega_7^2 cs^2\omega_{17}\omega_8^2 - 6\omega_6\omega_{16}^2\omega_7 cs^2\omega_{17}\omega_8^2 + 2\omega_6^2\omega_7^2\omega_{17}\omega_8^2 + \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8^2 + 4v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 + 6\omega_6^2\omega_{16}\omega_7 cs^2\omega_{17}\omega_8 +$
$2\omega_6^2\omega_{16}^2\omega_7^3\omega_8 - \omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2 + 2v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_8 - 2v_2^2\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2 + 2\omega_6^2\omega_{16}^2\omega_7^2 cs^2\omega_8 + \omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2 + 2\omega_{16}^2\omega_7^3 cs^2\omega_{17}\omega_8 -$
$2\omega_{16}^2\omega_7^2 cs^2\omega_{17}\omega_8^2 + v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_8^2 - \omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 + 2\omega_6^2\omega_{16}^2\omega_7^2\omega_8^2 + v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 - 2v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_8 - 2\omega_6^2\omega_{16}^2\omega_7^2\omega_8 + v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8^2 -$
$2\omega_6^2\omega_{16}^2\omega_7^2 cs^2\omega_8^2 - 2v_2^2\omega_6^2\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6\omega_{16}\omega_7 cs^2\omega_{17}\omega_8^2 + 2\omega_6\omega_{16}\omega_7^3 cs^2\omega_{17} + \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_7^3\omega_8^2 + 13\omega_6^2\omega_{16}^2\omega_7 cs^2\omega_{17}\omega_8^2 -$
$2\omega_6^2\omega_{16}^2\omega_7^3 cs^2\omega_{17} - 2v_2^2\omega_6^2\omega_{16}^2\omega_7^2\omega_8^2 - \omega_6^2\omega_{16}\omega_7^3 cs^2\omega_8^2 + 2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 - 8\omega_6^2\omega_{16}^2 cs^2\omega_{17}\omega_8^2 - v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8)\frac{\rho v_1 v_2}{2\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2}$

$C_{D_x D_y^3 v_3}^{(3),\text{MRT2}} = (2\omega_6^2\omega_{16}^2\omega_7^2\omega_8 cs^2 + 2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2 - 2\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 - v_2^2\omega_6^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 - 2\omega_6\omega_{16}\omega_7^2\omega_8 + v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 + 2v_2^2\omega_6\omega_{16}\omega_7^2\omega_8^2 -$
$7\omega_{16}^2\omega_7^3\omega_{17}\omega_8 cs^2 - v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 + \omega_6^2\omega_{16}\omega_7^3\omega_8^2 - 11\omega_6^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8 cs^2 - v_2^2\omega_6\omega_{16}\omega_7^3\omega_8^2 - 4\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2 - \omega_6^2\omega_7^3\omega_{17}\omega_8^2 -$
$6\omega_6\omega_{16}^2\omega_7\omega_{17}\omega_8^2 cs^2 + v_2^2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 + 5\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8 cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^3\omega_{17} cs^2 + 4\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8 cs^2 - 8\omega_6^2\omega_{16}^2\omega_{17}\omega_8^2 cs^2 + \omega_6^2\omega_{16}\omega_7^3\omega_8^2 cs^2 +$
$13\omega_6^2\omega_{16}^2\omega_7\omega_{17}\omega_8^2 cs^2 - 2v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 + 2v_2^2\omega_6\omega_{16}^2\omega_7^3\omega_8 + \omega_6\omega_{16}^2\omega_7^3\omega_{17}\omega_8 - 2\omega_6\omega_{16}\omega_7^2\omega_{17}\omega_8^2 cs^2 + v_2^2\omega_6^2\omega_7^3\omega_{17}\omega_8 - \omega_6\omega_{16}\omega_7^3\omega_8^2 cs^2 -$
$\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 - \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8 - 2\omega_6\omega_{16}\omega_7^2\omega_8^2 + 2\omega_6\omega_{16}\omega_7^3\omega_{17} cs^2 - v_2^2\omega_6\omega_{16}\omega_7^3\omega_8^2 - v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8 + \omega_6\omega_{16}\omega_7^3\omega_8^2 + 2\omega_6\omega_{16}\omega_7^2\omega_8^2 cs^2 +$
$2\omega_6\omega_{16}\omega_7^3\omega_8^2 cs^2 + 2\omega_6^2\omega_7^2\omega_{17}\omega_8^2 + 2\omega_{16}^2\omega_7^3\omega_{17}\omega_8 cs^2 + 2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2 + 4v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 - 2\omega_6^2\omega_7^2\omega_{17}\omega_8^2 - \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8^2 cs^2 +$
$2\omega_6^2\omega_{16}^2\omega_7^3\omega_8 - \omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 - 2\omega_6\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 cs^2 + 2v_2^2\omega_6^2\omega_{16}^2\omega_7^2\omega_8 - 2v_2^2\omega_6\omega_{16}^2\omega_7^3\omega_8 - \omega_6^2\omega_{16}\omega_7^3\omega_8^2 cs^2 + \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8 + 7\omega_6\omega_{16}^2\omega_7 cs^2\omega_{17}\omega_8^2 cs^2 +$
$v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_8^2 + 6\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8 cs^2 - \omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 - 2\omega_6^2\omega_{16}\omega_7^3\omega_8 cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^2\omega_8^2 + v_2^2\omega_6^2\omega_{16}\omega_7\omega_{17}\omega_8^2 - 2v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_8 - \omega_6^2\omega_{16}\omega_7^3\omega_8^2 cs^2 -$
$5\omega_6^2\omega_{16}^2\omega_7^2\omega_{17}\omega_8^2 cs^2 - 2\omega_6^2\omega_{16}^2\omega_7^2\omega_8 + v_2^2\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8 - 2v_2^2\omega_6^2\omega_7^3\omega_{17}\omega_8 + \omega_6^2\omega_{16}\omega_7^3\omega_{17}\omega_8 - \omega_6^2\omega_{16}\omega_7^3\omega_8^2 - 2\omega_6^2\omega_{16}^2\omega_7^2\omega_8^2 cs^2 - 2v_2^2\omega_6^2\omega_{16}^2\omega_7^2\omega_8^2 +$
$\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8^2 cs^2 + 2\omega_6^2\omega_{16}^2\omega_7^2\omega_{17} cs^2 + 4\omega_6^2\omega_{16}\omega_7^2\omega_{17}\omega_8^2 cs^2 + \omega_6^2\omega_7^3\omega_{17}\omega_8^2 cs^2 + 2\omega_6\omega_{16}\omega_7\omega_{17}\omega_8^2 - v_2^2\omega_6\omega_{16}\omega_7^3\omega_{17}\omega_8)\frac{\rho v_1 v_2}{2\omega_6^2\omega_{16}^2\omega_7^3\omega_{17}\omega_8^2}$

$C_{D_x D_y^3 v_3}^{(3),\text{CLBM1}} = 0$

$C_{D_x D_y^3 v_3}^{(3),\text{CLBM2}} = 0$

$C_{D_x D_y^3 v_3}^{(3),\text{CuLBM1}} = 0$

$C_{D_x D_y^3 v_3}^{(3),\text{CuLBM2}} = (2v_1^2\omega_3^2\omega_4\omega_1 - 12\omega_3\omega_4 - 36cs^2\omega_4^2 + 3v_2^2\omega_4^2\omega_1 - 2v_1^2\omega_3\omega_4^2\omega_1 + 6v_1^2\omega_3\omega_4^2 - 6v_2^2\omega_4^2 + 18cs^2\omega_4^2\omega_1 + 3v_2^2\omega_3^2\omega_1 + 6v_1^2\omega_3^2 -$
$18cs^2\omega_3^2\omega_4 + 6\omega_3\omega_4\omega_1 - 6\omega_3\omega_4^2 - 18cs^2\omega_3\omega_4\omega_1 + 36cs^2\omega_3\omega_4 + 3v_1^2\omega_4^2\omega_1 + 2\omega_3\omega_4^2\omega_1 + 12\omega_4^2 - 6cs^2\omega_3\omega_4^2\omega_1 - 6v_2^2\omega_3^2 + 6cs^2\omega_3^2\omega_4\omega_1 -$
$6v_1^2\omega_3^2\omega_4 - 2\omega_3^2\omega_4\omega_1 - 6\omega_4^2\omega_1 - 6v_2^2\omega_3\omega_4\omega_1 - 3v_1^2\omega_3^2\omega_1 + 12v_2^2\omega_3\omega_4 + 6\omega_3^2\omega_4 - 6v_1^2\omega_4^2 + 18cs^2\omega_3\omega_4^2)\frac{\rho v_1 v_2}{8\omega_3^2\omega_4^2\omega_1}$

coefficient $C_{D_y^4 \rho}^{(3)}$ **at** $\frac{\partial^4 \rho}{\partial x_2^4}$:

$C_{D_y^4 \rho}^{(3),\text{SRT}} = (6v_2^4 - 2cs^2 - 3v_2^4\omega + cs^2\omega + 24v_2^2 cs^2 - 12v_2^2 cs^2\omega + 3v_2^2\omega - cs^4\omega - 6v_2^2 + 2cs^4)\frac{v_3}{24\omega}$

$C_{D_y^4 \rho}^{(3),\text{MRT1}} = (48v_2^4\omega_{16}^2\omega_{10} + 30v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 36v_2^2\omega_{16}^2\omega_7^2 + 48\omega_{16}\omega_{10}^2\omega_7 cs^4 - 24v_2^4\omega_{10}^2\omega_7 - 48v_2^4\omega_{16}\omega_{10}\omega_7 - 24\omega_{16}^2\omega_7 cs^2 +$
$12\omega_{16}\omega_{10}^2\omega_7 cs^2 + 150v_2^2\omega_{16}\omega_{10}\omega_7 cs^2 + 72v_2^4\omega_{16}^2\omega_7 - 12\omega_{16}^2\omega_7 cs^4 - 36v_2^2\omega_{16}^2\omega_{10}\omega_7 + 72v_2^2\omega_{10}^2\omega_7 cs^2 - 12v_2^2\omega_{10}^2\omega_7 - 48\omega_{16}\omega_{10}\omega_7 cs^4 -$
$3v_2^4\omega_{16}^2\omega_{10}\omega_7 - 48v_2^2\omega_{16}^2\omega_{10} - 144v_2^2\omega_{16}^2\omega_7 cs^2 + 12\omega_{10}^2\omega_7 cs^4 - 24\omega_{16}\omega_{10}\omega_7 cs^2 - 36v_2^4\omega_{16}^2\omega_7 + 96v_2^2\omega_{16}\omega_{10}\omega_7 - 144v_2^2\omega_{16}\omega_{10}\omega_7 cs^2 +$
$24v_2^2\omega_{10}^2\omega_7 - 72v_2^2\omega_{16}^2\omega_7 + 24\omega_{10}^2\omega_7 cs^2 - \omega_{16}^2\omega_{10}\omega_7 cs^4 + 12v_2^2\omega_{10}^2\omega_7^2 + 24v_2^4\omega_{16}\omega_{10}\omega_7^2 - 96v_2^2\omega_{16}\omega_{10}^2\omega_7 - 126v_2^2\omega_{16}\omega_{10}^2\omega_7 cs^2 -$
$14\omega_{16}^2\omega_{10}\omega_7^2 + 24\omega_{16}\omega_{10}^2 cs^2 - 12\omega_{16}^2\omega_{10}\omega_7 cs^2 + 24\omega_{16}\omega_{10}^2 cs^4 - 30v_2^4\omega_{16}\omega_{10}^2\omega_7 + 48v_2^2\omega_{10}\omega_7 cs^2 + 48v_2^2\omega_{16}\omega_{10}\omega_7 +$
$432v_2^2\omega_{16}\omega_{10}^2\omega_7 cs^2 + 36v_2^4\omega_{16}\omega_{10}\omega_7^2 + 14\omega_{16}^2\omega_{10}\omega_7^2 cs^4 - 24\omega_{16}\omega_{10} cs^4 + 288v_2^2\omega_{16}^2\omega_7 cs^2 - 24\omega_{10}^2\omega_7 cs^4 + \omega_{16}^2\omega_{10}\omega_7^2 cs^2 + 72v_2^2\omega_{16}\omega_{10}\omega_7 cs^2 -$
$432v_2^2\omega_{16}^2\omega_{10}\omega_7 cs^2 - 48\omega_{16}^2\omega_{10}\omega_7 cs^2 + 24\omega_{16}^2\omega_7 cs^4 - 144v_2^2\omega_{10}^2\omega_7 cs^2 + 3v_2^4\omega_{16}^2\omega_{10}\omega_7 + 48v_2^2\omega_{16}^2\omega_{10} - 96v_2^4\omega_{16}^2\omega_{10}\omega_7 - 216v_2^2\omega_{16}\omega_{10}^2 cs^2 -$
$24v_2^2\omega_{16}\omega_{10}\omega_7 - 12v_2^2\omega_{16}^2\omega_{10}\omega_7^2 cs^2 - 12\omega_{16}\omega_{10}^2\omega_7 cs^4 + 12\omega_{16}^2\omega_7 cs^2 + 96v_2^2\omega_{16}\omega_{10}^2\omega_7 + 216v_2^2\omega_{16}^2\omega_{10} cs^2)\frac{v_3}{24\omega_{16}^2\omega_{10}^2\omega_7^2}$

$C_{D_y^4 \rho}^{(3),\text{MRT2}} = (48v_2^4\omega_{16}^2\omega_{10} + 30v_2^2\omega_{16}\omega_{10}^2\omega_7^2 - 12v_2^2\omega_{16}^2\omega_{10}\omega_7^2 cs^2 + 216v_2^2\omega_{16}^2\omega_{10} cs^2 + 36v_2^2\omega_{16}^2\omega_7^2 + 12\omega_{16}^2\omega_7 cs^2 - 24v_2^4\omega_{10}^2\omega_7 -$
$48v_2^4\omega_{16}\omega_{10}\omega_7 - 12\omega_{16}\omega_{10}^2\omega_7 cs^4 - 144v_2^2\omega_{10}^2\omega_7 cs^2 + 24\omega_{16}\omega_7 cs^4 + 72v_2^4\omega_{16}^2\omega_7 - 48\omega_{16}\omega_{10}\omega_7 cs^2 - 36v_2^2\omega_{16}^2\omega_{10}\omega_7 - 432v_2^2\omega_{16}\omega_{10}\omega_7 cs^2 -$
$12v_2^2\omega_{10}^2\omega_7 - 216v_2^2\omega_{16}\omega_{10}^2 cs^2 - 24\omega_{16}\omega_{10}^2 cs^4 - 3v_2^4\omega_{16}^2\omega_{10}\omega_7 - 48v_2^2\omega_{16}^2\omega_{10} + 14\omega_{16}\omega_{10}^2\omega_7 cs^4 + 72v_2^2\omega_{16}\omega_{10}\omega_7 cs^2 - 36v_2^4\omega_{16}^2\omega_7 +$
$\omega_{16}^2\omega_{10}\omega_7 cs^2 - 24\omega_{10}^2\omega_7 cs^4 + 288v_2^2\omega_{16}^2\omega_7 cs^2 + 96v_2^2\omega_{16}\omega_{10}\omega_7 + 24v_2^2\omega_{10}^2\omega_7 - 72v_2^2\omega_{16}^2\omega_7 + 24\omega_{16}\omega_{10} cs^4 + 12v_2^4\omega_{10}^2\omega_7 + 24v_2^4\omega_{16}\omega_{10}\omega_7^2 -$
$12\omega_{10}^2\omega_7 cs^2 - 96v_2^2\omega_{16}\omega_{10}^2\omega_7 + 432v_2^2\omega_{16}\omega_{10}^2\omega_7 cs^2 + 48\omega_{16}^2\omega_{10}\omega_7 cs^2 - \omega_{16}^2\omega_{10}\omega_7 cs^4 + 24\omega_{10}^2\omega_7 cs^2 - 30v_2^4\omega_{16}\omega_{10}^2\omega_7 + 24\omega_{16}\omega_{10}^2 cs^2 -$
$48v_2^4\omega_{16}^2\omega_{10} + 48v_2^2\omega_{16}\omega_{10}\omega_7 - 14\omega_{16}^2\omega_{10}\omega_7^2 cs^2 - 126v_2^2\omega_{16}\omega_{10}^2\omega_7 cs^2 + 36v_2^4\omega_{16}\omega_{10}\omega_7^2 - 48\omega_{16}\omega_{10}\omega_7 cs^4 - 144v_2^2\omega_{16}\omega_{10}\omega_7 cs^2 -$
$24\omega_{16}^2\omega_{10} cs^2 + 12\omega_{10}^2\omega_7 cs^4 - 144v_2^2\omega_{16}^2\omega_7 cs^2 + 72v_2^2\omega_{10}^2\omega_7 cs^2 - 12\omega_{16}^2\omega_7 cs^4 + 150v_2^2\omega_{16}\omega_{10}\omega_7 cs^2 + 12\omega_{16}\omega_{10}^2\omega_7 cs^2 + 3v_2^2\omega_{16}\omega_{10}^2\omega_7^2 +$
$48v_2^2\omega_{16}^2\omega_{10} - 96v_2^4\omega_{16}^2\omega_{10}\omega_7 - 24v_2^2\omega_{16}\omega_{10}\omega_7 - 24\omega_{16}^2\omega_7 cs^2 + 48\omega_{16}\omega_{10}^2\omega_7 cs^4 + 96v_2^4\omega_{16}\omega_{10}^2\omega_7)\frac{v_3}{24\omega_{16}^2\omega_{10}^2\omega_7}$

$C_{D_y^4 \rho}^{(3),\text{CLBM1}} = (2cs^4 - 12v_2^2 cs^2\omega_{10} - 3v_2^4\omega_{10} + 6v_2^4 - cs^4\omega_{10} + 24v_2^2 cs^2 + 3v_2^2\omega_{10} - 2cs^2 + cs^2\omega_{10} - 6v_2^2)\frac{v_3}{24\omega_{10}}$

$$C^{(3),\text{CLBM2}}_{\text{D}^4_y\rho} = (-3v_2^4\omega_{10} + 24v_2^2cs^2 + 6v_2^4 - \omega_{10}cs^4 - 12v_2^2\omega_{10}cs^2 + 2cs^4 + 3v_2^2\omega_{10} - 2cs^2 - 6v_2^2 + \omega_{10}cs^2)\frac{v_3}{24\omega_{10}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}^4_y\rho} = (-3v_2^4\omega_5 - 2cs^2 + 6v_2^4 + cs^2\omega_5 - 12v_2^2cs^2\omega_5 + 3v_2^2\omega_5 + 24v_2^2cs^2 + 2cs^4 - 6v_2^2 - cs^4\omega_5)\frac{v_3}{24\omega_5}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}^4_y\rho} = (4cs^4\omega_2 - 2cs^2\omega_1 + 48cs^2v_2^2\omega_2 - 6v_2^2\omega_1 + 12v_2^4\omega_2 + 9v_2^2\omega_1\omega_2 + 6v_2^4\omega_1 - 12v_2^2\omega_2 - 36cs^2v_2^2\omega_1\omega_2 - 3cs^4\omega_1\omega_2 - 4cs^2\omega_2 + 24cs^2v_2^2\omega_1 + 2cs^4\omega_1 - 9v_2^4\omega_1\omega_2 + 3cs^2\omega_1\omega_2)\frac{v_3}{72\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}^4_yv_2}$ at $\frac{\partial^4 v_2}{\partial x_2^4}$:

$$C^{(3),\text{SRT}}_{\text{D}^4_yv_2} = (-4 + 6cs^2 - 3cs^2\omega - 5v_2^2\omega + 2\omega + 10v_2^2)\frac{\rho v_2 v_3}{12\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}^4_yv_2} = (-51v_2^2\omega_{16}\omega_{10}^2\omega_7^2 + 36\omega_{16}\omega_{10}^2 - 24\omega_{16}\omega_{10}\omega_7cs^2 - 60v_2^2\omega_{16}^2\omega_7^2 + 72\omega_{16}^2\omega_7cs^2 - 33\omega_{16}\omega_{10}^2\omega_7^2cs^2 + 61v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 24v_2^2\omega_{10}^2\omega_7^2 + 24\omega_{16}\omega_{10}\omega_7 + 84v_2^2\omega_{16}^2\omega_{10} - 12\omega_{16}\omega_{10}\omega_7^2 + 60\omega_{16}^2\omega_{10}cs^2 - 168v_2^2\omega_{16}^2\omega_{10}\omega_7 - 48v_2^2\omega_{10}^2\omega_7 + 120v_2^2\omega_{16}^2\omega_7 + 2\omega_{16}^2\omega_{10}^2\omega_7^2 - 48\omega_{10}^2\omega_7cs^2 + 168v_2^2\omega_{16}\omega_{10}^2\omega_7 + 39\omega_{16}^2\omega_{10}\omega_7^2cs^2 - 60\omega_{16}\omega_{10}^2cs^2 + 24\omega_{10}^2\omega_7^2cs^2 - 25\omega_{16}^2\omega_{10}\omega_7^2 + 24\omega_{10}^2\omega_7 - 36\omega_{16}^2\omega_{10} - 120\omega_{16}^2\omega_{10}\omega_7cs^2 - 72v_2^2\omega_{16}\omega_{10}\omega_7 + 21\omega_{16}\omega_{10}^2\omega_7^2 - 48\omega_{16}^2\omega_7 - 3\omega_{16}^2\omega_{10}\omega_7^2cs^2 + 120\omega_{16}\omega_{10}^2\omega_7cs^2 + 24\omega_{16}^2\omega_7^2 - 5v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 - 84v_2^2\omega_{16}^2\omega_{10} - 72\omega_{16}\omega_{10}^2\omega_7 + 36v_2^2\omega_{16}\omega_{10}\omega_7^2 + 12\omega_{16}\omega_{10}\omega_7^2cs^2 + 72\omega_{16}^2\omega_{10}\omega_7 - 36\omega_{16}^2\omega_7cs^2 - 12\omega_{10}^2\omega_7^2)\frac{\rho v_2 v_3}{12\omega_{16}^2\omega_{10}^2\omega_7^2}$$

$$C^{(3),\text{MRT2}}_{\text{D}^4_yv_2} = (12\omega_{16}\omega_{10}\omega_7^2cs^2 - 51v_2^2\omega_{16}\omega_{10}^2\omega_7 + 36\omega_{16}\omega_{10}^2 - 60v_2^2\omega_{16}^2\omega_7 - 36\omega_{16}^2\omega_7^2cs^2 + 120\omega_{16}\omega_{10}^2\omega_7cs^2 + 61v_2^2\omega_{16}^2\omega_{10}\omega_7^2 + 24v_2^2\omega_{10}^2\omega_7^2 + 24\omega_{16}\omega_{10}\omega_7 + 84v_2^2\omega_{16}^2\omega_{10} - 12\omega_{16}\omega_{10}\omega_7^2 - 3\omega_{16}^2\omega_{10}\omega_7^2cs^2 - 168v_2^2\omega_{16}^2\omega_{10} - 48v_2^2\omega_{10}^2\omega_7 + 120v_2^2\omega_{16}^2\omega_7 + 2\omega_{16}^2\omega_{10}^2\omega_7 + 24\omega_{10}^2\omega_7cs^2 + 168v_2^2\omega_{16}\omega_{10}^2\omega_7 - 120\omega_{16}^2\omega_{10}\omega_7cs^2 - 25\omega_{16}^2\omega_{10}\omega_7^2 - 48\omega_{10}^2\omega_7cs^2 + 24\omega_{10}^2\omega_7 - 36\omega_{16}^2\omega_{10} - 60\omega_{16}\omega_{10}^2cs^2 - 72v_2^2\omega_{16}\omega_{10}\omega_7 + 39\omega_{16}^2\omega_{10}\omega_7^2cs^2 + 21\omega_{16}\omega_{10}^2\omega_7^2 - 48\omega_{16}^2\omega_7 + 60\omega_{16}\omega_{10}^2cs^2 + 24\omega_{16}^2\omega_7^2 - 33\omega_{16}\omega_{10}^2\omega_7^2cs^2 - 5v_2^2\omega_{16}^2\omega_{10}^2\omega_7^2 - 84v_2^2\omega_{16}^2\omega_{10} - 72\omega_{16}\omega_{10}^2\omega_7 - 24\omega_{16}\omega_{10}\omega_7cs^2 + 36v_2^2\omega_{16}\omega_{10}\omega_7^2 + 72\omega_{16}^2\omega_7cs^2 + 72\omega_{16}^2\omega_{10}\omega_7 - 12\omega_{10}^2\omega_7^2)\frac{\rho v_2 v_3}{12\omega_{16}^2\omega_{10}^2\omega_7^2}$$

$$C^{(3),\text{CLBM1}}_{\text{D}^4_yv_2} = (-4 + 2\omega_{10} - 5v_2^2\omega_{10} + 6cs^2 - 3cs^2\omega_{10} + 10v_2^2)\frac{\rho v_2 v_3}{12\omega_{10}}$$

$$C^{(3),\text{CLBM2}}_{\text{D}^4_yv_2} = (-4 + 2\omega_{10} - 5v_2^2\omega_{10} + 6cs^2 + 10v_2^2 - 3\omega_{10}cs^2)\frac{\rho v_2 v_3}{12\omega_{10}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}^4_yv_2} = (-4 + 6cs^2 - 3cs^2\omega_5 - 5v_2^2\omega_5 + 10v_2^2 + 2\omega_5)\frac{\rho v_2 v_3}{12\omega_5}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}^4_yv_2} = (6cs^2\omega_1 + 10v_2^2\omega_1 + 6\omega_1\omega_2 - 15v_2^2\omega_1\omega_2 + 20v_2^2\omega_2 + 12cs^2\omega_2 - 4\omega_1 - 9cs^2\omega_1\omega_2 - 8\omega_2)\frac{\rho v_2 v_3}{36\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}^4_yv_3}$ at $\frac{\partial^4 v_3}{\partial x_2^4}$:

$$C^{(3),\text{SRT}}_{\text{D}^4_yv_3} = (-14cs^2\omega^2 - 42v_2^4\omega^2 + cs^2\omega^3 - 72v_2^4 + 3v_2^4\omega^3 - 24cs^2 + 108v_2^4\omega + 36cs^2\omega - 3cs^4\omega^3 - 144v_2^2cs^2 - 3v_2^2\omega^3 + 216v_2^2cs^2\omega + 30cs^4\omega^2 + 42v_2^2\omega^2 - 108v_2^2\omega - 84v_2^2cs^2\omega^2 - 72cs^4\omega + 72v_2^2 + 48cs^4 + 6v_2^2cs^2\omega^3)\frac{\rho}{24\omega^3}$$

$$C^{(3),\text{MRT1}}_{\text{D}^4_yv_3} = (24\omega_{16}\omega_7cs^4 + 6v_2^2\omega_{16}^2\omega_7cs^2 + 24v_2^2\omega_{16}^2\omega_7^2 + 12\omega_{16}\omega_7cs^2 + 24v_2^4\omega_{16}^2\omega_7 + 24\omega_{16}^2\omega_7cs^4 + 24\omega_{16}\omega_7cs^2 - 3v_2^2\omega_{16}^2\omega_7^3 - 24v_2^4\omega_7^2 - 72v_2^2\omega_{16}^2\omega_7cs^2 - 24v_2^4\omega_{16}^2\omega_7 - 24v_2^2\omega_{16}\omega_7 + 12v_2^4\omega_7^3 - 6\omega_{16}\omega_7^3cs^2 - 3\omega_{16}^2\omega_7^3cs^4 - 24v_2^2\omega_{16}\omega_7cs^2 + 3v_2^4\omega_{16}^2\omega_7^3 + 48v_2^2\omega_{16}\omega_7 + 48v_2^2\omega_{16}\omega_7^2cs^2 - 18v_2^4\omega_{16}\omega_7^3 + \omega_{16}^2\omega_7^3cs^2 + 72v_2^4\omega_{16}\omega_7^2 - 24v_2^2\omega_7^2cs^2 + 156v_2^2\omega_{16}\omega_7cs^2 + 6\omega_{16}\omega_7^3cs^4 - 48v_2^4\omega_{16}\omega_7 + 24\omega_{16}^2cs^4 - 96v_2^2\omega_{16}^2cs^2 - 12v_2^2\omega_{16}\omega_7^3cs^2 - 12v_2^2\omega_7^3 - 48\omega_{16}^2\omega_7cs^4 - 24\omega_{16}\omega_7cs^2 + 18v_2^2\omega_{16}\omega_7^3 + 24v_2^2\omega_7^2 - 24\omega_{16}\omega_7cs^4 + 12v_2^2\omega_7^3cs^2 - 72v_2^2\omega_{16}\omega_7^2 - 8\omega_{16}^2\omega_7cs^2)\frac{\rho}{24\omega_{16}^2\omega_7^3}$$

$$C^{(3),\text{MRT2}}_{\text{D}^4_yv_3} = (12v_2^2\omega_7^3cs^2 - 24\omega_{16}\omega_7^2cs^4 + 24v_2^2\omega_7^2\omega_7^2 - 8\omega_{16}^2\omega_7cs^2 - 48\omega_{16}^2\omega_7cs^4 + 24v_2^4\omega_{16}^2\omega_7 - 12v_2^2\omega_{16}\omega_7^3cs^2 - 96v_2^2\omega_{16}^2cs^2 + 24\omega_{16}^2cs^4 - 24\omega_{16}\omega_7cs^2 - 3v_2^2\omega_{16}^2\omega_7^3 - 24v_2^4\omega_7^2 + \omega_{16}^2\omega_7^3cs^2 + 6\omega_{16}\omega_7^3cs^4 - 24v_2^4\omega_{16}^2\omega_7 + 156v_2^2\omega_{16}\omega_7cs^2 - 24v_2^2\omega_7^2cs^2 - 24v_2^2\omega_{16}\omega_7 + 12v_2^4\omega_7^3 + 48v_2^2\omega_{16}\omega_7^2cs^2 + 3v_2^4\omega_{16}^2\omega_7^3 - 6\omega_{16}\omega_7^3cs^2 + 48v_2^2\omega_{16}\omega_7 - 24v_2^2\omega_{16}\omega_7cs^2 - 18v_2^4\omega_{16}\omega_7^3 - 3\omega_{16}^2\omega_7^3cs^4 + 72v_2^4\omega_{16}\omega_7^2 - 72v_2^2\omega_{16}\omega_7^2cs^2 - 48v_2^4\omega_{16}\omega_7 + 24\omega_{16}^2\omega_7cs^4 - 12v_2^2\omega_7^3 + 18v_2^2\omega_{16}\omega_7^3 + 24\omega_{16}\omega_7^2cs^2 + 24v_2^2\omega_7^2 + 6v_2^2\omega_{16}^2\omega_7^3cs^2 + 24\omega_{16}\omega_7cs^4 + 12\omega_{16}^2\omega_7cs^2 - 72v_2^2\omega_{16}\omega_7^2)\frac{\rho}{24\omega_{16}^2\omega_7^3}$$

$$C^{(3),\text{CLBM1}}_{\text{D}^4_yv_3} = (24cs^4\omega_{16}\omega_7 - 36v_2^2cs^2\omega_{16}^2\omega_7 + 12v_2^2\omega_{16}^2\omega_7^2 + 24cs^4\omega_{16}^2 - 6cs^2\omega_{16}\omega_7^3 + 24cs^2\omega_{16}^2\omega_7 - 3v_2^2\omega_{16}^2\omega_7^3 - 24cs^2\omega_{16}\omega_7 - 72v_2^4\omega_7^2 + 6v_2^2cs^2\omega_{16}^2\omega_7 - 216v_2^2cs^2\omega_7^2 - 12v_2^4\omega_{16}^2\omega_7 + 6cs^4\omega_{16}\omega_7^3 + 36v_2^4\omega_7^3 - 24cs^4\omega_{16}\omega_7 + 108v_2^2cs^2\omega_7^3 + 3v_2^4\omega_{16}^2\omega_7^3 - 12v_2^2cs^2\omega_{16}^2\omega_7 + 24cs^4\omega_{16}^2\omega_7 + 144v_2^2cs^2\omega_{16}\omega_7 - 30v_2^2\omega_{16}\omega_7^3 + 12cs^2\omega_{16}^2\omega_7 + 72v_2^2\omega_{16}\omega_7^2 - 72v_2^2cs^2\omega_{16}\omega_7^3 - 3cs^4\omega_{16}^2\omega_7^3 - 36v_2^2\omega_7^3 - 8cs^2\omega_{16}^2\omega_7^2 + 30v_2^2\omega_{16}\omega_7^3 + 72v_2^2\omega_7^2 - 48cs^4\omega_{16}\omega_7 + 72v_2^2cs^2\omega_{16}\omega_7 - 72v_2^2\omega_{16}\omega_7^2 + cs^2\omega_{16}^2\omega_7^3)\frac{\rho}{24\omega_{16}^2\omega_7^3}$$

$$C^{(3),\text{CLBM2}}_{\text{D}^4_yv_3} = (24\omega_{16}^2\omega_7cs^4 + 12v_2^2\omega_{16}^2\omega_7^2 + 24\omega_{16}\omega_7^2cs^2 + 6v_2^2\omega_{16}^2\omega_7^3cs^2 + 24\omega_{16}\omega_7cs^4 + 12\omega_{16}^2\omega_7cs^2 - 3v_2^2\omega_{16}^2\omega_7^3 - 72v_2^4\omega_7^2 - 6\omega_{16}\omega_7^3cs^2 +$$

$$72v_2^2\omega_{16}\omega_7 cs^2 - 12v_2^4\omega_{16}^2\omega_7^2 - 3\omega_{16}^2\omega_7^3 cs^4 + 36v_2^4\omega_7^3 - 12v_2^2\omega_{16}^2\omega_7^2 cs^2 + 3v_2^4\omega_{16}^2\omega_7^3 + \omega_{16}^2\omega_7^3 cs^2 + 6\omega_{16}\omega_7^3 cs^4 - 216v_2^2\omega_7^2 cs^2 - 36v_2^2\omega_{16}^2\omega_7 cs^2 -$$
$$30v_2^4\omega_{16}\omega_7^2 + 72v_2^4\omega_{16}\omega_7^2 + 144v_2^2\omega_{16}\omega_7^2 cs^2 + 108v_2^2\omega_7^2 cs^2 - 36v_2^2\omega_7^3 - 24\omega_{16}\omega_7^2 cs^4 - 8\omega_{16}^2\omega_7^2 cs^2 + 30v_2^2\omega_{16}\omega_7^3 + 72v_2^2\omega_7^3 - 48\omega_{16}^2\omega_7 cs^4 +$$
$$24\omega_{16}^2 cs^4 - 72v_2^2\omega_{16}\omega_7^2 cs^2 - 72v_2^2\omega_{16}\omega_7^3 - 24\omega_{16}\omega_7 cs^2)\frac{\rho}{24\omega_{16}^2\omega_7^3}$$

$$C_{\mathrm{D}_y^4 v_3}^{(3),\mathrm{CuLBM1}} = (3v_2^4\omega_3^3\omega_{11} - 36v_2^2\omega_3\omega_{11}^2 cs^2 - 3\omega_3^3\omega_{11}^2 cs^4 + 36v_2^4\omega_3^3 + 12v_2^2\omega_3^2\omega_{11}^2 + 144v_2^2\omega_3^2\omega_{11} cs^2 + 72v_2^4\omega_3^2\omega_{11} + 24\omega_{11}^2 cs^4 + 30v_2^2\omega_3^3\omega_{11} -$$
$$6\omega_3^3\omega_{11} cs^2 - 72v_2^4\omega_3^2 - 24\omega_3\omega_{11} cs^2 - 3v_2^2\omega_3^3\omega_{11} - 12v_2^4\omega_3^2\omega_{11} - 24\omega_3^2\omega_{11} cs^4 - 8\omega_3^2\omega_{11}^2 cs^2 - 72v_2^2\omega_3^2\omega_{11} - 30v_2^4\omega_3^3\omega_{11} - 48\omega_3\omega_{11}^2 cs^4 +$$
$$6v_2^2\omega_3^3\omega_{11}^2 + 24\omega_3^2\omega_{11} cs^2 - 72v_2^2\omega_3^3\omega_{11} cs^2 + 108v_2^2\omega_3^3 cs^2 + 24\omega_3\omega_{11} cs^4 + 72v_2^2\omega_3^3 + 12\omega_3\omega_{11}^2 cs^2 - 36v_2^2\omega_3^3 + 24\omega_3^2\omega_{11}^2 cs^4 -$$
$$12v_2^2\omega_3^2\omega_{11}^2 cs^2 - 216v_2^2\omega_3^2 cs^2 + \omega_3^3\omega_{11}^2 cs^2 + 6\omega_3^3\omega_{11} cs^4 + 72v_2^2\omega_3\omega_{11})\frac{\rho}{24\omega_3^2\omega_{11}^2}$$

$$C_{\mathrm{D}_y^4 v_3}^{(3),\mathrm{CuLBM2}} = (27cs^2 v_2^2\omega_3^2\omega_1^3 + 9v_2^4\omega_4^2\omega_1^3 - 12v_2^2\omega_3^2\omega_4^2\omega_1^2 + cs^2\omega_3^2\omega_4^2\omega_1^3 + 36cs^2 v_2^2\omega_3^2\omega_4\omega_1 - 9v_2^2\omega_3^2\omega_1^3 + 18v_2^4\omega_3\omega_4\omega_1^3 + 12cs^4\omega_3\omega_4^2\omega_1 +$$
$$36cs^2 v_2^2\omega_3\omega_4\omega_1^2 + 18v_2^2\omega_3^2\omega_1^2 - 36v_2^2\omega_3\omega_4\omega_1^2 - 8cs^2\omega_3^2\omega_4^2\omega_1 + 3v_2^4\omega_3^2\omega_4^2\omega_1^3 - 18v_2^4\omega_4^2\omega_1^2 - 54cs^2 v_2^2\omega_3^2\omega_1^2 + 12cs^4\omega_3^2\omega_4\omega_1 - 9v_2^2\omega_4^2\omega_1^3 +$$
$$9v_2^4\omega_3^2\omega_1^3 + 15v_2^2\omega_3^2\omega_4\omega_1^2 - 12cs^4\omega_3^2\omega_4\omega_1^2 + 27cs^2 v_2^2\omega_4^2\omega_1^3 - 36v_2^2\omega_3\omega_4^2\omega_1^2 + 3cs^4\omega_3\omega_4^3\omega_1^3 + 72cs^2 v_2^2\omega_3\omega_4^2\omega_1^2 - 36cs^2 v_2^2\omega_3^2\omega_4\omega_1^3 +$$
$$12cs^2\omega_3^2\omega_4^2\omega_1 + 24cs^4\omega_3^2\omega_4^2 - 12cs^4\omega_3\omega_4^2\omega_1^2 + 15v_2^2\omega_3\omega_4^2\omega_1^3 - 54cs^2 v_2^2\omega_4^2\omega_1^2 + 3cs^4\omega_3^2\omega_4\omega_1^3 - 36v_2^2\omega_3\omega_4\omega_1^2 - 18v_2^4\omega_3^2\omega_1^3 + 18v_2^4\omega_4^2\omega_1^2 +$$
$$72cs^2 v_2^2\omega_3^2\omega_4\omega_1^2 - 36cs^2 v_2^2\omega_3\omega_4^2\omega_1^3 - 3cs^4\omega_3^2\omega_4^2\omega_1^3 + 12v_2^2\omega_3^2\omega_4^2\omega_1^2 - 18v_2^2\omega_3\omega_4\omega_1^3 + 54cs^2 v_2^2\omega_3\omega_4\omega_1^3 - 12cs^2\omega_3\omega_4^2\omega_1 - 12cs^2 v_2^2\omega_3^2\omega_4^2\omega_1^2 +$$
$$36v_2^2\omega_3\omega_4\omega_1^2 - 3v_2^2\omega_3^2\omega_4^2\omega_1^3 + 24cs^4\omega_3^2\omega_4^2\omega_1^2 - 12cs^2\omega_3^2\omega_4\omega_1 + 6cs^2 v_2^2\omega_3^2\omega_4^2\omega_1^3 - 108cs^2 v_2^2\omega_3\omega_4\omega_1^2 + 12cs^2\omega_3^2\omega_4\omega_1^2 - 15v_2^2\omega_3^2\omega_4\omega_1^3 -$$
$$3cs^2\omega_3\omega_4^2\omega_1^3 + 36v_2^2\omega_3\omega_4^2\omega_1^2 - 48cs^4\omega_3^2\omega_4^2\omega_1 - 15v_2^2\omega_3\omega_4^2\omega_1^3 + 12cs^2\omega_3\omega_4^2\omega_1^2 - 36cs^2 v_2^2\omega_3^2\omega_4\omega_1 + 36v_2^2\omega_3^2\omega_4\omega_1^2 - 3cs^2\omega_3^2\omega_4\omega_1^3)\frac{\rho}{24\omega_3^2\omega_4^2\omega_1^3}$$

coefficient $C_{\mathrm{D}_x^3\mathrm{D}_z\rho}^{(3)}$ **at** $\frac{\partial^4\rho}{\partial x_1^3\partial x_3}$:

$$C_{\mathrm{D}_x^3\mathrm{D}_z\rho}^{(3),\mathrm{SRT}} = (24 - 42cs^2\omega^2 + 36v_1^2\omega + 14\omega^2 + 3cs^2\omega^3 - 72cs^2 - \omega^3 + v_1^2\omega^3 + 108cs^2\omega - 14v_1^2\omega^2 - 24v_1^2 - 36\omega)\frac{v_1 cs^2}{12\omega^3}$$

$$C_{\mathrm{D}_x^3\mathrm{D}_z\rho}^{(3),\mathrm{MRT1}} =$$
$$(6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} cs^4\omega_{11} + 36\omega_9^2\omega_6^3\omega_{13}^2 cs^4 + 36\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^2 - 48\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 cs^4\omega_{11} +$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 108\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 6\omega_{18}\omega_9^2\omega_6^3\omega_{13} cs^2\omega_{11} + 18\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^4 + 144\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} cs^2\omega_{11} -$$
$$12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 6\omega_{18}\omega_9^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11} - 36\omega_9^3 v_3^2\omega_{22}\omega_{13}^2 cs^2 - 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 18\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2 cs^4\omega_{11} +$$
$$48\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12v_1^2\omega_9^2\omega_6^3\omega_{13}^2 cs^2\omega_{11} + 18\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{11} +$$
$$12\omega_{18}\omega_9^3\omega_6^2\omega_{22} cs^2\omega_{11} + 3\omega_{18}\omega_9^3\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{11} + 36\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{13} cs^2\omega_{11} - 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 12v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$36\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 72\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} cs^2 + 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 24\omega_{18}v_1^2\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} -$$
$$42\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} cs^4\omega_{11} - 18\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 cs^2 + 24\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 - 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 12v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 -$$
$$12\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 12\omega_9^2\omega_6^3 v_3^2\omega_3^2 - 36\omega_9\omega_6^3\omega_{22} v_3^2\omega_{22}\omega_{13}^2 cs^4 - 18\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{11} + 36\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^4\omega_{11} + 18\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 cs^2\omega_{11} -$$
$$15\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{11} + 12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{22}\omega_{13} - 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$9\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 3\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} cs^2\omega_{11} + 6\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{13}^2 cs^2\omega_{11} - 6\omega_{18}\omega_9^2\omega_6^2\omega_{22} cs^2\omega_{11} + 12v_1^2\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{11} -$$
$$12v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 - 3\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 36\omega_9^2\omega_6^3\omega_{13}^2 cs^4\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 12\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$6\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 36\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 9\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{13}^2 + 18\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 cs^4\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2\omega_{13} cs^2\omega_{11} - 72\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13} cs^2\omega_{11} - 36\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22} cs^2\omega_{11} -$$
$$12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 36\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 72\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 24\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} cs^2\omega_{11} +$$
$$12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} - 18\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2 + 12\omega_{18}v_1^2\omega_9^3\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 6\omega_{18}v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13}\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} +$$
$$12\omega_{18}\omega_9^2\omega_6^2\omega_{22} cs^4\omega_{11} + 36\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{22}^2\omega_{13}^2 cs^2\omega_{11} - 6\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^2 -$$
$$12\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 18\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 36\omega_9^2\omega_6^2 v_3^2\omega_{13}^2 cs^2\omega_{11} - 96\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 -$$
$$18\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13} cs^2\omega_{11} + 6\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} + 12v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11} + 12v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} -$$
$$6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 54\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 36\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + \omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 36\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} -$$
$$12\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13} cs^2\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 24\omega_{18}v_1^2\omega_9^3\omega_6 v_3^2\omega_{22}\omega_{13} + 72\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2 -$$
$$18\omega_{18}\omega_9^3\omega_6^3\omega_{13} cs^4\omega_{11} - 12\omega_{18}v_1^2\omega_9^3\omega_6^2\omega_{22} cs^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{11} - 36\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^4\omega_{11} + 24\omega_{18}v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$18\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{22} cs^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 24\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13} cs^2\omega_{11} -$$
$$45\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{22}\omega_{13} cs^2\omega_{11} + 12v_1^2\omega_9^3\omega_6^3\omega_{13}^2 cs^2 + 27\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 36\omega_{18}\omega_9^2\omega_6^2\omega_{13} cs^4\omega_{11} - 15\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$36\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} cs^2\omega_{11} + 6\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_6^3\omega_6^2\omega_{13} cs^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}^2 cs^2 -$$
$$12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13} - 12\omega_9^2\omega_6^3\omega_{13}^2 cs^2 - 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{22}\omega_{11} - 36\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 15\omega_{18}\omega_9\omega_6^3\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 24\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13} - 36\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}^2 cs^2\omega_{11} - 12v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 12\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 -$$
$$6\omega_{18}\omega_9^2\omega_6^3\omega_{22} cs^4\omega_{11} + 12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13} cs^2\omega_{11} + 15\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13} cs^4\omega_{11} + 12\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{22}\omega_{13} cs^2 -$$
$$36\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 12v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 18\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13} cs^2\omega_{11} + 12\omega_9^3\omega_6^3\omega_{13}^2 cs^2\omega_{11} - 5\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} - 12v_1^2\omega_9^2\omega_6^3 v_3^2\omega_3^2\omega_{13}\omega_{11} - 60\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 12\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11})\frac{v_1}{12\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}}$$

$$C_{\mathrm{D}_x^3\mathrm{D}_z\rho}^{(3),\mathrm{MRT2}} = (15\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} cs^4 + 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} - 6\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{11} cs^4 + \omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} cs^2 +$$
$$36\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} cs^2 + 12\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 - 48\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_9^2\omega_6^2\omega_{13}^2\omega_{11} cs^2 - 18\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} cs^2 -$$
$$12\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} cs^2 + 18\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} cs^2 + 36\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} cs^2 + 6\omega_{18}\omega_9^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 60\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} cs^4 +$$
$$12\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11} - 36\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} cs^4 - \omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} cs^2 - 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 6\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{13}\omega_{11} cs^2 +$$
$$36\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13} cs^2 + 48\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} cs^2 + 6\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 cs^2 - 45\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} cs^2 +$$
$$6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 156\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} cs^4 + 27\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} cs^2 + 18\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11} cs^2 + 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} -$$
$$24\omega_{18}v_1^2\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} + 36\omega_{18}\omega_9^2\omega_6^2\omega_{13}\omega_{11} cs^4 + 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2\omega_{11} cs^2 - 12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{11} cs^2 -$$

$$6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 + 24\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 - 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 -$$
$$12\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{11} - 12\omega_9^3\omega_6^2 v_3^2\omega_{13}^2 - 12\omega_9^2\omega_6^2\omega_{22}^2\omega_{13}^2 - 36\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^4 - 36\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 18\omega_{18}\omega_6^2\omega_6^3\omega_{13}\omega_{11}cs^4 +$$
$$12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} - 12\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11} + 9\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 72\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2 -$$
$$12v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 12v_1^2\omega_9^2\omega_6^3\omega_{13}^2cs^2 + 6\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 -$$
$$9\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}cs^2 + 6\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{11}cs^2 - 5\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 12\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$6\omega_{18}v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 - 96\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2\omega_{11}cs^4 - 6\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}^2cs^2 - 12v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 18\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{13}\omega_{11}cs^2 + 12\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^2 +$$
$$12\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{11}cs^4 - 24\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13}\omega_{11}cs^2 + 54\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^4 + 12\omega_{18}\omega_9^3\omega_6^2 v_3^2\omega_{13}^2\omega_{11} -$$
$$6\omega_{18}v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{13}\omega_{11} + 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 12\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11}cs^2 + 36\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^4 + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 108\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 +$$
$$6\omega_{18}\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^2 + 6\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} + 12v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} + 144\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 +$$
$$12v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} - 6\omega_{18}v_1^2\omega_9^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 36\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 - 18\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$24\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 18\omega_{18}\omega_6^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11}cs^2 - 15\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^4 + 24\omega_{18}v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 36\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11}cs^2 + 12v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{11} - 24\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}cs^4 + 18\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 12v_1^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}cs^2 + 6\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 +$$
$$12\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{11}cs^2 - 12\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 36\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^4 - 72\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2 - 15\omega_{18}v_1^2\omega_9^3\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} +$$
$$12\omega_{18}\omega_9^3\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 3\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 3\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}\omega_{11}cs^4 - 12\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$12\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} - 36\omega_9^2 v_3^2\omega_6^3\omega_{13}^2\omega_{11}cs^2 + 3\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{11}cs^2 + 6\omega_{18}v_1^2\omega_9^3\omega_6^3\omega_{13}\omega_{11}cs^2 +$$
$$12v_1^2\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^2 - 36\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^4 + 36\omega_9^2\omega_6^2\omega_{13}\omega_{11}cs^4 - 12v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 42\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4 +$$
$$15\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{11}cs^2 - 36\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11}cs^4 + 24\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} +$$
$$18\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^4 - 12v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} + 36\omega_9^2 v_3^2\omega_6^3\omega_{13}^2cs^2 + 18\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}\omega_{11}cs^4 +$$
$$36\omega_9^2\omega_6^3\omega_{13}^2cs^4 + 12\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 18\omega_{18}\omega_9^3\omega_6^3\omega_{13}^2cs^4 - 72\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 -$$
$$36\omega_{18}\omega_6^3\omega_6^2 v_3^2\omega_{22}\omega_{11}cs^2 - 12\omega_{18}\omega_9^3\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 36\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2cs^2 + 36\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 72\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 +$$
$$6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} - 12v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 12\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}\omega_{11}cs^2) \frac{v_1}{12\omega_{18}\omega_9^3\omega_6^2\omega_{22}^2\omega_{13}^2\omega_{11}}$$

$C^{(3),\text{CLBM1}}_{\text{D}_x^3\text{D}_z\rho} = (12\omega_{18}\omega_9\omega_6\omega_6^2\omega_{13}^2\omega_{11} - 36\omega_9\omega_6^2cs^2\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 12v_1^2\omega_6^2\omega_{22}\omega_{13}^2 - 6\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{11} +$
$\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}^2 + 36\omega_6^2cs^2\omega_{22}\omega_{13}^2\omega_{11} + 54\omega_{18}\omega_6cs^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_9\omega_6\omega_{13}^2\omega_{11} - 36\omega_6cs^2\omega_{22}\omega_{13}^2\omega_{11} -$
$12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 15\omega_{18}\omega_6^2cs^2\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}\omega_9\omega_6\omega_{13}^2\omega_{11} + 36\omega_9\omega_6^2cs^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_6^2\omega_{22}\omega_{13}^2 +$
$18\omega_{18}\omega_9\omega_6^2cs^2\omega_{13}^2\omega_{11} - 18\omega_{18}\omega_9\omega_6^2cs^2\omega_{13}^2 + 5\omega_{18}\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_9\omega_6^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{13}^2\omega_{11} + 12v_1^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} +$
$36\omega_{18}\omega_9\omega_6cs^2\omega_{13}\omega_{11} + 36\omega_{18}\omega_9cs^2\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{11} + 12\omega_{18}\omega_{22}\omega_{13}^2\omega_{11} - 36\omega_{18}\omega_9\omega_6cs^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_{22}\omega_{13}\omega_{11} -$
$36\omega_{18}\omega_9\omega_6cs^2\omega_{22}\omega_{11} - 6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} + 3\omega_{18}\omega_9\omega_6^2cs^2\omega_{22}\omega_{13}^2\omega_{11} + 18\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} + 12v_1^2\omega_9\omega_6\omega_{13}^2\omega_{11} +$
$3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 5\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}v_1^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6\omega_{13}^2\omega_{11} -$
$9\omega_{18}\omega_6^3cs^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_{22}\omega_{13}^2\omega_{11} + 36\omega_9\omega_6cs^2\omega_{13}^2\omega_{11} - \omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}v_1^2\omega_9\omega_6\omega_{13}\omega_{11} - 18\omega_{18}\omega_6\omega_{22}\omega_{13}^2\omega_{11} -$
$36\omega_6^2cs^2\omega_{22}\omega_{13}^2 - 36\omega_{18}\omega_9\omega_6cs^2\omega_{13}^2\omega_{11} - 36\omega_{18}\omega_9\omega_6cs^2\omega_{22}\omega_{13}^2\omega_{11} + 54\omega_{18}\omega_9\omega_6cs^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_6^2\omega_{22}\omega_{13}^2 +$
$18\omega_{18}\omega_6^2cs^2\omega_{22}\omega_{13}^2 - 12v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{11} + 12v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^2\omega_{13}^2 - 6\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{11} -$
$18\omega_{18}\omega_9\omega_6^2cs^2\omega_{13}\omega_{11} - 12v_1^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_9\omega_6^2\omega_{13}^2\omega_{11} - 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{13}^2\omega_{11} + 18\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} -$
$6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}^2 - 36\omega_{18}cs^2\omega_{22}\omega_{13}^2\omega_{11} + 12v_1^2\omega_9\omega_6^2\omega_{13}^2 + 18\omega_{18}\omega_9\omega_6^2cs^2\omega_{22}\omega_{11} - 3\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}) \frac{v_1cs^2}{12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}}$

$C^{(3),\text{CLBM2}}_{\text{D}_x^3\text{D}_z\rho} = (12\omega_{18}\omega_9\omega_6\omega_{13}^2\omega_{11} - 18\omega_{18}\omega_9\omega_6^2\omega_{13}cs^2\omega_{11} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 12v_1^2\omega_6^2\omega_{22}\omega_{13}^2 - 6\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{11} +$
$\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}^2 + 36\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11} + 54\omega_{18}\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11} - 12\omega_9\omega_6\omega_{13}^2\omega_{11} - 36\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11} -$
$12\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 36\omega_6^2\omega_{22}\omega_{13}^2cs^2 - 15\omega_{18}\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^2\omega_{13}^2\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_6^2\omega_{22}\omega_{13}^2 +$
$5\omega_{18}\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 18\omega_{18}\omega_6^2\omega_{22}\omega_{13}^2cs^2 + 18\omega_{18}\omega_6\omega_{22}\omega_{13}^2cs^2 - 12\omega_9\omega_6^2\omega_{13}^2 - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{13}^2\omega_{11} + 12v_1^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} +$
$36\omega_{18}\omega_9\omega_{22}\omega_{13}^2cs^2\omega_{11} + 6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} - 36\omega_{18}\omega_9\omega_6cs^2\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_{22}\omega_{13}^2\omega_{11} - 36\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11} + 36\omega_9\omega_6\omega_{13}^2cs^2\omega_{11} +$
$12\omega_{18}\omega_9\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} + 3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11} + 18\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} + 12v_1^2\omega_9\omega_6\omega_{13}^2\omega_{11} + 3\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} -$
$5\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}v_1^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{11} - 36\omega_{18}\omega_9\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} +$
$6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9\omega_{22}\omega_{13}^2\omega_{11} + 54\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} + 36\omega_{18}\omega_9\omega_6\omega_{13}cs^2\omega_{11} - \omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}v_1^2\omega_9\omega_6\omega_{13}\omega_{11} -$
$18\omega_{18}\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 9\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} + 12\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_6^2\omega_{22}\omega_{13}^2 - 12v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{11} +$
$12\omega_{18}v_1^2\omega_9\omega_{22}\omega_{13}^2\omega_{11} - 18\omega_{18}\omega_9\omega_6^2\omega_{13}^2cs^2 + 6\omega_{18}\omega_9\omega_6^2\omega_{13}^2 - 6\omega_{18}\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 18\omega_{18}\omega_9\omega_6^2\omega_{13}^2cs^2\omega_{11} + 36\omega_9\omega_6^2\omega_{13}^2cs^2 -$
$12v_1^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_9\omega_6^2\omega_{13}^2\omega_{11} - 36\omega_{18}\omega_9\omega_6\omega_{22}cs^2\omega_{11} - 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{13}\omega_{11} + 18\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}^2\omega_{11} -$
$6\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}^2 - 36\omega_{18}\omega_{22}\omega_{13}^2cs^2\omega_{11} + 12v_1^2\omega_9\omega_6^2\omega_{13}^2 - 3\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_9\omega_6^2\omega_{13}^2cs^2\omega_{11}) \frac{v_1cs^2}{12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}}$

$C^{(3),\text{CuLBM1}}_{\text{D}_x^3\text{D}_z\rho} = (12v_1^2\omega_{12}\omega_2 + 36\omega_{12}^2\omega_4cs^2 + 36\omega_{12}cs^2\omega_2 + 12v_1^2\omega_{12}^2\omega_4 + 6\omega_{12}\omega_2^2 - 9\omega_{12}\omega_4cs^2\omega_2^2 - 3v_1^2\omega_{12}\omega_4\omega_2^2 + 12\omega_{12}^2\omega_4\omega_2 +$
$54\omega_{12}\omega_4cs^2\omega_2^2 + 18v_1^2\omega_{12}\omega_4\omega_2 - \omega_{12}\omega_4\omega_2^2 - 12\omega_{12}\omega_2 - 18\omega_{12}cs^2\omega_2^2 - 6v_1^2\omega_{12}\omega_2^2 - 12\omega_{12}^2\omega_4 + 12\omega_4\omega_2 + 3\omega_{12}\omega_4\omega_2^2 - 12v_1^2\omega_{12}\omega_4\omega_2 -$
$36\omega_{12}^2cs^2 + v_1^2\omega_{12}^2\omega_2^2 - 12v_1^2\omega_{12} + 12\omega_{12}\omega_4 - 36\omega_4cs^2\omega_2 + 6v_1^2\omega_4\omega_2^2 + 3\omega_{12}^2\omega_4cs^2\omega_2^2 + 3\omega_{12}^2cs^2\omega_2^2 - 6\omega_{12}\omega_2 - 36\omega_{12}\omega_4cs^2 - 12v_1^2\omega_{12}\omega_4 -$
$\omega_{12}^2\omega_2^2 + 18\omega_4cs^2\omega_2^2 - 12v_1^2\omega_4\omega_2 - 36\omega_{12}\omega_4cs^2\omega_2 + 18\omega_{12}cs^2\omega_2 + 6v_1^2\omega_{12}^2\omega_2 - 6\omega_4\omega_2^2 - 18\omega_{12}\omega_4\omega_2 + v_1^2\omega_{12}^2\omega_4\omega_2^2 + 12\omega_{12}^2) \frac{v_1cs^2}{12\omega_{12}^2\omega_4\omega_2^2}$

$C^{(3),\text{CuLBM2}}_{\text{D}_x^3\text{D}_z\rho} = (-144cs^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 108cs^4\omega_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1\omega_2^3 - 104cs^2\omega_3^2\omega_4^2\omega_1^3 - 27cs^4\omega_3\omega_4\omega_1^3\omega_2^3 - 712v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8\omega_3^2\omega_4\omega_1\omega_2^2 -$
$460v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 36cs^2\omega_3^2\omega_4\omega_2^3 + 56cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 18cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 36v_1^2cs^2\omega_3^2\omega_4\omega_1^3 + 160v_1^2\omega_3^2\omega_4^3\omega_2^3 + 9cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 -$
$412v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 108cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 28\omega_3^2\omega_4^2\omega_1\omega_2^3 - 18cs^2\omega_3^2\omega_1^3\omega_2^2 - 288cs^4\omega_3^2\omega_4^2\omega_2^3 - 6v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 588cs^4\omega_3^2\omega_4^2\omega_1\omega_2^3 +$
$36cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 48v_1^2\omega_3^2\omega_4^2\omega_1 + 54cs^4\omega_4^2\omega_1^3\omega_2 - 368cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 6v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 16cs^2\omega_3\omega_4^2\omega_1^3\omega_2 + 18v_1^2cs^2\omega_3^2\omega_1^3\omega_2^2 -$

$$72cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 9cs^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 6v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 256v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 448v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 216cs^4\omega_3\omega_4^2\omega_1^2\omega_2^3 + 6v_1^2cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 +$$
$$48cs^4\omega_3\omega_4^2\omega_1^3\omega_2 + 228v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 6v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 27cs^4\omega_3\omega_4\omega_1^3\omega_2^3 - 18cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 320v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3 - 108cs^4\omega_4^2\omega_1^2\omega_2^3 +$$
$$32v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 40cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 36cs^2\omega_3^2\omega_1^2\omega_2^3 - 56v_1^2cs^2\omega_3\omega_4^2\omega_1\omega_2^3 - 24v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^2 + 394v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 120cs^4\omega_3\omega_4^2\omega_1^2\omega_2^2 -$$
$$36v_1^2cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 144cs^4\omega_3^2\omega_4^2\omega_1^3 - 88cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 104v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 6cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 18cs^4\omega_3^2\omega_4^3\omega_1^3\omega_2^3 + 16v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_2 -$$
$$96v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 72cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 72v_1^2cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 144v_1^4\omega_3^2\omega_4^2\omega_2^3 - 9v_1^2cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2 + 54cs^4\omega_3\omega_1^3\omega_2^3 +$$
$$56cs^2\omega_3\omega_4^2\omega_1\omega_2^3 + 208cs^2\omega_3^2\omega_4^2\omega_2^3 + 92v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 16\omega_3^2\omega_4^2\omega_2^3 - 118cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 152v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 56v_1^2\omega_3^2\omega_4^2\omega_1^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 -$$
$$168cs^4\omega_3\omega_4\omega_1\omega_2^3 + 14\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 40v_1^2cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 132v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 144cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 78v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 14\omega_3^2\omega_4^2\omega_1^2\omega_2^2 +$$
$$36v_1^2cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 20\omega_3^2\omega_4^2\omega_1^3\omega_2 - 56v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 78v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 342cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 9v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 276cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 -$$
$$784v_1^2cs^2\omega_3^2\omega_4^2\omega_2^3 + 208cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 18v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 184cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 92v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 120v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 36v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 +$$
$$12cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 36cs^2\omega_4^2\omega_1^2\omega_2^3 + 1232v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 52cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 136v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 108cs^4\omega_3^2\omega_1^2\omega_2^2)\dfrac{v_1}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{D_x^3 D_z v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^3 \partial x_3}$:

$$C^{(3),\text{SRT}}_{D_x^3 D_z v_1} = (-12 + 2cs^2\omega^2 - 54v_1^2\omega - 6\omega^2 - cs^2\omega^3 + 18v_1^2\omega^2 + 36v_1^2 + 18\omega)\frac{\rho cs^2}{12\omega^3}$$

$$C^{(3),\text{MRT1}}_{D_x^3 D_z v_1} = (6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_9^2\omega_6\omega_{22}\omega_{13}cs^4\omega_{11} + 12\omega_9^2\omega_6^3\omega_{13}^2 cs^4 + 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^2 - 48\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$12\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 cs^4\omega_{11} + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^4 +$$
$$48\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} - 36\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 36\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11} - 12\omega_9^3 v_3^2\omega_{22}\omega_{13}^2 cs^2 -$$
$$6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9^3\omega_6^2\omega_{13}^2 cs^4 + 144\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36v_1^2\omega_9^2\omega_6^3\omega_{13}^2 cs^2\omega_{11} + 54\omega_{18}v_1^2\omega_9\omega_6\omega_{22}^2\omega_{13}^2 cs^2\omega_{11} +$$
$$6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 - 36\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{11} - \omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}cs^2\omega_{11} - 6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$36v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 12\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 24\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2 + 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 72\omega_{18}v_1^2\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} +$$
$$24\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} - 18\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11} - 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^2 + 24\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 -$$
$$12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 36v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 - 36\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{11} - 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 - 12\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^4 - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$12\omega_9^2\omega_6^2\omega_{13}^2 cs^4\omega_{11} + 6\omega_{18}\omega_9^3\omega_6^3 v_3^2\omega_{13}^2 cs^2\omega_{11} - 5\omega_{18}\omega_9\omega_6^3\omega_{22}^2\omega_{13}^2 cs^4\omega_{11} + 36\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13} -$$
$$12\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} - 15\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 27\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_9\omega_6^3\omega_{13}^2\omega_{11} + 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}cs^2\omega_{11} +$$
$$36v_1^2\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{11} - 36v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 36v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 30\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_9^2\omega_6^3\omega_{13}^2 cs^4\omega_{11} +$$
$$18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 12\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 18\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11} - 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^2\omega_{11} + \omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} -$$
$$9\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2 cs^4\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}cs^2\omega_{11} -$$
$$24\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}cs^2\omega_{11} + 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 24\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 24\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 +$$
$$6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2 + 60\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 18\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} -$$
$$36\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 18\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{13}cs^2\omega_{11} - 18\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13}^2 cs^2 - 12\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} -$$
$$102\omega_{18}v_1^2\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 cs^2\omega_{11} - 12\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 18\omega_{18}v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2 + 18\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} +$$
$$18\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11} + 36v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 36v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11} - 18\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 108\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 12\omega_9^2\omega_6^3\omega_{13}^2 cs^2\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$18\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 72\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} - 48\omega_{18}v_1^2\omega_9^2\omega_{22}\omega_{13}cs^2\omega_{11} + 24\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}cs^4\omega_{11} +$$
$$24\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}cs^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2 cs^2\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^4\omega_{11} + 72\omega_{18}v_1^2\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}cs^2\omega_{11} +$$
$$12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{11} - 24\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 60\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} - 15\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} +$$
$$36v_1^2\omega_9^2\omega_6^3\omega_{13}cs^2 + 9\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}cs^4\omega_{11} - 45\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} -$$
$$12\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}cs^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3\omega_{13}^2 cs^2\omega_{11} + 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2 cs^4\omega_{11} + 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}cs^2 - 12\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$$
$$36\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13} - 12\omega_9^2\omega_6^3\omega_{13}^2 cs^2 - 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{11} - 12\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} + 15\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 5\omega_{18}\omega_9\omega_6^3\omega_{22}^2\omega_{13}^2 cs^2\omega_{11} + 72\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 - 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}^2 cs^2\omega_{11} - 36v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 +$$
$$12\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 36\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13}cs^2\omega_{11} + 6\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11} + 12\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2 -$$
$$12\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 36v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2 cs^2\omega_{11} - 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}cs^2\omega_{11} + 12\omega_9^2\omega_6^3\omega_{13}cs^2\omega_{11} - 15\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2\omega_{11} +$$
$$6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} - 36v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 5\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2 cs^4\omega_{11} - 36\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11})\dfrac{\rho}{12\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}}$$

$$C^{(3),\text{MRT2}}_{D_x^3 D_z v_1} = (6\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4 + 6\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 12\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 - 48\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$12\omega_9\omega_6^2\omega_{13}^2\omega_{11}cs^2 + 18\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 12\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 102\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11}cs^2 +$$
$$6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 5\omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^4 + 36\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}\omega_{11} - 12\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4 - 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} -$$
$$18\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^2 + 12\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2 + 144\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 60\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 + 6\omega_{18}\omega_9\omega_6^3\omega_{13}^2 cs^2 -$$
$$15\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^4 + 9\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{11}cs^2 +$$
$$12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} - 72\omega_{18}v_1^2\omega_9^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}\omega_{11}cs^4 + 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2\omega_{11}cs^2 +$$
$$24\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{11}cs^2 - 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2 cs^2 + 24\omega_{18}\omega_9\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 - 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 36\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{11} - 12\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 - 12\omega_9^2\omega_6^3\omega_{13}^2 cs^2 - 48\omega_{18}v_1^2\omega_9^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 -$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^4 - 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^4 + 36\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{22}\omega_{13} -$$
$$12\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} + 27\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 cs^2 - 36v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 36v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2 + 36v_1^2\omega_9^2\omega_6^2\omega_{13}^2 cs^2 +$$
$$18\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{11} - 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 9\omega_{18}\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^2 - 12\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 -$$
$$15\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 12\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}v_1^2\omega_9^2\omega_6^2 v_3^2\omega_{13}^2 - 12\omega_{18}\omega_9^2\omega_{22}\omega_{13}^2\omega_{11}cs^4 - 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}^2 cs^2 -$$
$$36v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 6\omega_{18}\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11}cs^2 + 12\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^2 - 24\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2 + 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11}cs^2 +$$
$$18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^4 + 12\omega_{18}\omega_9^2\omega_6^2 v_3^2\omega_{13}^2\omega_{11} - 18\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}\omega_{11} + 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 36\omega_{18}v_1^2\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$12\omega_{18}\omega_9^2\omega_6 v_3^2\omega_{13}^2\omega_{11}cs^2 + 36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 36v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 18\omega_{18}v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2 + 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^4 +$$
$$12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 36\omega_{18}\omega_9\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}\omega_{11}cs^2 + 18\omega_{18}v_1^2\omega_9^2\omega_6^3 v_3^2\omega_{13}^2\omega_{11} + 36v_1^2\omega_9\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$$

$$12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{13}\omega_{11} + 48\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 36v_1^2\omega_9^2\omega_6^2v_3^2\omega_{13}^2\omega_{11} - 18\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 108\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 + 18\omega_{18}v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 72\omega_{18}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13} - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2\omega_{11}cs^2 - 5\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^4 + 72\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_9\omega_{13}\omega_{11}cs^2 + 36v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{11} - 24\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}cs^4 + 54\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 36v_1^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}cs^2 + 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 36\omega_{18}v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{11}cs^2 + 12\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^4 - 24\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2 - 45\omega_{18}v_1^2\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + \omega_{18}\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 + 30\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - \omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}cs^4 - 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 36\omega_{18}v_1^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13} - 12\omega_9^2\omega_6^3v_3^2\omega_{13}^2\omega_{11}cs^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 + 18\omega_{18}v_1^2\omega_9^2\omega_6^3\omega_{13}^2\omega_{11}cs^2 + 36v_1^2\omega_9^2\omega_6^2\omega_{13}^2\omega_{11}cs^2 - 12\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^4 + 12\omega_9^2\omega_6^2\omega_{13}^2\omega_{11}cs^4 - 36v_1^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 - 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{22}\omega_{11} - 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4 + 15\omega_{18}\omega_9^3\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}^2cs^2 - 15v_1^2\omega_9^2\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 12\omega_{18}\omega_9^2\omega_6^2\omega_{13}^2\omega_{11}cs^4 + 72v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^4 - 36v_1^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13} + 12\omega_9^2\omega_6^3v_3^2\omega_{13}^2cs^2 + 6\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_9^2\omega_6^3\omega_{13}^2cs^4 + 12\omega_9\omega_6^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 60\omega_{18}v_1^2\omega_9^2\omega_6\omega_{22}\omega_{13}^2\omega_{11}cs^2 - 6\omega_{18}\omega_9^2\omega_6^3\omega_{13}^2cs^4 - 24\omega_{18}\omega_9^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 12\omega_{18}\omega_9^2\omega_6^2v_3^2\omega_{22}\omega_{11}cs^2 - 12\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2cs^2 + 12\omega_9\omega_6^3v_3^2\omega_{22}\omega_9^2\omega_{13}^2\omega_{11}cs^2 + 24\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_6^3\omega_{13}\omega_{11}cs^2 + 6\omega_{18}\omega_9^2\omega_6^3v_3^2\omega_{13}\omega_{11} - 36v_1^2\omega_9^2\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 36\omega_{18}v_1^2\omega_9^2\omega_6^2v_3^2\omega_{13}^2\omega_{11} - 12\omega_{18}\omega_9^3\omega_6^2\omega_{13}\omega_{11}cs^2)\frac{\rho}{12\omega_{18}\omega_9^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}}$$

$C_{\mathrm{D}_x^3\mathrm{D}_z v_1}^{(3),\mathrm{CLBM1}} = (-36\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{11} + 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{11} - 5\omega_{18}\omega_6^3cs^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11} + 12\omega_6^3cs^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_9\omega_6^2\omega_{13}\omega_{11} + 12\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11} - 54\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} - \omega_{18}\omega_9\omega_6^3cs^2\omega_{22}\omega_{13}\omega_{11} + 36v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} - 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{11} - 6\omega_{18}\omega_9\omega_6^3cs^2\omega_{11} + 12\omega_{18}\omega_9\omega_6cs^2\omega_{22}\omega_{11} - 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} - 12\omega_9\omega_6^3\omega_{13} + 6\omega_{18}\omega_9\omega_6^3\omega_{11} + 12\omega_6^3\omega_{22}\omega_{13} + \omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11} + 36\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{11} + 12\omega_9\omega_6^3\omega_{13}\omega_{11} - 5\omega_{18}\omega_9\omega_6cs^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_9\omega_6cs^2\omega_{13}\omega_{11} + 54\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11} + 6\omega_{18}\omega_9\omega_6^3cs^2\omega_{22}\omega_{11} + 6\omega_{18}\omega_6^3cs^2\omega_{22}\omega_{13} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 36v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9cs^2\omega_{22}\omega_{13}\omega_{11} + 5\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_9\omega_6cs^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_6^3cs^2\omega_{22}\omega_{13} - 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{11} + 6\omega_{18}\omega_9\omega_6^3cs^2\omega_{13}\omega_{11} - 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13} + 18\omega_{18}\omega_6^2cs^2\omega_{22}\omega_{13}\omega_{11} + 36v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{11} - 36v_1^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6^2cs^2\omega_{13}\omega_{11} + 18\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13} + 36v_1^2\omega_9\omega_6^3\omega_{13} + 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11} - 18\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}\omega_9\omega_6^2cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^3\omega_{13} + 12\omega_9\omega_6^2cs^2\omega_{13}\omega_{11} + 12\omega_9\omega_6^3cs^2\omega_{13} - 36v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11} - 18\omega_{18}\omega_9\omega_6^2cs^2\omega_{22}\omega_{11} - 6\omega_{18}\omega_9\omega_6^3cs^2\omega_{13} - 12\omega_{18}\omega_6cs^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 15\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_6^2cs^2\omega_{22}\omega_{13}\omega_{11} - 3\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11})\frac{\rho cs^2}{12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}}$

$C_{\mathrm{D}_x^3\mathrm{D}_z v_1}^{(3),\mathrm{CLBM2}} = (-36\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{11} - 12\omega_{18}\omega_9\omega_6^2\omega_{13}cs^2\omega_{11} + 12\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} + 18\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{11} + 12\omega_{18}\omega_9\omega_6^2cs^2\omega_{11} - 12\omega_{18}\omega_9\omega_6^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^2\omega_{13}\omega_{11} + 6\omega_{18}\omega_9\omega_6^3\omega_{22}cs^2\omega_{11} - 5\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_9\omega_6^2\omega_{13}\omega_{11} + 12\omega_9\omega_6^2\omega_{13}cs^2\omega_{11} - 18\omega_{18}\omega_9\omega_6^2\omega_{22}cs^2\omega_{11} + 12\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11} - 54\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11} + 36v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} - 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{11} - 12\omega_9\omega_6^3\omega_{13}cs^2\omega_{11} - 36\omega_{18}v_1^2\omega_9\omega_6^2\omega_{13}\omega_{11} - 12\omega_9\omega_6^3\omega_{13} + 6\omega_{18}\omega_9\omega_6^3\omega_{13}cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^3\omega_{11} + 12\omega_6^3\omega_{22}\omega_{13} - \omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} + \omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_9\omega_6^3\omega_{13}cs^2 + 36\omega_{18}v_1^2\omega_9\omega_6\omega_{22}\omega_{11} + 12\omega_9\omega_6^3\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_{22}\omega_{13}cs^2\omega_{11} + 18\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} + 54\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_9\omega_6^3\omega_{13}cs^2 - 6\omega_{18}\omega_9\omega_6^3\omega_{13}\omega_{11} - 5\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} - 6\omega_{18}\omega_9\omega_6^3cs^2\omega_{11} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 36v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_6^3\omega_{22}\omega_{13}cs^2 + 5\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2 - 6\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{11} - 18v_1^2\omega_9\omega_6^3\omega_{13} + 36v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{11} - 36v_1^2\omega_6^3\omega_{22}\omega_{13} + 18\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}cs^2\omega_{11} + 36v_1^2\omega_9\omega_6^3\omega_{13} + 18\omega_{18}v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11} + 12\omega_{18}\omega_9\omega_6\omega_{22}cs^2\omega_{11} - 18\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6^3\omega_{13} + 18\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} - 36v_1^2\omega_9\omega_6^3\omega_{13}\omega_{11} - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} - 15\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 3\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}v_1^2\omega_9\omega_6^2\omega_{22}\omega_{11})\frac{\rho cs^2}{12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}}$

$C_{\mathrm{D}_x^3\mathrm{D}_z v_1}^{(3),\mathrm{CuLBM1}} = (-36v_1^2\omega_{12}\omega_2 - \omega_{12}\omega_2^3 - 18v_1^2\omega_2^3 - 12\omega_{12}cs^2\omega_2 + 12cs^2\omega_2^2 - \omega_{12}\omega_4cs^2\omega_2^3 - 6\omega_{12}\omega_2^2 - 5\omega_{12}\omega_4cs^2\omega_2^2 - 3v_1^2\omega_{12}\omega_4\omega_2^2 - 6cs^2\omega_2^3 + 36v_1^2\omega_2^2 + 18\omega_{12}\omega_4cs^2\omega_2 + \omega_{12}cs^2\omega_2^3 - 12\omega_2^2 + 12\omega_{12}\omega_2 + 3v_1^2\omega_{12}\omega_2^3 + 6\omega_{12}cs^2\omega_2^2 + 18v_1^2\omega_{12}\omega_2^2 + 6\omega_2^3 - 12\omega_4\omega_2 + \omega_{12}\omega_4\omega_2^2 + 18v_1^2\omega_4\omega_2^2 + 12\omega_4cs^2\omega_2 - 54v_1^2\omega_4\omega_2^2 - 12\omega_{12}\omega_4cs^2 - 18\omega_4cs^2\omega_2^2 + 36v_1^2\omega_4\omega_2 - 6\omega_4\omega_2^3 + 18\omega_4\omega_2^2 + 6\omega_4cs^2\omega_2^3)\frac{\rho cs^2}{12\omega_{12}\omega_4\omega_2^3}$

$C_{\mathrm{D}_x^3\mathrm{D}_z v_1}^{(3),\mathrm{CuLBM2}} = (-68cs^4\omega_3\omega_4\omega_2^3 + 120v_1^2cs^2\omega_3\omega_4\omega_1^2\omega_2 - 20cs^2\omega_4\omega_1^2\omega_2^2 + 408v_1^4\omega_3\omega_4\omega_1\omega_2^3 + v_3^3\omega_3\omega_4\omega_1^2\omega_2^3 + 96v_1^4\omega_3\omega_4\omega_1^3 + 27v_1^2cs^2\omega_4\omega_1^3\omega_2^3 - v_3^3\omega_3\omega_4\omega_1^2\omega_2^3 - 222v_1^2\omega_3\omega_4\omega_1\omega_2^3 - 24v_1^4\omega_3\omega_4\omega_1\omega_2^2 - 8cs^2\omega_4\omega_1^3\omega_2 - 20cs^2\omega_3\omega_4\omega_1^3 + 18cs^2\omega_4\omega_1^2\omega_2^3 + 4\omega_3\omega_4\omega_1^3 + 153v_1^2cs^2\omega_3\omega_4\omega_1^3\omega_2^2 + 108v_1^2cs^2\omega_3\omega_4\omega_1\omega_2^3 - 3cs^2v_3^3\omega_3\omega_4\omega_1^2\omega_2^3 + 12v_1^2\omega_3\omega_4\omega_1\omega_2^3 + 144v_1^2\omega_3\omega_4\omega_2^3 - 36cs^4\omega_3\omega_1^2\omega_2^3 - 54v_1^2cs^2\omega_4\omega_1^3\omega_2^2 + 3cs^2v_3^3\omega_3\omega_4\omega_1^3\omega_2^2 + 32cs^2\omega_3\omega_4\omega_1\omega_2^2 + 24v_1^2cs^2\omega_4\omega_1^3\omega_2 + 8cs^4\omega_4\omega_1\omega_2^3 + 144v_1^2cs^2\omega_3\omega_4\omega_1^3 - 54v_1^2cs^2\omega_4\omega_1^2\omega_2^3 + 18cs^2\omega_4\omega_1^3\omega_2^2 - 28cs^4\omega_3\omega_4\omega_1\omega_2^2 - 153v_1^2cs^2\omega_3\omega_4\omega_1^2\omega_2^3 - 36cs^2\omega_3\omega_1\omega_2^3 - 288v_1^2cs^2\omega_3\omega_4\omega_1^3\omega_2 - 4\omega_3\omega_4\omega_1\omega_2^2 + 60v_1^2cs^2\omega_4\omega_1^2\omega_2^2 + 9cs^4\omega_3\omega_1^3\omega_2^3 + v_3^3\omega_3\omega_4\omega_1^3\omega_2^2 - 54cs^2\omega_3\omega_4\omega_1\omega_2^3 + 14\omega_3\omega_4\omega_1\omega_2^3 - 90v_1^2cs^2\omega_3\omega_4\omega_1^2\omega_2^2 + 94cs^4\omega_3\omega_4\omega_1\omega_2^3 - v_3^3\omega_3\omega_4\omega_1^3\omega_2^2 - 9cs^2\omega_4\omega_1^3\omega_2^2 + 20cs^4\omega_4\omega_1^2\omega_2^2 - 8\omega_3\omega_4\omega_2^3 + 24cs^2\omega_3\omega_4\omega_1^2\omega_2^3 - 81v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 + 40cs^2\omega_3\omega_4\omega_1^3\omega_2 + 42cs^2\omega_3\omega_4\omega_1^3\omega_2 + 27v_1^2cs^2\omega_3\omega_1^3\omega_2^3 - 10\omega_3\omega_4\omega_1^3\omega_2 - 60v_1^2cs^2\omega_3\omega_4\omega_1\omega_2^2 - 7\omega_3\omega_4\omega_1\omega_2^3 - 60v_1^2\omega_3\omega_4\omega_1^3 - 32cs^4\omega_3\omega_4\omega_1^3\omega_2 + 138v_1^4\omega_3\omega_4\omega_1^3\omega_2^3 - 29cs^4\omega_3\omega_4\omega_1^3\omega_2^3 - 96v_1^2\omega_3\omega_4\omega_1^3\omega_2 - 6cs^2\omega_3\omega_4\omega_2^3 + 16cs^4\omega_3\omega_4\omega_1^3 + 24v_1^2cs^2\omega_4\omega_1\omega_2^3 + 8cs^4\omega_4\omega_1^3\omega_2 - 18cs^4\omega_4\omega_1^2\omega_2^3 + 10cs^4\omega_3\omega_4\omega_1^2\omega_2^2 + 192v_1^4\omega_3\omega_4\omega_1^2\omega_2 - 4\omega_3\omega_4\omega_1^2\omega_2^2 - 264v_1^4\omega_3\omega_4\omega_2^3 + 36cs^2\omega_3\omega_1^2\omega_2^3 + 432v_1^2cs^2\omega_3\omega_4\omega_1\omega_2^3 + 8cs^4\omega_3\omega_4\omega_1^2\omega_2 - 8cs^2\omega_4\omega_1\omega_2^3 - 3cs^4\omega_3\omega_4\omega_1^3\omega_2^3 - 168v_1^4\omega_3\omega_4\omega_1^2\omega_2^2 + 8\omega_3\omega_4\omega_1^2\omega_2 + 84v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 + 36cs^4\omega_3\omega_1\omega_2^3 - 108v_1^2cs^2\omega_3\omega_1^2\omega_2^3 - 16cs^2\omega_3\omega_4\omega_1^2\omega_2 - 18cs^4\omega_4\omega_1^3\omega_2^3 + 7\omega_3\omega_4\omega_1^3\omega_2^3 - 312v_1^2cs^2\omega_3\omega_4\omega_2^3 - 9cs^2\omega_3\omega_1^3\omega_2^3 + 17cs^4\omega_3\omega_4\omega_1^3\omega_2^3 - 138v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 - 240v_1^4\omega_3\omega_4\omega_1^3\omega_2 + 9cs^4\omega_4\omega_1^3\omega_2^3 + 138v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 + 81v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 - 24cs^2\omega_3\omega_4\omega_1^3\omega_2^2)\frac{\rho}{36\omega_3\omega_4\omega_1^3\omega_2^3}$

coefficient $C_{\mathrm{D}_x^3\mathrm{D}_z v_3}^{(3)}$ **at** $\frac{\partial^4 v_3}{\partial x_1^3 \partial x_3}$**:**

$C_{\mathrm{D}_x^3\mathrm{D}_z v_3}^{(3),\mathrm{SRT}} = (2 + v_1^2\omega - 6cs^2 + 3cs^2\omega - 2v_1^2 - \omega)\frac{\rho v_1 v_3}{12\omega}$

$C_{\mathrm{D}_x^3\mathrm{D}_z v_3}^{(3),\mathrm{MRT1}} = (-6\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2v_1^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} - 6\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}^2v_1^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} -$

$$18\omega_{18}^2 v_1^2 \omega_9^2 \omega_6^3 \omega_{22} \omega_{13} \omega_{11}^2 - 12\omega_{18}^2 \omega_9 \omega_6 \omega_{22} \omega_{13}^2 \omega_{11}^2 + 24\omega_{18}^2 \omega_9^2 \omega_6^2 \omega_{13}^2 \omega_{11} + 6\omega_{18}^2 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11}^2 - 36\omega_{18}^2 \omega_9^2 \omega_6 \omega_{22} \omega_{13} cs^2 \omega_{11}^2 -$$

(large continued expression) $\dfrac{\rho v_1 v_3}{12\omega_{18}^2 \omega_9^2 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11}^2}$

$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(3),\mathrm{MRT2}} = (24\omega_{18} \omega_9^2 \omega_6^3 \omega_{22} \omega_{13}^2 cs^2 - 6\omega_{18}^2 \omega_9 \omega_6^3 \omega_{22} \omega_{13} \omega_{11} + 12\omega_{18}^2 v_1^2 \omega_9^2 \omega_6 \omega_{22} \omega_{13}^2 \omega_{11}^2 - 24\omega_{18}^2 v_1^2 \omega_9^2 \omega_6^2 \omega_{13}^2 \omega_{11} - 6\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11} -$

(large continued expression) $\dfrac{\rho v_1 v_3}{12\omega_{18}^2 \omega_9^2 \omega_6^3 \omega_{22} \omega_{13}^2 \omega_{11}}$

$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(3),\mathrm{CLBM1}} = (3\omega_9 - 9\omega_9 cs^2 + 3\omega_9 cs^2 \omega_{13} + v_1^2 \omega_{13} - \omega_{13} - 3v_1^2 \omega_9 - \omega_9 \omega_{13} + v_1^2 \omega_9 \omega_{13} + 3cs^2 \omega_{13}) \dfrac{\rho v_1 v_3}{12\omega_9 \omega_{13}}$

$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(3),\mathrm{CLBM2}} = (3\omega_9 - 9\omega_9 cs^2 + 3\omega_9 \omega_{13} cs^2 + v_1^2 \omega_{13} - \omega_{13} + 3\omega_{13} cs^2 - 3v_1^2 \omega_9 - \omega_9 \omega_{13} + v_1^2 \omega_9 \omega_{13}) \dfrac{\rho v_1 v_3}{12\omega_9 \omega_{13}}$

$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(3),\mathrm{CuLBM1}} = (-\omega_{12} + 3\omega_{12} cs^2 - 3v_1^2 \omega_4 + 3\omega_4 - \omega_{12}\omega_4 - 9\omega_4 cs^2 + 3\omega_{12}\omega_4 cs^2 + v_1^2 \omega_{12}\omega_4 + v_1^2 \omega_{12}) \dfrac{\rho v_1 v_3}{12\omega_{12}\omega_4}$

$C_{\mathrm{D}_x^3 \mathrm{D}_z v_3}^{(3),\mathrm{CuLBM2}} = (-27cs^2 \omega_3 \omega_1 \omega_2 + 9\omega_3 \omega_1 \omega_2 - 18v_3^2 \omega_3 \omega_4 \omega_2 - 9v_1^2 \omega_4 \omega_1 \omega_2 - 6\omega_3 \omega_4 \omega_1 \omega_2 + 18cs^2 \omega_3 \omega_4 \omega_1 \omega_2 + 6v_1^2 \omega_3 \omega_4 \omega_1 \omega_2 + 4v_1^2 \omega_3 \omega_4 \omega_2 -$
$8\omega_3 \omega_4 \omega_1 + 12cs^2 \omega_3 \omega_4 \omega_1 + 9\omega_4 \omega_1 \omega_2 - 27cs^2 \omega_4 \omega_1 \omega_2 + 18v_3^2 \omega_3 \omega_3 \omega_4 - 9v_1^2 \omega_3 \omega_1 \omega_2 + 2v_1^2 \omega_3 \omega_4 \omega_1 + 6cs^2 \omega_3 \omega_4 \omega_2 + 2\omega_3 \omega_4 \omega_2) \dfrac{\rho v_1 v_3}{72\omega_3 \omega_4 \omega_1 \omega_2}$

coefficient $C_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho}^{(3)}$ **at** $\dfrac{\partial^4 \rho}{\partial x_1^2 \partial x_2 \partial x_3}$:

$C_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{SRT}} = (-24v_1 v_2^2 cs^2 - 14v_1 v_2^2 v_3^2 \omega^2 - 36v_2 v_3^2 cs^2 \omega + 24v_1^2 v_2 cs^2 + v_1 v_2^2 v_3^2 \omega^3 + 36v_1 v_3^2 cs^2 \omega - 36v_1^2 v_2 v_3^2 \omega + 14v_1^2 v_2 v_3^2 \omega^2 -$
$14v_1 v_3^2 cs^2 \omega^2 + 14v_2 v_3^2 cs^2 \omega^2 - 24v_1 v_3^2 cs^2 - v_1^2 v_2 v_3^2 \omega^3 + v_1 v_3^2 cs^2 \omega^3 + 36v_1 v_2^2 v_3 \omega - v_2 v_3^2 cs^2 \omega^3 - v_1^2 v_2 cs^2 \omega^3 + 36v_1 v_2^2 cs^2 \omega + 14v_1^2 v_2 cs^2 \omega^2 +$
$v_1 v_2^2 cs^2 \omega^3 + 24v_2 v_3^2 cs^2 + 24v_1^2 v_2 v_3^2 - 36v_1^2 v_2 cs^2 \omega - 24v_1 v_2^2 v_3^2 - 14v_1 v_2^2 cs^2 \omega^2) \dfrac{1}{2\omega^3}$

$C_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho}^{(3),\mathrm{MRT1}} = (2v_1 v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{11} \omega_{14} \omega_8^2 + 2v_1 v_2^2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 - 2v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 -$
$\omega_{18} v_1 v_2^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_8^2 - 2\omega_{18} v_1 v_2^2 \omega_6^2 v_3^2 \omega_{19} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 - 2\omega_{18} v_1^2 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{11} \omega_{14} \omega_8^2 +$
$2\omega_{18} v_1 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{11} \omega_{14} \omega_8^2 + \omega_{18} v_1 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_8^2 - 2\omega_{18} v_1 v_2^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7 \omega_{20} \omega_{11} \omega_8 -$
$2v_1^2 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{11} \omega_{14} \omega_8^2 + 2v_1^2 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{14} \omega_8^2 + \omega_{18} v_1^2 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_8^2 -$
$2\omega_{18} v_1 v_2^2 \omega_6^2 \omega_{19} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 + 2v_1 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{11} \omega_{14} \omega_8^2 + 2\omega_{18} v_1^2 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_7^2 cs^2 \omega_{14} \omega_8^2 +$

$$\begin{aligned}
&2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - \\
&\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{14}\omega_8^2 + \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - \\
&\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 + \\
&\omega_{18}v_1\omega_6^3v_3^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&8\omega_{18}v_2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - \\
&2v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + 2v_1^2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + \\
&2v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8^2 + \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - \\
&\omega_{18}v_2\omega_6^3v_3^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + 2v_1^2v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8^2 - 2v_1v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 + \\
&2v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8 + \\
&\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8^2 + \\
&2v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2 + \\
&\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - \\
&\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - 2v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + 2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 + 2v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 + 2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8 - 2v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 + \\
&\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 - 2v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + 2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_1v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2v_1v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2 + \\
&\omega_{18}v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8^2 + \\
&2\omega_{18}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - 2v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 + \\
&2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 - \\
&4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14} + 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 + \\
&2v_1\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - \\
&2v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1^2v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2 + \\
&2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^4\omega_{20}\omega_{11}\omega_{14} + \\
&2v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 + \\
&2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_1^2v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - \\
&\omega_{18}v_1^2v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \\
&2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{14}\omega_8^2 + 2v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2v_1\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2 + \\
&4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2 - \\
&2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2 - \\
&2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8 -
\end{aligned}$$

$$\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 2v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 + 2v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$2v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 12\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$2v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1 v_2\omega_6^3\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 - \omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$2v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 -$$
$$8\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 2v_1\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 - \omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 - 2v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 + 8\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 - 8\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2\omega_6\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2)\frac{1}{2\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2}$$

$$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z \rho} = (2v_1 v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - 2v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 cs^2 + 2\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - \omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$4\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^4 - 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$2v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14} cs^4 + \omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 -$$
$$2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 - 2v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1^2 v_2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2v_1 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - \omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1 v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 - \omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 - 2v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 +$$
$$2v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 2v_1 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - \omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2v_1\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2v_1^2 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 - \omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 -$$
$$\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 cs^2 - 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 +$$
$$2\omega_{18}v_2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 - 2\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 +$$
$$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 + 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} cs^4 + 2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 + \omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 - 2\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14} cs^4 - 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^4 -$$
$$\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + 2v_1^2 v_2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + \omega_{18}v_1\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 + \omega_{18}v_1\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 +$$
$$2v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 + \omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2v_1^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 + 2v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 - 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 +$$
$$\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$\omega_{18}v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 +$$
$$8\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^4 + 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - \omega_{18}v_2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2 + \omega_{18}v_1 v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1^2 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + 2\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 cs^2 + 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 +$$
$$2v_1 v_2\omega_6^3\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1 v_2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + \omega_{18}v_1\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 +$$

$$\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 12\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^4 + 2v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 - 2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2cs^2 -$$
$$\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 + \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8cs^2 - \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 - \omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2 + 2v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^4 - \omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 +$$
$$\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8cs^2 - 8\omega_{18}v_2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^4 +$$
$$2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 + 2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8cs^4 -$$
$$2v_1\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2\omega_{18}v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 -$$
$$\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8 - 2v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 -$$
$$\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 + 2v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 +$$
$$4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}cs^4 + \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8cs^2 -$$
$$\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2cs^2 + 2v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2v_1v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 - 2v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}cs^4 - 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 + \omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8cs^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8cs^2 - \omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 + 2v_1^2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2cs^2 + 2v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 - 2v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8cs^2 + \omega_{18}v_1v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 - 2v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 2v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_1^2v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2v_1v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - \omega_{18}v_1\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1^2v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8cs^2 + 2v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$\omega_{18}v_1^2v_2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 8\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8cs^4 - \omega_{18}v_1^2v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 -$$
$$2v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 -$$
$$2v_1\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 + \omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8cs^4 +$$
$$\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2cs^2 - \omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8cs^4 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8cs^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 - 2v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8cs^2 - \omega_{18}v_1^2v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2cs^2 - 2v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 2v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2cs^2 +$$
$$\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8cs^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8cs^2 - 2\omega_{18}v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8cs^2 +$$
$$\omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 - \omega_{18}v_1^2v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$2\omega_{18}v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_1\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$\omega_{18}v_1v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_1^2v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2\Big)\frac{1}{2\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z\rho} = \big(-2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$$
$$\omega_{18}v_1\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_2\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$2v_1^2v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} +$$
$$2v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$\omega_{18}v_1^2v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$

$$
\begin{aligned}
&\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2\omega_{18}v_1 cs^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2v_1^2 v_2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} + \\
&2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 - 2v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2v_1^2 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1 v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - \\
&2\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + \\
&2\omega_{18}v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8 + \omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \\
&2v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2v_1 v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - \\
&2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \\
&2v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \\
&2v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - \omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 + \\
&\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + \\
&\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1 v_2^2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2v_1^2 v_2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \\
&2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + \\
&2v_1^2 v_2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - \\
&2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}v_1^2 v_2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 - 2v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2v_1^2 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + 2v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - \\
&\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \\
&2v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} + \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - \\
&\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} + \\
&\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \\
&2v_1 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - \\
&2v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \\
&2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_1^2 v_2 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - \\
&2\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \\
&\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 + 2v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \\
&\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 2v_1 v_2^2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2v_1^2 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \\
&2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} + 2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 - \\
&2v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2 cs^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + \\
&2v_1^2 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \\
&2\omega_{18}v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - \\
&2\omega_{18}v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \\
&2\omega_{18}v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 + 2v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \\
&\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 2v_1 v_2^2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \\
&\omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2v_1^2 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \\
&2\omega_{18}v_1 v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - \omega_{18}v_2\omega_6 cs^2 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - \\
&2v_1\omega_6 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + \\
&2\omega_{18}v_1 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2v_1^2 v_2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - \\
&2\omega_{18}v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}v_1^2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_1 v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \\
\end{aligned}
$$

$$\omega_{18}v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6cs^2v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2\omega_6cs^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}v_2cs^2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2\omega_6cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}v_2cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2\omega_6cs^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 -$$
$$2v_2\omega_6cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - \omega_{18}v_1^2v_2\omega_6cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$\omega_{18}v_2\omega_6cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6cs^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18}v_1^2v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_2\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - 2v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_2\omega_6cs^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_2\omega_6cs^2v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1v_2^2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$$
$$\omega_{18}v_1^2v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} -$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_1\omega_6cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} +$$
$$2v_1v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\big)\frac{1}{2\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8}$$

$C^{(3),\text{CLBM2}}_{\mathrm{D}^2_x\mathrm{D}_y\mathrm{D}_z\rho} = (-2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 +$

$\omega_{18}v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$

$2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_2\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 -$

$\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 -$

$2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} +$

$2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} - 2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$

$2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$

$2v_1^2v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 -$

$2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$

$2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$

$2v_1\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11} +$

$2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$

$2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}cs^2\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 -$

$2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 +$

$2v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$

$\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 -$

$2\omega_{18}v_1^2v_2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 -$

$2v_1\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11} -$

$2v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} + \omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$

$2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} - 2v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$

$\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 -$

$2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$

$\omega_{18}v_1v_6\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1^2v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 +$

$2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2v_2\omega_6\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$

$2v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2v_1^2v_2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1v_2^2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$

$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$

$2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} - \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 -$

$\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} + 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14} - 2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 -$

$2v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 -$

$2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14} + 2v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$

$2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$

$2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 -$

$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$

$2v_1^2v_2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 -$

$2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 - \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 +$

$2v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2v_2v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$

$2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14} +$

$\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$

$2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_3^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$

$2v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - 2v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 -$

$2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} - 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} -$

$2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$

$\omega_{18}v_1v_6\omega_6v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - 2v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - 2v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 -$

$\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 -$

$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2v_1^2v_2\omega_2\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - 2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11} - \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 -$$
$$2v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} +$$
$$2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} -$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2v_2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} + 2v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1^2v_2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} + \omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_1^2v_2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 +$$
$$2v_1v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} +$$
$$2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 -$$
$$2v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{14}\omega_8 - 2\omega_{18}v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$$
$$2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} - 2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} +$$
$$2v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - 2v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} + 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} + \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1^2v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 2v_1v_2^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} - 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} -$$
$$2v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} -$$
$$2\omega_{18}v_2v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_2v_3^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} + 2\omega_{18}v_1v_2^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} -$$
$$\omega_{18}v_1^2v_2\omega_6\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - 2v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14} -$$
$$2v_1v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2v_1^2v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2^3\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8)\frac{1}{2\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8}$$

$$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_x^2\,\mathrm{D}_y\,\mathrm{D}_z\,\rho} = 0$$

$$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_x^2\,\mathrm{D}_y\,\mathrm{D}_z\,\rho} = (-216cs^4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 8v_2^2\omega_3^2\omega_4^2\omega_2^3 - 324cs^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3 + 54cs^2v_2^2\omega_4^2\omega_1^3\omega_2^3 - 104cs^2\omega_3^2\omega_4^2\omega_1^3 - 81cs^4\omega_3\omega_4^2\omega_1^3\omega_2^3 -$$
$$432v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 + 108cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 72cs^4\omega_4^2\omega_1^3\omega_2^2 + 128cs^2\omega_3^2\omega_4\omega_1\omega_2^2 + 32cs^2v_2^2\omega_3^2\omega_4^2\omega_2^3 - 96v_1^2\omega_3^2\omega_4^2\omega_2^3 +$$
$$64cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_2 - 24v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 + 27cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 864v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 24cs^2v_2^2\omega_4^2\omega_1^3\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^3 + 54cs^2\omega_3^2\omega_1^3\omega_2^3 +$$
$$144cs^4\omega_3^2\omega_4^2\omega_2^3 - 24cs^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 108cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 8cs^2\omega_3\omega_4^2\omega_1^3\omega_2 + 48v_1^2\omega_3^2\omega_4^2\omega_1^3 + 162cs^4\omega_4^2\omega_1^3\omega_2^3 + 64cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 +$$
$$27cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_2^3 + 8cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 108cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 60v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 27cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 8cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 96v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 -$$
$$432v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 324cs^4\omega_3\omega_4^2\omega_1^2\omega_2^3 - 84cs^2v_2^2\omega_4^2\omega_1^2\omega_2^3 - 24cs^4\omega_3\omega_4^2\omega_1^3\omega_2 - 36v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 81cs^4\omega_3^2\omega_4\omega_1^3\omega_2^3 -$$
$$56cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 432v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3 - 252cs^4\omega_4^2\omega_1^2\omega_2^3 + 96v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 108cs^2v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 27cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 64cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 +$$
$$72v_1^2v_2^2\omega_3^2\omega_4^2\omega_2^3 + 120v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 108cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 192cs^4\omega_3\omega_4^2\omega_1^2\omega_2^3 + 144cs^4\omega_3^2\omega_4^2\omega_1^3 + 80cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 -$$
$$192v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 32cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 96v_1^2\omega_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 54cs^2v_2^2\omega_3^2\omega_3^2\omega_1^3\omega_2 + 72v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 72cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 8v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 +$$
$$24v_1^4\omega_3^2\omega_4^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2 + 24cs^2\omega_4^2\omega_1^3\omega_2^3 - 162cs^4\omega_3^2\omega_1^3\omega_2^3 + 56cs^2\omega_3\omega_4^2\omega_1\omega_2^3 - 104cs^2\omega_3^2\omega_4^2\omega_2^3 - 60v_1^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8\omega_3^2\omega_4^2\omega_2^3 -$$
$$10cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 10cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 96v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 40cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8v_2^2\omega_3^2\omega_4\omega_4^3 + 32cs^2v_2^2\omega_3^2\omega_4^2\omega_4^3 - 96v_1^2\omega_3^2\omega_4^2\omega_1^3 -$$
$$54cs^2\omega_4^2\omega_1^3\omega_2^3 - 168cs^4\omega_3\omega_4^2\omega_1\omega_2^3 - 36v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 16cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 30cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 8\omega_3^2\omega_4^2\omega_1^3\omega_2 + 48v_1^2v_2^2\omega_3^2\omega_4^2\omega_4^3 -$$
$$432v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 30cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 108cs^2v_2^2\omega_3^2\omega_1^2\omega_2^3 + 8v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 168cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 432v_1^2cs^2\omega_3^2\omega_4^2\omega_2^3 - 56cs^2v_2^2\omega_3\omega_4^2\omega_1\omega_2^3 +$$
$$112cs^2\omega_3^2\omega_4\omega_1^3\omega_2 + 10cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 10cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 72v_1^4\omega_3^2\omega_4^2\omega_1\omega_2 + 192cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 84cs^2\omega_4^2\omega_1^2\omega_2^3 - 432v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 +$$
$$16\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 176cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 8cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 96v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 324cs^4\omega_3\omega_4^2\omega_2^3)\frac{v_2}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\mathrm{D}_x^2\,\mathrm{D}_y\,\mathrm{D}_z\,v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1^2\partial x_2\partial x_3}$:

$$C^{(3),\text{SRT}}_{D_x^2 D_y D_z v_1} = (36v_3^2 cs^2\omega + 48v_1v_2v_3^2 + v_2^2v_3^2\omega^3 - 2v_1v_2cs^2\omega^3 + 28v_1v_2cs^2\omega^2 - 14v_2^2v_3^2\omega^2 - 72v_1v_2cs^2\omega + 36v_2^2v_3^2\omega + v_3^2cs^2\omega^3 - 14v_3^2cs^2\omega^2 - 24v_2^2v_3^2 - 24v_2^2cs^2 + 36v_2^2cs^2\omega - 72v_1v_2v_3^2\omega - 24v_3^2cs^2 - 14v_2^2cs^2\omega^2 + 28v_1v_2v_3^2\omega^2 + 48v_1v_2cs^2 - 2v_1v_2v_3^2\omega^3 + v_2^2cs^2\omega^3)\frac{\rho}{2\omega^3}$$

$$C^{(3),\text{MRT1}}_{D_x^2 D_y D_z v_1} = (-\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8 + 6\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 +$$
$$4v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 +$$
$$4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8 + 4\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 6\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 -$$
$$6\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 - 4v_1v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - \omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 + 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_7\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 4v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 + 4v_1v_2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14} + 10\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 8\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$4v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14} +$$
$$4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$4\omega_{18}v_1v_2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$4v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^3\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 4v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 +$$
$$2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$4\omega_{18}v_1v_2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 -$$
$$2v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 + 2v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11} +$$
$$4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 + 4v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 +$$
$$2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 + 2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 - 12\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$

$$4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 +$$
$$4v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$4v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 - 8\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 +$$
$$2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2 - 4v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$4v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + 4v_1v_2\omega_6^2v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\Big) \dfrac{\rho}{2\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2}$$

$$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_1} = \big(-\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$4\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 - 4\omega_{18}v_1v_2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8 cs^2 - 2v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 - 4v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + \omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14} cs^2 +$$
$$2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + \omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$2v_2^2\omega_6^2v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 -$$
$$2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 - \omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - \omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 - 4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 10\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 + 2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 -$$
$$\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 4v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14} +$$
$$4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 cs^2 - 4v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 cs^2 - 2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 4v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 + \omega_{18}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 - 4v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 - 6\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$4\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2 + 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 + 2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 -$$
$$4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$4v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 4v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 + 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 4v_1v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 - 12\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 +$$
$$\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 - 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14} cs^2 +$$
$$2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 cs^2 + 2\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 +$$
$$4\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 + 2v_2^2\omega_6^3v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 8\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$4v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 +$$
$$\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$

$$2v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 - 12\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 cs^2 +$$
$$2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}cs^2 +$$
$$2v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 + 2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 4\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8 cs^2 +$$
$$2\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2 + 2v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 - 8\omega_{18}v_1 v_2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 2\omega_{18}v_1 v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 + 4\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$4\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2 + 4\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 - 4\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{14}\omega_8^2 +$$
$$4\omega_{18}v_1 v_2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 - 4\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 -$$
$$2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - \omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$4v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 + 6\omega_{18}v_1 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 - 4v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 - 4\omega_{18}v_1 v_2\omega_6\omega_{22}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 +$$
$$4\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 4\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$4\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 - \omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 + 4v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 2v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 cs^2 -$$
$$2v_2^2\omega_6^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 cs^2 + \omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 4\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$\omega_{18}v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + \omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{14}\omega_8^2 -$$
$$2\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8 cs^2 + 4\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 - 4\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{11}\omega_{14}\omega_8^2 +$$
$$4\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 + 2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2\omega_6^3\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{22}\omega_{13}^2\omega_7\omega_{11}\omega_{14}\omega_8^2 + \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2 - 2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - \omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 4\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 +$$
$$4v_1 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 + 6\omega_{18}v_1 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}^2\omega_7\omega_{20}\omega_{11}\omega_8^2 cs^2 +$$
$$\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{14}\omega_8^2 + 4\omega_{18}v_1 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2) \frac{\rho}{2\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}^2\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = (-4v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 4\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1 v_2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4v_1 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 4\omega_{18}v_1 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14} -$$
$$2\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4v_1 v_2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$2cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1 v_2 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 4\omega_{18}v_1 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} +$$
$$4\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 - 2v_2^2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} +$$
$$2\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$$
$$4v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} +$$
$$2\omega_{18}v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + 2v_2^2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 +$$
$$4\omega_{18}v_1 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 4\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18}v_2^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 4\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} -$$
$$\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 4\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4v_1 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4v_1 v_2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} + 4\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$$
$$4\omega_{18}v_1 v_2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18} cs^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1 v_2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - \omega_{18}v_2^2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2v_2^2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} -$$
$$2\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$4v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18} cs^2 v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4v_1 v_2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18} cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 4v_1 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$\omega_{18}\omega_6 cs^2 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18} cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11} + 4\omega_{18}v_1 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_6 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2^2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 -$$
$$2v_2^2 v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_6 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4v_1 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18} cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}v_1 v_2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_2^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_2^2\omega_6 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 -$$

$$2\omega_{18}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - 2v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_6cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1v_2\omega_6cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} +$$
$$4v_1v_2cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + 4\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 4v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 4v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 -$$
$$2v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 4v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 4v_1v_2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + 2\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2v_2^2cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2\omega_6cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_2^2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + \omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 + \omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 4v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} -$$
$$4\omega_{18}v_1v_2cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$$
$$\omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2\omega_{18}cs^2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$4v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4v_1v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - \omega_{18}v_2^2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}\omega_6cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + 2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1v_2\omega_6cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2v_2^2cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\Big)\dfrac{\rho}{2\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8}$$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_1} = \big(-4v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 -$

$$\omega_{18}\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2\omega_6\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} -$$
$$4v_1v_2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 4v_1v_2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_6\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11} + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} - 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_2^2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - 2v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 -$$
$$2v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 - 4v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} + 2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1v_2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_3^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 +$$
$$\omega_{18}\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} - 4v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} +$$
$$\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + 4v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 +$$
$$2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} + 4v_1v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 -$$
$$2v_2^2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + \omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} -$$
$$2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18}v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 4v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} +$$
$$\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14} - 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} - 2v_2^2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} + \omega_{18}\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$

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$$4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18}v_2^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14} -$$
$$4v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 - \omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} - 4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$$
$$4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 +$$
$$2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2v_2^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 +$$
$$2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14} + 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - 4v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 4v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 +$$
$$\omega_{18}v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} +$$
$$4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 2v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$$
$$2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} + 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 - 2v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 +$$
$$4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} +$$
$$4v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - 2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{14}\omega_8 + 2v_2^2\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$$
$$4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 +$$
$$4v_1v_2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} - 4\omega_{18}v_1v_2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} + 4\omega_{18}v_1v_2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2\omega_{18}\omega_6v_3^2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} - 2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{14}\omega_8 + 2v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$4\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$2v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 4v_1v_2\omega_6v_3^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$4v_1v_2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$2v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} + 2\omega_{18}v_2^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$$
$$\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2^2\omega_{22}\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_8) \frac{\rho}{2\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8}$$

$C^{(3),\text{CuLBM1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = 0$

$C^{(3),\text{CuLBM2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_1} = (-13v_1^2\omega_3\omega_1^3\omega_2 + 2\omega_1\omega_2^3 + 4v_2^2\omega_1^2\omega_2^2 + 26cs^2\omega_3\omega_2^3 - 3v_2^2\omega_3\omega_1^3\omega_2 + 26v_1^2\omega_3\omega_1^2\omega_2^2 + 6v_2^2\omega_3\omega_1^2\omega_2^2 - 2v_2^2\omega_1^3\omega_2 - 12\omega_3\omega_1^3 +$
$4v_2^2\omega_3\omega_2^3 - 4v_2^2\omega_3\omega_1^2\omega_2 + 12cs^2\omega_1^2\omega_2^2 + 10\omega_3\omega_1\omega_2^3 - 22v_1^2\omega_3\omega_1^2\omega_2 - 24cs^2\omega_3\omega_1\omega_2^3 + 16v_1^2\omega_3\omega_1^3 - 6cs^2\omega_1^3\omega_2 - 24cs^2\omega_3\omega_1\omega_2^2 + 8\omega_3\omega_1\omega_2^2 -$
$6cs^2\omega_1\omega_2^3 - 10\omega_3\omega_2^3 + 48cs^2\omega_3\omega_1^2\omega_2^2 - 20\omega_3\omega_1^2\omega_2^2 + 10\omega_3\omega_1^3\omega_2 - 24cs^2\omega_3\omega_1^3\omega_2 + 28cs^2\omega_3\omega_1^3 - 4\omega_1^2\omega_2^2 + 10v_1^2\omega_3\omega_2^3 - 4v_1^2\omega_3\omega_1\omega_2^2 -$
$4v_2^2\omega_3\omega_1\omega_2^2 - 2v_2^2\omega_1\omega_2^3 - 13v_1^2\omega_3\omega_1\omega_2^3 - 30cs^2\omega_3\omega_1^2\omega_2 + 2\omega_1^3\omega_2 + 4v_2^2\omega_3\omega_1^3 + 14\omega_3\omega_1^2\omega_2 - 3v_2^2\omega_3\omega_1\omega_2^3) \frac{\rho v_1 v_2}{6\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(3)}_{\text{D}_x^2\text{D}_y\text{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1^2\partial x_2\partial x_3}$:

$C^{(3),\text{SRT}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = (-216v_3^2cs^2\omega - 288v_1v_2v_3^2 + 12v_1v_2cs^2\omega^3 - 216v_1^2cs^2\omega - 168v_1v_2cs^2\omega^2 + 432v_1v_2cs^2\omega - 6v_3^2cs^2\omega^3 + 144v_1^2cs^2 +$
$84v_1^2cs^2\omega^2 + 84v_3^2cs^2\omega^2 - 6v_1^2cs^2\omega^3 - cs^4\omega^3 - 6v_1^2v_3^2\omega^3 + 144v_1^2v_3^2 - 16cs^4\omega^2 + 432v_1v_2v_3^2\omega + 84v_1^2v_3^2\omega^2 - 216v_1^2v_3^2\omega + 144v_3^2cs^2 -$
$168v_1v_2v_3^2\omega^2 + 54cs^4\omega - 288v_1v_2cs^2 - 36cs^4 + 12v_1v_2v_3^2\omega^3) \frac{\rho}{12\omega^3}$

$C^{(3),\text{MRT1}}_{\text{D}_x^2\text{D}_y\text{D}_z v_2} = (12\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5 -$
$24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^3cs^2\omega_{14}\omega_8^2\omega_5 + 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$
$24\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 24\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 12\omega_{18}v_1v_2\omega_6^3\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$
$24\omega_{18}v_1^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{14}\omega_8^2\omega_5 - 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 -$
$24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$
$12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{11}\omega_{14}\omega_8^2\omega_5 + 12\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$
$12\omega_{18}v_1^2\omega_6^3v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 24\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$
$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{14}\omega_8^2\omega_5 + 12\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$
$24v_1v_2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 12\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 -$
$12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5 +$
$12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 6\omega_{18}v_1^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 12\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$
$12\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$
$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 12v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5 - 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$

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$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_8\omega_5^2 - 18\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12v_1^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{11}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7^3cs^2\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$42\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5^2 + 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12v_1^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 48\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{14}\omega_8^2\omega_5 + 24\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 10\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2\omega_6^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12v_1^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8^2\omega_5^2 -$$
$$60\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^4\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{14}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 36\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 24v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 6\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5^2 - 12\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^4\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5^2 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8\omega_5^2 - 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}\omega_6v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_8\omega_5^2 -$$
$$24v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5^2 + 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 18\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 18\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}v_1^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8\omega_5^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 18\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 18\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 36\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 24v_1v_2\omega_6\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 + 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12v_1^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 -$$
$$12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$

$$24 v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^4 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 12 v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} v_1 v_2 \omega_6^3 \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_5^2 + 36 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 + 12 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$24 v_1 v_2 \omega_6^2 \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 24 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 - 6 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 - 6 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$24 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 24 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5 + 12 \omega_{18} v_1^2 \omega_6^3 \omega_{19} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{13} \omega_7^3 cs^4 \omega_{20} \omega_{14} \omega_8^2 \omega_5 +$$
$$6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} v_1^2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^4 \omega_{20} \omega_{14} \omega_8^2 \omega_5 - 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^4 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 -$$
$$12 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 + 12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} \omega_6^2 \omega_{22} \omega_{19} \omega_7^2 cs^4 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{13} \omega_7^3 cs^4 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 2 \omega_{18} \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^4 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} \omega_6^3 v_3^2 \omega_{19} \omega_{19} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^4 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 - 12 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 \omega_{18} \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^4 \omega_{11} \omega_{14} \omega_8 \omega_5^2 +$$
$$6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 + 12 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 - 24 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_7^2 cs^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 -$$
$$24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7^3 \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7 cs^4 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{13} \omega_7^3 cs^4 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$6 \omega_{18} \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 -$$
$$60 \omega_{18} \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 + 12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_7^3 cs^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5 - 24 v_1 v_2 \omega_6^3 \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$24 v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 v_1^2 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 v_1^2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$$
$$12 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 cs^2 \omega_{20} \omega_{11} \omega_{14} \omega_5^2) \frac{\rho}{12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2}$$

$C_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_2}^{(3),\mathrm{MRT2}} = (-12 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_5^2 cs^2 - 60 \omega_{18} \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^2 +$

$12 \omega_{18} v_1^2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7 \omega_{14} \omega_8^2 \omega_5^2 +$

$12 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 cs^2 + 12 \omega_{18} v_1^2 \omega_6^3 \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 -$

$12 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 6 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 d +$

$12 \omega_{18} v_1 v_2 \omega_6^3 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 - 12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 -$

$6 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 24 v_1 v_2 \omega_6^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 24 v_1 v_2 \omega_6^2 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$

$12 \omega_{18} \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_5^2 cs^2 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 - 12 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$

$6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 12 \omega_{18} v_1 v_2 \omega_6^3 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 +$

$12 \omega_{18} v_1^2 \omega_6^2 v_3^2 \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^2 - 12 \omega_{18} \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^4 -$

$24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8 \omega_5^2 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^4 + 12 v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$

$6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 18 \omega_{18} \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5 cs^4 + 12 v_1^2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 -$

$12 \omega_{18} v_1^2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_5^2 + 12 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5 cs^2 -$

$12 \omega_{18} \omega_6^3 \omega_{22} \omega_{13} \omega_7^3 \omega_{14} \omega_8^2 \omega_5^2 cs^4 - 12 v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} \omega_6 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 -$

$12 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^2 - 12 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 36 \omega_{18} \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 cs^2 -$

$24 v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 6 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 -$

$24 v_1 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 24 v_1 v_2 \omega_6^3 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 12 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 -$

$6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 - 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 -$

$12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 - 24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 + 12 \omega_{18} \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 +$

$12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 24 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^2 + 6 \omega_{18} \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 -$

$24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 v_1 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_{18} \omega_6^2 v_3^2 \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 -$

$24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 +$

$24 v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_5^2 cs^2 + 12 \omega_{18} \omega_6 \omega_{22} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8 \omega_5 cs^4 +$

$24 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5 - 36 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 18 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 -$

$6 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 24 \omega_{18} v_1 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 24 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 -$

$24 \omega_{18} \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 cs^2 - 24 \omega_{18} \omega_6 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5 cs^2 + 24 \omega_{18} \omega_6 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 cs^4 -$

$6 \omega_{18} \omega_6^3 v_3^2 \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 - 24 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8 \omega_5^2 cs^2 + 24 v_1 v_2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 -$

$12 v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5 cs^4 - 12 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 -$

$12 \omega_{18} v_1 v_2 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^2 +$

$12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_5^2 cs^2 + 12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^2 - 24 v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{14} \omega_8^2 \omega_5^2 +$

$12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 12 \omega_{18} v_1^2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 +$

$12 v_1^2 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_6^2 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 cs^2 + 6 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 +$

$12 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_{18} v_1 v_2 \omega_6^3 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 cs^4 -$

$24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 + 12 \omega_{18} v_1^2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^2 +$

$12 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5 cs^2 + 12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8 \omega_5 cs^2 + 6 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^2 +$

$24 \omega_{18} \omega_6 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^2 + 24 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 cs^2 - 12 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 -$

$6 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 - 6 \omega_{18} v_1^2 \omega_6^3 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 24 v_1 v_2 \omega_6^3 \omega_{22} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 +$

$6 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 - 24 \omega_{18} v_1 v_2 \omega_6^2 \omega_{19} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 6 \omega_{18} \omega_6 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^4 -$

$12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8 \omega_5^2 + 24 v_1 v_2 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 -$

$12 \omega_{18} \omega_6^3 v_3^2 \omega_{22} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5 cs^2 + 24 \omega_{18} v_1 v_2 \omega_6^2 \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 12 \omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 -$

$12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_8^2 \omega_5^2 cs^4 + 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{11} \omega_{14} \omega_8^2 \omega_5 + 24 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^2 \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 +$

$12 \omega_{18} \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^4 + 12 v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{14} \omega_8^2 \omega_5^2 cs^2 + 24 \omega_{18} v_1 v_2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{14} \omega_8^2 \omega_5^2 -$

$12 v_1^2 \omega_6^3 v_3^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 + 12 \omega_{18} v_1^2 \omega_6^2 \omega_{22} \omega_{19} \omega_{13} \omega_7^3 \omega_{20} \omega_{11} \omega_{14} \omega_5^2 cs^2 - 12 \omega_{18} v_1^2 \omega_6^3 \omega_{22} \omega_{19} \omega_{13} \omega_{20} \omega_{11} \omega_{14} \omega_8^2 \omega_5^2 cs^2 +$

$$12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 +$$
$$12\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 - 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$12v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 36\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^2 - 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$24\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5cs^2 - 24v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 + 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2cs^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 -$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12v_1^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12v_1^2\omega_6^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^2 - 18\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 - 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 - 18\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$24v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 +$$
$$12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 12v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 +$$
$$12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5^2cs^2 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2cs^2 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 + 6\omega_{18}v_1^3\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5cs^4 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 24\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8\omega_5^2cs^2 - 60\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2cs^2 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 + 12v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}\omega_6\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5cs^4 - 6\omega_{18}v_1^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 -$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_5^2cs^2 +$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 - 12\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 +$$
$$24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 +$$
$$12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 6\omega_{18}v_1^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 + 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8\omega_5^2 + 42\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2cs^2 + 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$48\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2cs^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 6\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 - 6\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5cs^4 + 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5cs^2 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 + 24v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 +$$
$$24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 +$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{14}\omega_6\omega_8^2\omega_5^2 - 24\omega_{18}v_1^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$24\omega_{18}v_1v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}v_1^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 +$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5cs^2 +$$
$$6\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_6^2v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^2 +$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8^2\omega_5cs^4 - 24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2 - 18\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^2 -$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{14}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$24\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_5^2cs^2 + 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 - 2\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2cs^2 + 12\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^4 + 12v_1^2\omega_6^3v_3^2\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 +$$
$$10\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5cs^4 + 24\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5^2cs^2 - 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2 -$$
$$12v_1^2\omega_6^3\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2cs^2) \frac{\rho}{12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5^2}$$

$$C^{(3),\text{CLBM1}}_{D_x^2 D_y D_z v_2} = (-12\omega_{18}\omega_6^3cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_5 - 6\omega_{18}v_1^2\omega_6^3cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_6^2cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^3\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^3cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}\omega_6^3cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2\omega_6^3cs^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1v_2\omega_6^3cs^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3cs^4\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 - 24v_1v_2\omega_6^3cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1v_2\omega_6^2cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_5 + 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_6 cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$6\omega_{18}\omega_6^3cs^2v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 24v_1v_2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3cs^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$18\omega_{18}\omega_6^3cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 24\omega_{18}v_1v_2\omega_6^2v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1v_2\omega_6^3cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_5 +$$

$$6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 12v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$18\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 10\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8 - 24\omega_{18}cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - 12\omega_6^2 cs^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24v_1 v_2 \omega_6^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24v_1 v_2 \omega_6^2 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^2 v_3^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_5 + 12v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 - 6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24v_1 v_2 \omega_6^3 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_5 + 24v_1 v_2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_5 + 12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 +$$
$$24\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 +$$
$$12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 +$$
$$6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 12v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 + 6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 24v_1 v_2 \omega_6^2 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$18\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8 - 6\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 +$$
$$12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_5 -$$
$$6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 +$$
$$12v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 +$$
$$6\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 12v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 - 12v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8 - 12\omega_{18}v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 +$$
$$24\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_5 + 12\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_5 + 12v_1^2 \omega_6^2 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 + 12\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 +$$
$$12\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - \omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8 - 12\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8 -$$
$$12\omega_{18}v_1^2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 + 6\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 24v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 +$$
$$12\omega_{18}\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 + 12v_1^2 \omega_6^2 cs^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12v_1^2 \omega_6^2 \omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 -$$
$$12\omega_{18}\omega_6^2 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 -$$
$$12\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8 - 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$24v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 24v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_5 +$$
$$12\omega_{18}v_1^2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1 v_2 \omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{19}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 cs^4 \omega_{22}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_6^2 cs^4 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8 + 24\omega_{18}v_1 v_2 \omega_6^3 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 + 6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24v_1 v_2 \omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_6^3 cs^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24v_1 v_2 \omega_6^2 cs^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 +$$

$$6\omega_{18}\omega_6^3 cs^2 v_3^2 \omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_5 +$$
$$12\omega_6^3 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$24 v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_6^2 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^3 cs^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_5 -$$
$$12 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 - 12 v_1^2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12 v_1^2\omega_6^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12 v_1^2\omega_6^3 cs^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2\omega_6^3 cs^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_6^3 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2\omega_6^3 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_5 + 12 v_1^2\omega_6^3 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3 cs^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24 v_1 v_2\omega_6^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 cs^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 24 v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_6^3 cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8 + 12\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^2 cs^4\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3 cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 + 24 v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_5 +$$
$$24 v_1 v_2\omega_6^3 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 24\omega_{18}\omega_6 cs^4\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2 cs^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 cs^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^2 cs^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}v_1^2\omega_6^2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}\omega_6^3 cs^4\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 cs^4\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8) \dfrac{\rho}{12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5}$$

$C_{\mathrm{D}_x^2 \mathrm{D}_y \mathrm{D}_z v_2}^{(3),\mathrm{CLBM2}} = (12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_5 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{11}\omega_{14}\omega_8\omega_5 +$

$$24 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5 -$$
$$24 v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$12\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 -$$
$$24 v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 24 v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_5 - 6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_5 +$$
$$12 v_1^2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^4\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12 v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 - 12 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_5 + 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$10\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5 + 6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12 v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24 v_1 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_5 - 12 v_1^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_5 - 6\omega_{18}v_1^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24 v_1 v_2\omega_6^2 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_5 - 6\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$24 v_1 v_2\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 18\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8 - 6\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 2\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5 -$$
$$24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_5 + 6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_8\omega_5 - 18\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8 + 6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12 v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_5 + 12\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5 -$$
$$24 v_1 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24 v_1 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_5 +$$
$$12 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{11}\omega_{14}\omega_5 +$$
$$6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8\omega_5 - 12 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 + 12 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^4\omega_{20}\omega_{14}\omega_8 +$$
$$12\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_5 +$$
$$12\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_7^2 cs^4\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4\omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_6^2 v_3^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8\omega_5 +$$

$$12\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 \omega_{22}\omega_{19}\omega_{13}cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8 - 18\omega_{18}\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 24v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{20}\omega_{11}\omega_5 +$$
$$12\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}v_1^2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 6\omega_{18}v_1^2\omega_6^3 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4 \omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1 v_2\omega_6^3 \omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_1^2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 -$$
$$12\omega_{18}\omega_6^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^2 \omega_{22}\omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1^2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_7 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_5 - 12\omega_{18}v_1^2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 -$$
$$12\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_6^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 \omega_{22}\omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{14}\omega_8 +$$
$$6\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 24v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - \omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_7^2 cs^4 \omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$12v_1^2\omega_6^3 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{11}\omega_{14}\omega_5 + 12v_1^2\omega_6^2 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8 - 24\omega_{18}v_1 v_2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12v_1^2\omega_6^3 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 24v_1 v_2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{11}\omega_5 -$$
$$12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{14}\omega_8\omega_5 + 24v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 - 24v_1 v_2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8 + 12\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{11}\omega_{14}\omega_5 +$$
$$12\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{13}\omega_7 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12v_1^2\omega_6^2 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_5 -$$
$$12\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 cs^4 \omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^2 \omega_{22}\omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_5 -$$
$$24v_1 v_2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_6^2 \omega_{22}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8 +$$
$$24v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$6\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 12v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_7 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8 -$$
$$12\omega_{18}v_1^2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_8\omega_5 - 24v_1 v_2\omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 6\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12v_1^2\omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{11}\omega_{14}\omega_5 + 12v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{14}\omega_8\omega_5 + 6\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 6\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_{13}cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 12\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{14}\omega_8 -$$
$$6\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{11}\omega_{14}\omega_8\omega_5 + 24v_1 v_2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 12\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^4 \omega_{11}\omega_{14}\omega_5 -$$
$$12\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 6\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}\omega_6^2 \omega_{22}\omega_{19}\omega_7 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 + 24v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{11}\omega_{14}\omega_5 +$$
$$24\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{11}\omega_{14}\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$24\omega_{18}v_1 v_2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2 \omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$24\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^4 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1 v_2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 +$$
$$12\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_5 -$$
$$12\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{14}\omega_8\omega_5 - 12\omega_{18}v_1^2\omega_6^3 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$6\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{13}\omega_7 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 12\omega_{18}v_1^2\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_5 - 6\omega_{18}v_1^2\omega_6^3 \omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$$
$$12\omega_6^2 v_3^2 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 24\omega_{18}v_1 v_2\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_7 \omega_{11}\omega_{14}\omega_8\omega_5\Big)\dfrac{\rho}{12\omega_{18}\omega_6^3 \omega_{22}\omega_{19}\omega_{13}\omega_7^2 \omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5}$$

$$C^{(3),CuLBM1}_{D_x^2 D_y D_z v_2} = \big(-12\omega_1\omega_3^3 + 12\omega_3\omega_{13}\omega_1\omega_2 - 6\omega_3\omega_{13}\omega_2^3 - 24\omega_3^2\omega_{13}\omega_1 + 12\omega_{13}\omega_2^3 + 24\omega_3\omega_1\omega_2^3 - 12\omega_3^2\omega_2^2 - 6\omega_3\omega_{13}\omega_1\omega_2 + 12\omega_2^3\omega_2^3 - 12\omega_3\omega_1\omega_2^2 +$$
$$24\omega_3^2\omega_{13}\omega_1\omega_2 + 12\omega_3^2\omega_{13}\omega_2 - 12\omega_3\omega_2^3 - 12\omega_3^2\omega_1\omega_2^2 + 12\omega_3^2\omega_1\omega_2^2 - 2\omega_3^2\omega_{13}\omega_2^3 - \omega_3^2\omega_{13}\omega_1\omega_2^2 - 2\omega_3^2\omega_{13}\omega_1\omega_2^2 - 6\omega_3^2\omega_{13}\omega_2^2\big)\dfrac{\rho cs^4}{12\omega_3^2\omega_{13}\omega_1\omega_2^3}$$

$$C^{(3),CuLBM2}_{D_x^2 D_y D_z v_2} = \big(-468 cs^2 v_2^2 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^3 - 36 v_1^2 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^2 - 288 v_1^2 v_2^2 \omega_3\omega_4^2 \omega_1\omega_5\omega_2^2 + 12 v_1^4 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^2 - 8\omega_3^2 \omega_4^2 \omega_1\omega_5\omega_2^2 +$$
$$36 v_1^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 - 16 cs^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2^2 - 180 v_1^2 v_2^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2 + 160 cs^4 \omega_3\omega_4^2 \omega_1\omega_5\omega_2^2 - 8\omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2 - 56 cs^4 \omega_3^2 \omega_4^2 \omega_1\omega_5\omega_2^2 +$$
$$36 cs^2 \omega_3^2 \omega_4^2 \omega_1\omega_5\omega_2^3 + 36 v_1^4 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 - 28 cs^4 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2 + 24 v_2^2 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2 - 54 v_1^2 \omega_3\omega_4\omega_4\omega_1\omega_5\omega_2^3 - 18 v_1^4 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^2 -$$
$$84 v_1^2 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^2 - 162 cs^2 v_2^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 + 132 cs^2 v_2^2 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^2 - 24 v_1^2 cs^2 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^2 - 27 cs^2 v_3^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 - 160 cs^2 \omega_3\omega_4^2 \omega_1\omega_5\omega_2^2 -$$
$$88 cs^2 \omega_3^2 \omega_4\omega_4\omega_5\omega_2^2 + 36 v_1^4 \omega_3\omega_4\omega_4\omega_1^2 \omega_5\omega_2^2 - 180 v_1^2 v_2^2 \omega_3\omega_4^2 \omega_1\omega_5\omega_2^2 - 12 v_1^2 \omega_3\omega_4\omega_4\omega_1\omega_5\omega_2^2 - 36 v_1^4 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 - 108 v_1^2 cs^2 \omega_3^2 \omega_4\omega_1\omega_5\omega_2^3 -$$
$$8\omega_3^2 \omega_4^2 \omega_1\omega_5\omega_2^2 + 16 cs^4 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2 + 264 cs^2 v_2^2 \omega_3\omega_4^2 \omega_1^2 \omega_5\omega_2^2 - 288 cs^4 \omega_3^2 \omega_4^2 \omega_1\omega_2^3 + 264 v_1^2 cs^2 \omega_3^2 \omega_4^2 \omega_1\omega_5 - 6 cs^2 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_5\omega_2^2 -$$
$$36 v_1^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 + 54 v_1^4 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^3 + 8\omega_3^2 \omega_4^2 \omega_5\omega_2^3 + 36 cs^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2 + 18 v_1^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 - 36 v_1^2 \omega_3\omega_4^2 \omega_4^2 \omega_1^3 \omega_5\omega_2 + 64 cs^2 \omega_3^2 \omega_4^2 \omega_1\omega_5\omega_2^2 +$$
$$8 cs^4 \omega_3^2 \omega_4^2 \omega_1\omega_5\omega_2^2 + 152 cs^4 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2 + 6 cs^2 v_3^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2 + 24 v_1^4 \omega_3\omega_4^2 \omega_1\omega_5\omega_2^2 - 288 cs^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^3 + 54 v_1^2 \omega_3\omega_4^3 \omega_1^3 \omega_5\omega_2^3 - 4 cs^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2^2 -$$
$$6 cs^4 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2^2 - 2 v_3^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2^2 - 96 v_1^4 \omega_3\omega_4^2 \omega_5\omega_2^3 - 72 v_1^2 cs^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2^2 - 108 v_1^2 cs^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 + 36 v_1^4 \omega_3\omega_4\omega_4\omega_1\omega_5\omega_2^2 -$$
$$36 v_1^4 \omega_4^2 \omega_4^3 \omega_1^3 \omega_5\omega_2^2 + 108 v_1^2 cs^2 \omega_3^2 \omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 + 48 v_1^2 cs^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_5\omega_2 - 54 v_1^4 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2^2 + 9 v_3^2 \omega_3\omega_4\omega_4\omega_1^3 \omega_5\omega_2^2 + 324 v_1^2 cs^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_5\omega_2^2 -$$
$$72 cs^4 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2^2 - 72 cs^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2^3 + 36 v_1^2 \omega_4^2 \omega_4^3 \omega_1^3 \omega_5\omega_2^2 + 24 v_1^2 \omega_3\omega_4^2 \omega_5\omega_2^3 + 240 cs^2 v_2^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2^3 + 108 v_1^2 cs^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2^2 + 54 v_1^4 \omega_3^2 \omega_4^3 \omega_1^3 \omega_5\omega_2^2 +$$
$$144 v_1^2 v_2^2 \omega_3^2 \omega_4\omega_4\omega_1^3 \omega_5 - 36 v_1^2 \omega_3\omega_4\omega_4\omega_1\omega_5\omega_2^2 - 24 v_2^2 \omega_3\omega_4^2 \omega_5\omega_2^2 - 648 cs^2 v_2^2 \omega_3\omega_4\omega_4\omega_1\omega_5\omega_2^2 - 216 v_1^2 cs^2 \omega_4^2 \omega_1^3 \omega_5\omega_2^2 + 2 v_3^2 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2^2 +$$
$$288 cs^4 \omega_3^2 \omega_4\omega_4\omega_1^2 \omega_5\omega_2^3 + 4 cs^4 \omega_3^2 \omega_4^2 \omega_1^3 \omega_5\omega_2^2 - 48 v_2^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_5\omega_2^2 - 96 cs^2 v_2^2 \omega_3\omega_4^2 \omega_1^3 \omega_5\omega_2 - 54 v_1^4 \omega_4^2 \omega_4^3 \omega_1^3 \omega_5\omega_2^2 + 72 cs^2 \omega_3\omega_4^2 \omega_4^3 \omega_1^3 \omega_5\omega_2^2 +$$

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$$72cs^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 - 9v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 + 108v_1^2cs^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 - 60v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 180v_1^2cs^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 + 18v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 +$$
$$36v_1^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^2 + 64cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 144v_1^4\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 + 288cs^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 24cs^2v_2^2\omega_3^2\omega_4\omega_1^3\omega_5 - 96v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5 +$$
$$27cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 72cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 348v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 180cs^2v_2^2\omega_3\omega_4^3\omega_1\omega_5\omega_2^2 + 48v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5 -$$
$$36v_1^2\omega_3\omega_4\omega_1^2\omega_5\omega_2^2 - 54v_1^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 - 72v_1^2\omega_3\omega_4^3\omega_1^3\omega_5\omega_2^2 - 24v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 - 72v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 6cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 -$$
$$288cs^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 24v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 6cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 + 648cs^2v_2^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 - 18v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 36v_1^4\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^2 +$$
$$24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 144v_1^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 - 56cs^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 + 36v_1^4\omega_3\omega_4\omega_1^2\omega_5\omega_2^3 + 54v_1^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 + 300v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 -$$
$$24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5 + 72v_1^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 + 216v_1^2v_2^2\omega_3^2\omega_4^2\omega_5\omega_2^3 + 162cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 72v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 -$$
$$24v_1^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 112cs^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 + 72v_1^4\omega_4^2\omega_1^3\omega_5\omega_2^3 - 216cs^4\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^3 - 12v_1^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 + 360v_1^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 -$$
$$108v_1^2cs^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^2 + 16\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 288cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 336cs^2v_2^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 + 162v_1^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^3 + 2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 -$$
$$168cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 9v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 72v_1^4\omega_4^2\omega_1^3\omega_5\omega_2^2 + 108v_1^2cs^2\omega_3\omega_4\omega_1^2\omega_5\omega_2^3 + 108v_1^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 72v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 +$$
$$180v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 - 12cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 56cs^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 4cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 132v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 72cs^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 -$$
$$162v_1^2cs^2\omega_3^2\omega_1^3\omega_5\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3\omega_5 + 12v_1^4\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 + 108v_1^4\omega_3^2\omega_1^3\omega_5\omega_2^3 + 60v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 216v_1^2cs^2\omega_4^2\omega_1\omega_5\omega_2^3 + 32cs^4\omega_3^2\omega_4^2\omega_1^3\omega_5 +$$
$$48cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 + 24v_1^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 + 112cs^4\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 + 216cs^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^3 - 72cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 28cs^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 +$$
$$72cs^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 72v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 108v_1^2\omega_3^2\omega_1^3\omega_5\omega_2^2 - 216v_1^2cs^2\omega_3^2\omega_4\omega_5\omega_2^3 - 48v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 108v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 +$$
$$24v_1^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 - 2v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 - 108v_1^2cs^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 9v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 40cs^2\omega_3^2\omega_4^2\omega_1^3\omega_5 - 120cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3)\dfrac{\rho}{72\omega_3^3\omega_4^2\omega_1^3\omega_5\omega_2^3}$$

coefficient $C^{(3)}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3}$ **at** $\dfrac{\partial^4 v_3}{\partial x_1^2 \partial x_2 \partial x_3}$ **:**

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3} = (v_1 v_2^2\omega^3 + 14v_1^2 v_2\omega^2 + 14v_2 cs^2\omega^2 - v_1^2 v_2\omega^3 - 14v_1 v_2^2\omega^2 - v_2 cs^2\omega^3 + 36v_1 v_2^2\omega - 24v_1 v_2^2 - 36v_2 cs^2\omega + 24v_2 cs^2 - 36v_1^2 v_2\omega - 14v_1 cs^2\omega^2 - 24v_1 cs^2 + v_1 cs^2\omega^3 + 36v_1 cs^2\omega + 24v_1^2 v_2)\dfrac{\rho v_3}{\omega^3}$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3} = (-12\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 -$

$4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8\omega_5 + 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$4v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 -$

$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$

$4\omega_{18}v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 12\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_5 -$

$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$

$2\omega_{18}^2 v_2\omega_6^3\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 + 8\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 - 4\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$

$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 + 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$

$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 +$

$4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}^2 v_1\omega_6^2\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 2\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 -$

$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$

$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 + 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8\omega_5 +$

$4\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 14\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 -$

$4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 +$

$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$

$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8\omega_5 +$

$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$

$4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 -$

$12\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - 8\omega_{18}^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$

$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_5 + 8\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 -$

$12\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 - 2\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 -$

$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 +$

$2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_8\omega_5 -$

$4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8\omega_5 + 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$

$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$

$$4\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}^2\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 8\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 +$$
$$4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_2\omega_6^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$9\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^6\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1 v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7 cs^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$4 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$6\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 -$$
$$8\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1\omega_6^6\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5\bigg)\frac{\rho v_3}{2\omega_{18}^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5}$$

$C^{(3),\text{MRT2}}_{\text{D}_x^2\text{D}_y\text{D}_z v_3} = \big(-4v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 -$

$$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 - 4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 4\omega_{18}v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{20}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 +$$
$$4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 +$$
$$2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 cs^2 - 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 - 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 +$$
$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 6\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}v_1^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 +$$
$$4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 2\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2 cs^2 -$$
$$4\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}v_1 v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6^6\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 +$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_1\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$12\omega_{18}v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8\omega_5 + 4\omega_{18}v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - \omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1\omega_6^6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_5 cs^2 -$$
$$4\omega_{18}v_1 v_2^2\omega_6^3\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 -$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 8\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 9\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 -$$
$$2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 8\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8 cs^2 - 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$

$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$8\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 8\omega_{18}^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1^2\omega_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 14\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 4\omega_{18}^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_1\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 12\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 8\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 + 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8\omega_5 cs^2 - 2\omega_{18}^2 v_1\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1^2\omega_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18} v_1\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$12\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8\omega_5 -$$
$$4\omega_{18} v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18} v_1 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18} v_1\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18} v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 - 4\omega_{18} v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 -$$
$$2\omega_{18} v_1 v_2^2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18} v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4\omega_{18} v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 4\omega_{18} v_1\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18} v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18} v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 + 4 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2 v_1 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 + 2\omega_{18}^2 v_1\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8 cs^2 + 12\omega_{18}^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18} v_2\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$4\omega_{18} v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18} v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2 v_1^2\omega_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18}^2 v_1 v_2^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2 cs^2 +$$
$$2\omega_{18}^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8 cs^2 - 4\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_1^2 v_2\omega_6^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 - 4\omega_{18} v_1\omega_6^3\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 +$$
$$4\omega_{18} v_1 v_2^2\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}\omega_{14}\omega_8^2\omega_5 - 2\omega_{18}^2 v_2\omega_6^3\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2 v_2\omega_6^2\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5 cs^2 -$$
$$4\omega_{18} v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 2\omega_{18}^2 v_1\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 cs^2 + 2\omega_{18}^2 v_1^2 v_2\omega_6^3\omega_{22}\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8\omega_5 +$$
$$4\omega_{18}^2 v_1\omega_6^2\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2) \frac{\rho v_3}{2\omega_{18}^2\omega_6^3\omega_{22}\omega_{19}\omega_{13}\omega_7^2\omega_{20}\omega_{11}^2\omega_{14}\omega_8^2\omega_5}$$

$C^{(3),\text{CLBM1}}_{\text{D}_x^2 \text{D}_y \text{D}_z v_3} = (-\omega_{18} v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} +$
$\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - \omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} + 2\omega_{18} v_1 v_2^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18} v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2 v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18} v_1 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2 v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1^2 v_2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 +$
$2\omega_{18} v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18} v_1 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18} v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 -$
$2\omega_{18} v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18} v_1 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 -$
$\omega_{18} v_2\omega_6 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2 v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2 v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 -$
$2 v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2 v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2 v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} + 2 v_1^2 v_2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2 v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2 v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_2 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_1 v_2^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18} v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2 v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$
$2 v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2 v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} + \omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2 v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2 v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} +$
$\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18} v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} +$
$2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} - 2\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + \omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$
$\omega_{18} v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$
$\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18} v_1^2 v_2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2 v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 +$
$\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 -$
$\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + \omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2 v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} -$
$\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - 2 v_1 v_2^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$
$2\omega_{18} v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18} v_1\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2 v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 +$
$2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 -$
$2 v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18} v_1 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18} v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18} v_1\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 -$
$\omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2 v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18} v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18} v_2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$

$\omega_{18}v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 + 2v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} - 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} -$
$2\omega_{18}v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - 2\omega_{18}v_1\omega_6 cs^2\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 -$
$2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$
$\omega_{18}v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$
$\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} -$
$2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_1 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 +$
$2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2v_1\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_2\omega_6 cs^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2 cs^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 -$
$2v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_2\omega_6 cs^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1 v_2^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8)\dfrac{\rho v_3}{\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8}$

$\color{green}C^{(3),\text{CLBM2}}_{D_x^2 D_y D_z v_3} = (-2\omega_{18}v_2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} - \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} -$
$2\omega_{18}v_2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 -$
$2v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 -$
$\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14} +$
$2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2v_1\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2v_1\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11} - \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$
$2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 +$
$2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14} + 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14} + 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 +$
$2\omega_{18}v_2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14} - 2v_1\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} +$
$2v_1^2 v_2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_1\omega_9\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{22}\omega_{13} cs^2\omega_{11}\omega_{14}\omega_8 +$
$2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + 2v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14} - 2\omega_{18}v_2\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1\omega_6\omega_{22}\omega_{13}\omega_7 cs^2\omega_{14}\omega_8 - 2v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14} +$
$\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11} + 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_1\omega_{22}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11} - 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 +$
$\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - 2v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11} -$
$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 -$
$2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - 2\omega_{18}v_1^2 v_2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18}v_1\omega_1\omega_9\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 - 2v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 +$
$2v_2\omega_6\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$2v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1\omega_6\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{14}\omega_8 - 2v_1 v_2^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2\omega_6\omega_{22}\omega_{13}\omega_7 cs^2\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} - 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 +$
$2\omega_{18}v_1\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14} -$
$2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 - 2v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 - \omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 -$
$2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{14}\omega_8 - 2v_2\omega_6\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14} + 2v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11} - 2\omega_{18}v_1\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11} - 2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{14}\omega_8 -$
$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{11}\omega_{14}\omega_8 + 2v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11} - \omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1 v_2\omega_6\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1\omega_9\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11} + 2v_2\omega_6\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} +$
$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_1\omega_6\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$2v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_8 + 2v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{14}\omega_8 - \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 -$
$\omega_{18}v_1\omega_6\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14} +$
$2\omega_{18}v_1\omega_{22}\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14} - \omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_{20}\omega_{11}\omega_{14} -$
$\omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6\omega_{22}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 +$
$\omega_{18}v_1\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - \omega_{18}v_2\omega_{22}\omega_{19}\omega_{13} cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + 2v_1\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14} + \omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 -$
$2\omega_{18}v_2\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{11}\omega_{14} - \omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_1 v_2^2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14} + \omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{14}\omega_8 -$
$\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11} + 2\omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{20}\omega_{11}\omega_{14} -$
$\omega_{18}v_1^2 v_2\omega_6\omega_{22}\omega_{13}\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1^2 v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 - 2v_1^2 v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + 2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7 cs^2\omega_{14}\omega_8 +$

$2\omega_{18}v_1\omega_6\omega_{22}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{11}\omega_{14} - \omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 -$
$2v_1\omega_6\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{14}\omega_8 - 2v_1^2v_2\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}cs^2\omega_{11}\omega_{14} - 2\omega_{18}v_1\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14} -$
$2\omega_{18}v_1^2v_2\omega_6\omega_{22}\omega_{13}\omega_7\omega_{11}\omega_{14}\omega_8 + \omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2\omega_{18}v_2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}\omega_{14}\omega_8 -$
$2\omega_{18}v_1v_2^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 + 2v_1^2v_2\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8 - 2\omega_{18}v_2\omega_{19}\omega_{13}\omega_7cs^2\omega_{20}\omega_{11}\omega_{14}\omega_8)\frac{\rho v_3}{\omega_{18}\omega_6\omega_{22}\omega_{19}\omega_{13}\omega_7\omega_{20}\omega_{11}\omega_{14}\omega_8}$

$C^{(3),\text{CuLBM1}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3} = 0$

$C^{(3),\text{CuLBM2}}_{\mathrm{D}_x^2\mathrm{D}_y\mathrm{D}_z v_3} = (27cs^2\omega_3\omega_1\omega_2 - 9\omega_3\omega_1\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 - 2\omega_3\omega_4\omega_1 - 2v_2^2\omega_3\omega_4\omega_2 + 6cs^2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 - 27cs^2\omega_4\omega_1\omega_2 + 9v_2^2\omega_3\omega_1\omega_2 -$
$6cs^2\omega_3\omega_4\omega_2 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2)\frac{\rho v_2 v_3}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C^{(3)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1\partial x_2^2\partial x_3}$:

$C^{(3),\text{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = (24v_1v_2^2cs^2 - 14v_2^2v_3cs^2\omega^2 + 36v_1^2v_2^2v_3\omega + 14v_1v_2^2v_3^2\omega^2 - 14v_1^2v_3cs^2\omega^2 + v_2^2v_3cs^2\omega^3 - v_1v_2^2v_3^2\omega^3 + v_1^2v_3cs^2\omega^3 - 36v_1v_3^2cs^2\omega +$
$v_1^2v_2^2v_3\omega^3 - 24v_1^2v_2^2v_3 + 14v_1v_3^2cs^2\omega^2 + 24v_1v_3^2cs^2 - v_1v_3^2cs^2\omega^3 - 14v_1^2v_2^2v_3\omega^2 + 36v_1^2v_3cs^2\omega - 36v_1v_2^2v_3\omega - 24v_1^2v_3cs^2 + 36v_2^2v_3cs^2\omega -$
$36v_1v_2^2cs^2\omega - v_1v_2^2cs^2\omega^3 + 24v_1v_2^2v_3^2 + 14v_1v_2^2cs^2\omega^2 - 24v_2^2v_3cs^2)\frac{1}{2\omega^3}$

$C^{(3),\text{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho} = (\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 -$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2v_1^2v_2^2\omega_6^2\omega_{13}\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 -$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 +$
$\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8^2 +$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 -$
$2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 -$
$8\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 -$
$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 +$
$2v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 + v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 +$
$2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 -$
$2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 +$
$4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8^2 +$
$2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 - 4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11} +$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 -$
$8\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + 2v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 -$
$\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 8\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + 2v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1v_2^2\omega_6^2\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 +$
$4\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 +$
$v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 8\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 -$
$2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 -$

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$$2v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_1 v_2^2\omega_6^2\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 +$$
$$4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 +$$
$$2\omega_{18}v_1\omega_6^2 v_3^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 +$$
$$2\omega_{18}v_2^2\omega_6^2 v_3\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 -$$
$$\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$$
$$\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 - v_1 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1 v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 -$$
$$\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2 v_3\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_8^2 + 4\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 + v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - \omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 -$$
$$v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1^2 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6^2 v_3\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 +$$
$$\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + 12\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11} + 2v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1^2\omega_6^2 v_3\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_1\omega_6^2 v_3^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6^2 v_3^2\omega_{16}\omega_7^2 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 +$$
$$\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2v_1^2 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$$
$$\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8) \; \dfrac{1}{2\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2}$$

$C^{(3),\text{MRT2}}_{\text{D}_x\text{D}_y^2\text{D}_z\rho} = (2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 cs^2 - v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2 + \omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 cs^2 -$

$2v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + 4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}cs^4 + 2v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 cs^2 -$

$2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 + v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 -$

$2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + 2\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 cs^2 - \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 cs^2 +$

$\omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 + \omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 +$

$2\omega_{18}v_1 v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 + 8\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^4 - 2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_1\omega_6^2 v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 cs^2 + 2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 cs^2 -$

$v_1 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 cs^2 -$

$2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2 cs^2 + 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 + 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 cs^2 -$

$2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 cs^2 + 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 cs^2 +$

$2\omega_{18}v_1^2 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2 - 2\omega_{18}v_1 v_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 -$

$v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2 + 2\omega_{18}v_1 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 cs^2 -$

$2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 - \omega_{18}v_2^2\omega_6^2 v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 + 2v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 cs^2 +$

$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1v_2^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 - \omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1\omega_6^2v_3^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 -$$
$$\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 - 2\omega_{18}v_2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 +$$
$$2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 -$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 - 8\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 -$$
$$2\omega_{18}v_1^2v_2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 + \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2cs^2 + 2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 -$$
$$\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + 4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_1^2v_2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 -$$
$$\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1v_2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 8\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 -$$
$$2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - \omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 +$$
$$\omega_{18}v_1^2v_2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 + 2v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 -$$
$$2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + \omega_{18}v_1\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 12\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^4 +$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 +$$
$$4\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}cs^4 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 -$$
$$\omega_{18}v_1v_2^2\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 - \omega_{18}v_2^2\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - \omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2v_2^2\omega_6^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 8\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 -$$
$$4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}cs^4 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 -$$
$$2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8cs^2 + \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 -$$
$$2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 - v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 +$$
$$\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 - \omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 - 4\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^4 + v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 +$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - \omega_{18}v_2^2v_3\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 +$$
$$v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 4\omega_{18}v_1\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 +$$
$$2\omega_{18}v_2^2\omega_6^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$

$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^4 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 + 2v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 +$$
$$\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 - \omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 +$$
$$2\omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 - \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 -$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + 2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 +$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2v_1^2v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 + \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$$
$$\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$$
$$\omega_{18}v_1v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2)\frac{1}{2\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2}$$

$C^{(3),\text{CLBM1}}_{\text{D}_x\text{D}_y^2\text{D}_z\rho} = (2\omega_{18}v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$v_1v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$
$2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$
$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - \omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 -$
$2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 +$
$\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$
$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$
$2\omega_{18}v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$
$\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$
$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 -$
$\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} -$
$v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 +$
$\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + \omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 +$
$2\omega_{18}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$2v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 -$
$\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$
$2v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$
$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + \omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$
$\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$
$\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$
$2\omega_{18}v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$
$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + \omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$
$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$
$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$
$\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 -$
$\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 -$
$\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$
$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 +$
$2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} -$
$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$
$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$
$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$

$$2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} + 2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17} - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11} - \omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$$
$$2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} -$$
$$\omega_{18}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$2v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} +$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} +$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$2v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_1v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_2^2cs^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6cs^2v_3^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8)\dfrac{1}{2\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8}$$

$C_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z\rho}^{(3),\mathrm{CLBM2}} = (2\omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$2v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} -$

$\omega_{18}v_1v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$

$\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6\omega_{16}cs^2\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_3^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} +$

$2\omega_{18}v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$

$2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 -$

$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 - v_1v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11} -$

$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 +$

$2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_3\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$

$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} +$

$2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_8 -$

$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$

$2v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$2v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$

$2v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 +$

$2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} - 2v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} -$

$$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 -$$
$$2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} +$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_1^2\omega_6v_3\omega_{19}v_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1v_2^2\omega_6\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} -$$
$$\omega_{18}v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 -$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} +$$
$$\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} +$$
$$v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_2^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - \omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} -$$
$$\omega_{18}v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 +$$
$$v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6v_3\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2v_1v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$

$2v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{11} -$
$\omega_{18}v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$
$2\omega_{18}v_1 v_2^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2v_1 v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8) \frac{1}{2\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8}$

$C_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z \rho}^{(3),\mathrm{CuLBM2}} = (-216 cs^4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 96 v_2^2\omega_3^2\omega_4^2\omega_2^3 - 324 cs^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3 - 104 cs^2\omega_3^2\omega_4^2\omega_1^3 - 81 cs^4\omega_3\omega_4^2\omega_1^3\omega_2^3 -$
$40 v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 - 10 v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 108 cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 72 cs^4\omega_4^2\omega_1^3\omega_2^2 + 128 cs^2\omega_3^2\omega_4\omega_1\omega_2^2 + 108 v_1^2 cs^2\omega_3^2\omega_1^2\omega_2^3 +$
$432 cs^2 v_2^2\omega_3^2\omega_4^2\omega_2^3 - 8 v_1^2\omega_3^2\omega_4^2\omega_2^3 - 24 v_1^2 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 27 cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 32 v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 48 v_2^4\omega_3^2\omega_4^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2^3 + 54 cs^2\omega_3^2\omega_1^3\omega_2^3 +$
$144 cs^4\omega_3^2\omega_4^2\omega_2^3 - 24 cs^4\omega_3^2\omega_4^2\omega_1\omega_2^3 + 162 cs^4\omega_4^2\omega_1^3\omega_2^3 + 64 cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8 cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 54 v_1^2 cs^2\omega_3^3\omega_1^3\omega_2^3 - 108 cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 -$
$60 v_1^2 v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 27 cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 - 432 cs^2 v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 8 v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 8 v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 324 cs^4\omega_3\omega_4^2\omega_1^2\omega_2^3 - 24 cs^4\omega_3\omega_4^2\omega_1^3\omega_2 +$
$96 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 81 cs^4\omega_3^2\omega_4\omega_1^3\omega_2^3 - 36 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 432 cs^2 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 32 v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^3 - 252 cs^4\omega_4^2\omega_1^2\omega_2^3 + 8 v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^2 -$
$64 cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 72 v_1^2 v_2^2\omega_3^2\omega_4^2\omega_2^3 + 120 v_1^2 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 108 cs^2\omega_3^2\omega_1^2\omega_2^3 - 56 v_1^2 cs^2\omega_3\omega_4^2\omega_1\omega_2^3 + 96 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 10 v_1^2 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 +$
$192 cs^4\omega_3\omega_4^2\omega_1^2\omega_2^2 - 84 v_1^2 cs^2\omega_4^2\omega_1^3\omega_2^2 + 144 cs^4\omega_3^2\omega_4^2\omega_1^3 - 36 v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 80 cs^2\omega_3^2\omega_4^2\omega_1\omega_2 - 16 v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 864 cs^2 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 +$
$24 v_2^4\omega_3^2\omega_4^2\omega_2^3 - 96 v_1^2 v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 - 8 v_1^2 cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 72 cs^4\omega_3^2\omega_4^2\omega_1\omega_2 + 108 v_1^2 cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 96 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 + 27 v_1^2 cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 -$
$8\omega_3^2\omega_4^2\omega_1^2\omega_2 + 24 cs^2\omega_4^2\omega_1^3\omega_2^2 - 162 cs^4\omega_3^3\omega_1^3\omega_2^3 + 56 cs^2\omega_3\omega_4^2\omega_1\omega_2^3 - 104 cs^2\omega_3^2\omega_4^2\omega_2^3 - 60 v_1^2 v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 8\omega_3^2\omega_4^2\omega_2^3 - 10 cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 +$
$72 v_2^4\omega_3^2\omega_4^2\omega_1\omega_2^2 + 8 v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 432 cs^2 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 96 v_2^2\omega_3^2\omega_4^2\omega_1^3 + 432 cs^2 v_2^2\omega_3^2\omega_4^2\omega_1^3 - 8 v_1^2\omega_3^2\omega_4^2\omega_1^3 - 54 cs^2\omega_4^2\omega_1^3\omega_2^3 -$
$168 cs^4\omega_3^2\omega_4\omega_1\omega_2^3 + 64 v_1^2 cs^2\omega_3\omega_4^2\omega_1^2\omega_2 - 192 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 30 cs^4\omega_3^2\omega_4^2\omega_1\omega_2 - 108 v_1^2 cs^2\omega_3\omega_4\omega_1^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2 + 48 v_1^2 v_2^2\omega_3^2\omega_4^2\omega_1^3 -$
$56 v_1^2 cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 30 cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 96 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 27 cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 168 cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 32 v_1^2 cs^2\omega_3^2\omega_4^2\omega_2^3 + 112 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 -$
$72 v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 54 v_1^2 cs^2\omega_4^2\omega_1^3\omega_2^3 + 10 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 192 cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 84 cs^2\omega_4^2\omega_1^3\omega_2 + 8 v_1^2 cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1^2\omega_2 -$
$176 cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 432 cs^2 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 + 8 v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 - 24 v_1^2 cs^2\omega_4^2\omega_1^3\omega_2^2 + 324 cs^4\omega_3^2\omega_1^2\omega_2^3) \frac{v_1}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_1}^{(3)}$ **at** $\frac{\partial^4 v_1}{\partial x_1 \partial x_2^2 \partial x_3}$:

$C_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_1}^{(3),\mathrm{SRT}} = (-216 v_3^2 cs^2\omega - 6 v_2^2 v_3^2\omega^3 + 84 v_2^2 v_3^2\omega^2 - 216 v_2^2 v_3^2\omega - 6 v_3^2 cs^2\omega^3 + 84 v_3^2 cs^2\omega^2 + 144 v_2^2 v_3^2 - 168 v_1 v_3 cs^2\omega^2 - 288 v_1 v_2^2 v_3 -$
$cs^4\omega^3 + 432 v_1 v_2^2 v_3\omega + 144 v_2^2 cs^2 - 216 v_2^2 cs^2\omega - 16 cs^4\omega^2 + 12 v_1 v_3 cs^2\omega^3 - 288 v_1 v_3 cs^2 + 144 v_3^2 cs^2 + 84 v_2^2 cs^2\omega^2 + 12 v_1 v_2^2 v_3\omega^3 + 54 cs^4\omega -$
$36 cs^4 + 432 v_1 v_3 cs^2\omega - 6 v_2^2 cs^2\omega^3 - 168 v_1 v_2^2 v_3\omega^2) \frac{\rho}{12\omega^3}$

$C_{\mathrm{D}_x \mathrm{D}_y^2 \mathrm{D}_z v_1}^{(3),\mathrm{MRT1}} = (-24\omega_{18}v_1\omega_6^3 v_3\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$
$12\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 12 v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$
$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8\omega_5^2 +$
$12\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 18\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 24\omega_{18}\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 +$
$12\omega_{18}\omega_6^3 v_3^2\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$
$12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_8^2\omega_5 -$
$24 v_1 v_2^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$24\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 -$
$12\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$
$12\omega_{18}v_1\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$
$12\omega_{18}\omega_6^3\omega_{19}\omega_2^2\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 24 v_1\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12 v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2\omega_5^2 +$
$12\omega_{18}\omega_6\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$
$24\omega_{18}v_1\omega_6^3 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 -$
$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}v_3^2\omega_6^3 v_3^2\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$6 v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12 v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24 v_1\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$
$12\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11} + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 -$
$12\omega_{18}\omega_6^3\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 24\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2 -$
$18\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_6^3 v_3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 +$
$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24 v_1\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$
$6\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_6^3 v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2\omega_5^2 +$
$6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 18\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 -$
$6\omega_{18}v_2^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}v_2^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 +$
$24\omega_{18}v_1\omega_6^3 v_3\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 24\omega_{18}v_1\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$6\omega_{18}\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2 + 24\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 -$
$12\omega_{18}\omega_6^3 v_3^2\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2 -$
$12\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$
$12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 +$
$12\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 6\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$
$12\omega_{18}v_2^2\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2 + 6\omega_{18}v_2^2\omega_6^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$
$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{19}\omega_2^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$
$24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_{16}\omega_7^3 cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{18}v_1 v_2^2\omega_6^3 v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$

$$24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2\omega_5^2 +$$
$$12v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}\omega_6^2\omega_{19}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_5^2 + 12\omega_{18}v_2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 +$$
$$12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12v_1v_2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}v_2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 60\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_2^2\omega_6\omega_{19}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$$
$$12v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2 - 12v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$2\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3\omega_{19}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8\omega_5^2 -$$
$$60\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}v_2^2\omega_6^3v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^3\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2 +$$
$$6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{19}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_5^2 +$$
$$24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 6v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$18\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 - 12v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 42\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - \omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 18\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2 - 6\omega_{18}v_2\omega_6^3\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6\omega_6\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 48\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_5^2 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 - 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8\omega_5^2 -$$
$$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{17}\omega_8^2\omega_5^2 +$$
$$10\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^3\omega_6^3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_5^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$36\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$36\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$36\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^3\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{20}\omega_{17}\omega_8^2\omega_5 + 24v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 -$$

$$12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2)\frac{\rho}{12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2}$$

$C^{(3),\text{MRT2}}_{D_x D_y^2 D_z v_1} = (-18\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$12\omega_{18}\omega_6^3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 + 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$

$24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 -$

$24\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5cs^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 -$

$18\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 + 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2cs^2 -$

$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 -$

$24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5^2cs^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$36\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 - 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 +$

$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^4 - 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_7^2\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$

$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 36\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + 12\omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 -$

$12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 +$

$24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 + 12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 - 6v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2 - 60\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 +$

$24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$

$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 + 12v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 +$

$24\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^4 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2cs^2 -$

$6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2 - 12\omega_{18}\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^4 +$

$12v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2 + 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$

$24v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_7^2\omega_5^2cs^2 - 18\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$

$6\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2cs^2 - 60\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 -$

$\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2cs^2 +$

$12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5cs^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5cs^4 + 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 -$

$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2 + 24\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^4 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 +$

$12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$

$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 + 6\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$

$6\omega_{18}v_2^3\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$

$6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 -$

$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5cs^4 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2cs^2 +$

$12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 + 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 + 6\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 -$

$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$

$12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$

$24\omega_{18}v_2^3\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$

$6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 + 12v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$12\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 - 24\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 +$

$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 + 24\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 -$

$24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$

$24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2cs^2 +$

$12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 -$

$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 - 24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 - 12v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$

$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5^2cs^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5cs^2 - 12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$

$12\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 - 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 +$

$12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$

$12\omega_{18}v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^4 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 -$

$12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2cs^4 + 12\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 -$

$12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$

$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 6\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 -$

$24v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$

$$12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2cs^4 +$$
$$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5cs^2 + 12\omega_{18}\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5cs^4 + 12v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12v_2^2\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2cs^2 +$$
$$24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 + 12v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1v_2^3\omega_6^3v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^3\omega_5^2 -$$
$$36\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5^2cs^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5^2cs^2 + 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5^2cs^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$6v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 - 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 +$$
$$12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5cs^4 - 18\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 - 12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6\omega_{18}\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 - 24\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5^2cs^2 +$$
$$18\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 -$$
$$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 12v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5cs^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 + 10\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 - 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 +$$
$$6\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5^2cs^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 +$$
$$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5cs^4 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}v_1v_2^2\omega_6^3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 +$$
$$42\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2cs^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 - 2\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 -$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5cs^4 +$$
$$12\omega_{18}v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}v_2^3\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5cs^2 +$$
$$6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 6v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 + 12\omega_{18}v_2^2\omega_6^3v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 + 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2\omega_5cs^4 +$$
$$12\omega_{18}\omega_6^3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 +$$
$$12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^4 - 12v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$24\omega_{18}v_1\omega_6^3v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 - 12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^4 + 12\omega_{18}v_2^2\omega_6^3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2cs^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5^2 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5^2 +$$
$$12\omega_{18}\omega_6^3v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 + 6\omega_{18}v_2^2\omega_6^3v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2 -$$
$$24\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8^2\omega_5^2 + 6v_2^2\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2cs^2)\dfrac{\rho}{12\omega_{18}\omega_6^3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5^2}$$

$$C_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_1}^{(3),\mathrm{CLBM1}} = (12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 - 6\omega_{18}cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 +$$
$$12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$2\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_1v_2^2\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2cs^2v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6^3v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$6v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1v_2^2\omega_6^2cs^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 + 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 -$$
$$6\omega_{18}\omega_6cs^4\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 + 24\omega_{18}v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$18\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$6v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 6v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 24\omega_{18}v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 +$$
$$12v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 +$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^4\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^4\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$6\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 - 6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 -$$
$$12\omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6cs^4\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 12\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 + 12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 10\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$

$$12\omega_{18}\omega_6 cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 - 6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$6\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_5 + 6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$24\omega_{18}v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 + 24\omega_{18}v_1v_2^2\omega_6v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 +$$
$$12\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 + 12\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - \omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$6\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$6\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 -$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12v_1\omega_6^2cs^2v_3\omega_{19}\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 -$$
$$12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6cs^4\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 +$$
$$12\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^4\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 - 24v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 6\omega_{18}\omega_6^2cs^4\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2cs^4\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$24v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 +$$
$$12v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 - 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$12\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 24v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 +$$
$$6\omega_{18}\omega_6cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$6\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12v_2^2\omega_6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2cs^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1\omega_6cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 +$$
$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$6\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 18\omega_{18}\omega_6^2cs^4\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 12\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2cs^4\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8 + 24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}\omega_6cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 +$$

$$12\omega_{18}\omega_6^2cs^2v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2cs^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1\omega_6^2cs^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_6^2cs^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5)\frac{\rho}{12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5}$$

$C^{(3),\text{CLBM2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_1} = (-12\omega_{18}\omega_6^2v_3^3\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_8 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 +$

$12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$

$6\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 18\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$24\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$

$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8\omega_5 -$

$24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{17}\omega_{11}\omega_5 -$

$12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 +$

$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}\omega_6^2\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_8 + 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_6^2\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 -$

$6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 12\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$12\omega_{18}\omega_6^2v_3^3\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$12\omega_{18}\omega_6^2v_3^3\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 -$

$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$

$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6^2\omega_{19}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$

$12\omega_{18}\omega_6^2\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$

$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 + 6\omega_{18}\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$

$24\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 18\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_{11}\omega_5 -$

$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 -$

$24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$

$12v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 18\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$12v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 + 12\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_8 -$

$6\omega_{18}\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 6v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$12\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 +$

$6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 +$

$24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}\omega_6^2\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 10\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}\omega_6\omega_{19}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$

$12\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 - 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$

$6\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 -$

$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - 6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$

$12\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{20}\omega_{11}\omega_5 + 6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 -$

$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 -$

$12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_8\omega_5 - 6\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$

$12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 +$

$12v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$12\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_6^2v_3^3\omega_{19}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 +$

$12v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$12\omega_{18}\omega_6^2v_3^3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$

$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 -$

$12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$

$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 + 12\omega_{18}\omega_6^2v_3^2\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 -$$
$$12\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_8\omega_5 + 12\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6\omega_{19}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$6v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2v_3\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 24v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 -$$
$$24v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 +$$
$$12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 6\omega_{18}\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_5 - 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_5 +$$
$$6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 +$$
$$12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_8\omega_5 +$$
$$12\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 + 12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 +$$
$$12v_2^2\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_5 + 6\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_5 + 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 6\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 - 24\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}v_2^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 12v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 2\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 24\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$24\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 + 6\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 6\omega_{18}v_2^2v_3^2\omega_{19}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5 + 6\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{23}\omega_{17}\omega_8\omega_5 -$$
$$24\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 12\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_5 - 12\omega_6^2\omega_{19}\omega_{16}\omega_7cs^4\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$12\omega_{18}\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{17}\omega_{11}\omega_5 - 12\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5)\frac{\rho}{12\omega_{18}\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5}$$

$$C^{(3),\text{CuLBM1}}_{D_x D_y^2 D_z v_1} = (12\omega_3^3\omega_2 - 12\omega_3^3\omega_1\omega_2 + 12\omega_3\omega_{13}\omega_1\omega_2 + 12\omega_3\omega_{13}\omega_2 - 6\omega_3^3\omega_{13}\omega_2 - 2\omega_3^3\omega_{13}\omega_2 - 12\omega_3^3\omega_2 + 24\omega_3\omega_{13}\omega_1\omega_2 + 24\omega_3^3\omega_1\omega_2 -$$
$$12\omega_3^3\omega_2 + 12\omega_3^3\omega_{13} - 6\omega_3^3\omega_{13}\omega_1\omega_2 - \omega_3^3\omega_{13}\omega_1\omega_2 + 12\omega_3^3\omega_1\omega_2 - 12\omega_3^3\omega_1\omega_2 - 12\omega_3^3\omega_1 - 24\omega_{13}\omega_1\omega_2 - 2\omega_3^3\omega_{13}\omega_1\omega_2 - 6\omega_3^3\omega_{13}\omega_2)\frac{\rho cs^4}{12\omega_3^3\omega_{13}\omega_1\omega_2}$$

$$C^{(3),\text{CuLBM2}}_{D_x D_y^2 D_z v_1} = (-72cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_3^3 - 108cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 - 288v_1^2v_2^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 - 8\omega_3^3\omega_4^2\omega_1\omega_5\omega_2^2 - 16cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 -$$
$$180v_1^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 + 160cs^4\omega_3\omega_4\omega_1\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 56cs^4\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 + 36cs^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 - 36v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 -$$
$$28cs^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 48v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 + 108cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 + 48cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 - 96v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 27cs^2v_2^3\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 -$$
$$160cs^2\omega_3\omega_4\omega_1\omega_5\omega_2^3 - 88cs^2\omega_3^2\omega_4\omega_5\omega_2^3 - 180v_1^2v_2^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 - 648v_1^2cs^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 16cs^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 +$$
$$108cs^2v_2\omega_3\omega_4\omega_2^2\omega_1\omega_5\omega_2^2 - 288cs^4\omega_3^2\omega_4\omega_1\omega_2^3 + 24v_1^2cs^2\omega_3^2\omega_4\omega_1^3\omega_5 + 108cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 - 60cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 + 24v_2^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 +$$
$$8\omega_3^2\omega_4\omega_5\omega_2^3 + 36cs^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 64cs^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 8cs^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 + 152cs^4\omega_3^2\omega_4^2\omega_5\omega_2^2 + 36v_2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 + 6cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 +$$
$$54v_2^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 - 288cs^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 36v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 - 36v_2^4\omega_3^2\omega_4^2\omega_5\omega_2^2 - 4cs^2\omega_3^2\omega_4^4\omega_1^3\omega_5\omega_2^2 + 18v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^3 -$$
$$162cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 - 6cs^4\omega_3^2\omega_4\omega_4^2\omega_1\omega_5\omega_2^3 - 2v_3^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 - 468v_1^2cs^2\omega_3\omega_4\omega_1\omega_5\omega_2^3 - 54v_2^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 162v_1^2cs^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^3 +$$
$$132v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 9v_3^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 - 12v_2^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 - 72cs^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 + 36v_2^4\omega_3\omega_4^2\omega_1\omega_5\omega_2^3 - 72cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 +$$
$$54v_2^4\omega_4^2\omega_1^3\omega_5\omega_2^2 - 108cs^2v_2^2\omega_4\omega_4^3\omega_1^3\omega_5\omega_2^2 - 36v_2^4\omega_3\omega_4\omega_4^3\omega_1^3\omega_5\omega_2^2 - 24v_1^2\omega_3^2\omega_4^2\omega_5\omega_2^3 - 216cs^2v_2^2\omega_3\omega_4^2\omega_5\omega_2^3 + 36v_2^4\omega_4^3\omega_1^3\omega_5\omega_2^2 + 264v_1^2cs^2\omega_3\omega_4\omega_4^2\omega_1^2\omega_5\omega_2^2 +$$
$$144v_1^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_5 + 24v_2^2\omega_3^2\omega_4^4\omega_5\omega_2^3 - 108cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 2v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 + 288cs^4\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 - 54v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 +$$
$$24v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_1^3\omega_5\omega_2^2 + 36v_2^4\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 + 4cs^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 84v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 54v_2^4\omega_3^3\omega_1^3\omega_5\omega_2^3 - 18v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^3 - 24cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2 -$$
$$96v_2^4\omega_3^2\omega_4^2\omega_5\omega_2^3 + 72cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 + 12v_2^4\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 + 72cs^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 - 36v_2^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 + 162cs^2v_2^2\omega_4^3\omega_1^3\omega_5\omega_2^2 -$$
$$36v_2^4\omega_4^2\omega_1^3\omega_5\omega_2^2 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 - 9v_3^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 + 54v_2^2\omega_3^2\omega_1^3\omega_5\omega_2^2 - 6v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 336v_1^2cs^2\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 +$$
$$64cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 72v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 108cs^2v_2^2\omega_3\omega_4\omega_1^2\omega_5\omega_2^2 + 288cs^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 + 264cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_5 - 24v_1^2\omega_3\omega_4^2\omega_1\omega_5 +$$
$$24v_2^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 27cs^2v_2^3\omega_3\omega_4^2\omega_1\omega_5\omega_2^2 - 48v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 - 72cs^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 12v_2^2\omega_3\omega_4^3\omega_1^3\omega_5\omega_2 - 12v_1^2cs^2\omega_3^2\omega_4^4\omega_1^3\omega_5\omega_2 +$$
$$108cs^2v_2^2\omega_3\omega_4\omega_4^2\omega_1^2\omega_5\omega_2^2 + 180cs^2v_2^2\omega_3\omega_4\omega_4^3\omega_1^3\omega_5\omega_2 + 24v_2^2\omega_3\omega_4\omega_4^3\omega_1^3\omega_5\omega_2 - 168v_1^2cs^2\omega_3^2\omega_4\omega_1\omega_5\omega_2 + 48v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_5 + 48v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_5 -$$
$$6cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 288cs^4\omega_3^2\omega_4\omega_1\omega_5\omega_2^3 + 72v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 108v_2^4\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^2 + 60cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 - 216cs^2v_2^2\omega_3\omega_4\omega_1^2\omega_5\omega_2^2 +$$
$$132v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 - 56cs^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 24v_2^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 - 120v_1^2cs^2\omega_3^2\omega_4\omega_1\omega_5\omega_2 - 96v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5 + 216v_1^2v_2^2\omega_3^2\omega_4^2\omega_5\omega_2 -$$
$$108cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 8\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2 - 12v_2^2\omega_3\omega_4\omega_1\omega_5\omega_2 - 72v_1^2v_2^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2 + 36v_2^4\omega_3\omega_4\omega_4\omega_1^2\omega_5\omega_2 - 216cs^2v_2^2\omega_4^2\omega_1^2\omega_5\omega_2 +$$
$$72v_2^4\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2 - 112cs^2\omega_3\omega_4^2\omega_1^2\omega_5\omega_2^2 + 54v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 - 216cs^4\omega_3\omega_4\omega_1^3\omega_5\omega_2^2 + 360v_1^2v_2^2\omega_3\omega_4^2\omega_1\omega_5\omega_2 + 16\omega_3^2\omega_4\omega_1^3\omega_5\omega_2 +$$
$$288cs^4\omega_3^2\omega_4\omega_1\omega_2^3 - 108v_2^2\omega_3^2\omega_1\omega_5\omega_2^3 + 180cs^2v_2^2\omega_3\omega_4\omega_1\omega_5\omega_2^3 + 2v_3^3\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 - 24cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 + 9v_3^4\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 +$$
$$24v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2 - 180v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 348cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2 - 18v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 + 56cs^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 + 4cs^2\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 +$$
$$108v_2^4\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^2 + 144v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2 + 24v_1^2\omega_3\omega_4^2\omega_4^2\omega_1^3\omega_5\omega_2 - 72cs^4\omega_3\omega_4\omega_1^3\omega_5\omega_2^3 - 36v_2^2\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2 + 8\omega_3^2\omega_4^2\omega_1^3\omega_5 + 6v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2^2 +$$
$$648v_1^2cs^2\omega_3^2\omega_4\omega_1\omega_5\omega_2 + 32cs^4\omega_3^2\omega_4^2\omega_1^3\omega_5 - 72cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 72v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_5\omega_2 - 36v_2^2\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2 + 112cs^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 -$$
$$72v_2^2\omega_3\omega_4\omega_4^2\omega_1^3\omega_5\omega_2 + 216cs^2\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 54v_2^4\omega_3\omega_4\omega_1^3\omega_5\omega_2 - 72cs^2\omega_3^2\omega_4\omega_1^2\omega_5\omega_2 + 18v_2^2\omega_3^2\omega_4\omega_1^3\omega_5\omega_2^2 - 28cs^4\omega_3^2\omega_4\omega_1^2\omega_5\omega_2^3 +$$
$$324cs^2v_2^2\omega_3\omega_1\omega_5\omega_2^2 + 72cs^2\omega_3^2\omega_4\omega_1\omega_5\omega_2^2 - 144v_2^4\omega_3\omega_4\omega_1^3\omega_5\omega_2 + 36v_2^2\omega_3\omega_4\omega_1\omega_5\omega_2^2 + 240v_1^2cs^2\omega_3^2\omega_4\omega_5\omega_2^2 + 72v_2^2\omega_4^2\omega_1^3\omega_5\omega_2^2 +$$

$$24v_1^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3 + 162v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_5\omega_2^3 - 2v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_5\omega_2^2 - 9v_3^2\omega_3^3\omega_4\omega_1^3\omega_5\omega_2^2 - 40cs^2\omega_3^2\omega_4^2\omega_1^3\omega_5 + 300cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_5\omega_2^3)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1\omega_3\omega_5\omega_2^3}$$

coefficient $C^{(3)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_zv_2}$ **at** $\frac{\partial^4 v_2}{\partial x_1\partial x_2^2\partial x_3}$:

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_zv_2} = (-36v_1v_3^2\omega - 24v_3cs^2 + 36v_1^2v_3\omega + 24v_1v_3^2 - v_1v_3^2\omega^3 - 14v_1^2v_3\omega^2 + v_1^2v_3\omega^3 + 14v_1v_3^2\omega^2 + v_3cs^2\omega^3 + 14v_1cs^2\omega^2 - 14v_3cs^2\omega^2 + 24v_1cs^2 - v_1cs^2\omega^3 - 24v_1^2v_3 + 36v_3cs^2\omega - 36v_1cs^2\omega)\frac{\rho v_2}{\omega^3}$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_zv_2} = (-v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 - \omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6^3v_3^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_8^2 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 3\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 3\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 + \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 6\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^3\omega_7cs^2\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - 2v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + 5\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 - 2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 - 2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 - \omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^3\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^3\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{17}\omega_8^2 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^3\omega_7\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7cs^2\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{16}^3\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + 3\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + \omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 6\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2 - \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 - v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_8^2 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 4\omega_{18}v_1v_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + $

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$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3cs^2\omega_{20}\omega_{17}\omega_8^2 - \omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 +$
$2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2 -$
$\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2)\dfrac{\rho v_2}{\omega_{18}\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2}$

$C^{(3),\text{MRT2}}_{\text{D}_x\text{D}_y^2\text{D}_z v_2} = (2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 +$
$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 -$
$2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 - v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$\omega_{18}v_1\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}cs^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 +$
$2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 +$
$2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 +$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 +$
$2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - \omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$
$2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 -$
$2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$
$2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 +$
$\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + 2v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 -$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 +$
$\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + 2v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 +$
$2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 - 2v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 +$
$\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 - \omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$
$\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$3\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}cs^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 -$
$6\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8 +$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 +$
$3\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 - 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$
$\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$
$2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 + \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 -$
$\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}cs^2 + 2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_8^2cs^2 -$
$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 -$
$\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 -$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 - 4\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 -$
$2\omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8cs^2 - 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 +$
$\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 - 2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2cs^2 +$
$\omega_{18}\omega_6v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8^2cs^2 - \omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$\omega_{18}v_1\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 + 5\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 -$
$v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2cs^2 - \omega_{18}\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2cs^2 +$
$2\omega_{18}\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 +$
$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8cs^2 +$
$2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 +$
$2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2cs^2 + 2\omega_{18}v_1\omega_6^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 + 2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_8^2cs^2 +$
$2\omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_8^2 - \omega_{18}v_1^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 - 2\omega_{18}v_1^2\omega_6^2v_3\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 -$

$$2\omega_{18}\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8^2 cs^2 - 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 + \omega_{18}\omega_6^2 v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 -$$
$$2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}\omega_6^2 v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2 cs^2 +$$
$$2\omega_{18}v_1\omega_6^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2 cs^2 - 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_8^2 - 6\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 cs^2 +$$
$$v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 - 2\omega_{18}\omega_6 v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8 cs^2 - 2\omega_{18}v_1\omega_6^2 v_3^2\omega_{16}^2\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2 +$$
$$2\omega_{18}\omega_6^2 v_3\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8^2 cs^2 + 2\omega_{18}v_1^2\omega_6^2 v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2) \dfrac{\rho v_2}{\omega_{18}\omega_6^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2}$$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = (-2\omega_{18}cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$

$2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 +$

$2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + v_1^2\omega_6 v_3\omega_{19}\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} - v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} -$

$\omega_{18}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - \omega_{18}cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$

$2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$

$2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$

$2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$

$2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$

$2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} +$

$2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + \omega_{18}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 -$

$2v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} -$

$2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 -$

$2cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} +$

$2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$

$2\omega_{18}cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$

$v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$

$cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 -$

$\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 -$

$2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_8 +$

$2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$2\omega_{18}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} +$

$\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$\omega_{18}v_1\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}\omega_6 cs^2 v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8) \dfrac{\rho v_2}{\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8}$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = (2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 v_3\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 -$

$2\omega_{18}\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$2\omega_{18}\omega_6 v_3\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1\omega_6\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_8 +$

$\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$

$2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6 v_3\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} -$

$2v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$

$\omega_{18}\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6 v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} -$

$v_1^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6 v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$

$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} -$$
$$\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6v_3\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$$
$$\omega_{18}v_1\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} + \omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1\omega_6\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} +$$
$$\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}\omega_6v_3\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1\omega_6\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$$
$$\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11} -$$
$$2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} +$$
$$2\omega_{18}\omega_6v_3\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1\omega_6\omega_{19}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 +$$
$$\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 +$$
$$v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1\omega_6\omega_{19}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} - v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} -$$
$$v_1\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1\omega_6\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}\omega_6v_3\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 +$$
$$2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - v_1\omega_6v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}\omega_6v_3\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1\omega_6v_3^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}\omega_6v_3\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$$
$$2\omega_{18}v_1v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + \omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1\omega_6\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 \Big) \frac{\rho v_2}{\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8}$$

$$C^{(3),\text{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = 0$$

$$C^{(3),\text{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_2} = \big(-3v_1^2\omega_3\omega_1^3\omega_2 + 2\omega_1\omega_2^3 + 26cs^2\omega_3\omega_2^3 - 13v_2^2\omega_3\omega_1^3\omega_2 + 6v_1^2\omega_3\omega_1^2\omega_2^2 + 26v_2^2\omega_3\omega_1^2\omega_2^2 - 12\omega_3\omega_1^3 + 10v_2^2\omega_3\omega_2^3 - 22v_2^2\omega_3\omega_1^2\omega_2 +$$
$$12cs^2\omega_1^2\omega_2^2 - 2v_1^2\omega_1\omega_2^3 + 10\omega_3\omega_1\omega_2^3 - 4v_1^2\omega_3\omega_1^2\omega_2 - 24cs^2\omega_3\omega_1\omega_2^3 + 4v_1^2\omega_3\omega_1^3 - 6cs^2\omega_1^3\omega_2 - 24cs^2\omega_3\omega_1\omega_2^2 + 8\omega_3\omega_1\omega_2^2 - 6cs^2\omega_1\omega_2^3 -$$
$$10\omega_3\omega_2^3 + 48cs^2\omega_3\omega_1^2\omega_2^2 + 4v_1^2\omega_1\omega_2^2 - 20\omega_3\omega_1^2\omega_2^2 - 2v_1^2\omega_1^3\omega_2 + 10\omega_3\omega_1^3\omega_2 - 24cs^2\omega_3\omega_1^3\omega_2 + 28cs^2\omega_3\omega_1^3 - 4\omega_1^2\omega_2^2 + 4v_1^2\omega_3\omega_2^3 - 4v_1^2\omega_3\omega_1\omega_2^2 -$$
$$4v_2^2\omega_3\omega_1\omega_2^2 - 3v_1^2\omega_3\omega_1\omega_2^3 - 30cs^2\omega_3\omega_1^2\omega_2 + 2\omega_1^3\omega_2 + 16v_2^2\omega_3\omega_1^3 + 14\omega_3\omega_1^2\omega_2 - 13v_2^2\omega_3\omega_1\omega_2^3\big)\frac{\rho v_1 v_2}{6\omega_3\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1 \partial x_2^2 \partial x_3}$:

$$C^{(3),\text{SRT}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = \big(36v_1^2cs^2\omega - 24v_1^2cs^2 - 14v_1^2cs^2\omega^2 + v_1^2cs^2\omega^3 + 28v_1v_3cs^2\omega^2 + 48v_1v_2^2v_3 - 72v_1v_2^2v_3\omega - 24v_1^2v_2^2 + 36v_1^2v_2^2\omega - 24v_2^2cs^2 +$$
$$36v_2^2cs^2\omega - 2v_1v_3cs^2\omega^3 + 48v_1v_3cs^2 + v_1^2v_2^2\omega^3 - 14v_2^2cs^2\omega^2 - 2v_1v_2^2v_3\omega^3 - 14v_1^2v_2^2\omega^2 - 72v_1v_3cs^2\omega + v_2^2cs^2\omega^3 + 28v_1v_3^2v_3\omega^2\big)\frac{\rho}{2\omega^3}$$

$$C^{(3),\text{MRT1}}_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3} = \big(\omega_{18}v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 +$$
$$4v_1\omega_6v_3\omega_2^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}v_6v_3\omega_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$12\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_5 +$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$

$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 8\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$4v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 - \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + \omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8 + 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^5cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$8\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^4cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 -$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 8\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_2^2\omega_6\omega_{19}^2\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8 +$$
$$4\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 14\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 + \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2 - 4\omega_{18}v_1v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^4\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8 -$$
$$\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 9\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 +$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 - v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}\omega_8^2\omega_5 - 12\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$\omega_{18}v_1^2\omega_6^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 -$$
$$8\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_5 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 - \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$

$$4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 - 2v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$8\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5)\frac{\rho}{2\omega_{18}\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5}$$

$C_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_zv_3}^{(3),\mathrm{MRT2}} = (2\omega_{18}v_1^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + \omega_{18}v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$

$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 -$

$2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$

$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$

$2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2cs^2 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 +$

$2v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + \omega_{18}v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2 +$

$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$

$\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 2\omega_{18}v_1\omega_6v_3\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 9\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 - 4v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$

$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_5cs^2 -$

$4\omega_{18}v_1v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$

$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 -$

$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2cs^2 +$

$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 + \omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$

$12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$\omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1^2v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 -$

$v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$

$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$

$4\omega_{18}v_1v_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1v_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 -$

$2v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 - 12\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 -$

$2v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 +$

$\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$

$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 - \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 4\omega_{18}v_1v_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$

$2\omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 + 8\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 -$

$4\omega_{18}v_1\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 - \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 - 4v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + 4v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 -$

$2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$

$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 +$

$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$

$\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 8\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$

$2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 +$

$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 12\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 6\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 -$

$2\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2cs^2 - 4\omega_{18}v_1v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 -$

$2v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5cs^2 - 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$

$\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 -$

$4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 4v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$

$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 - v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 +$

$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 -$

$2v_1^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5cs^2 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$

$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}\omega_8\omega_5cs^2 -$

$2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2cs^2 +$

$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 - 2v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5cs^2 +$

$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5cs^2 + 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_8\omega_5cs^2 +$

$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5cs^2 + \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$

$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_5cs^2 + 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8cs^2 -$

$$\omega_{18}v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$\omega_{18}v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 cs^2 +$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 12\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 8\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 + \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 +$$
$$8\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 4\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 cs^2 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 -$$
$$v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 - 2v_1^2v_2^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 - 8\omega_{18}v_1\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 cs^2 -$$
$$4v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 + v_1^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 +$$
$$2v_1^2\omega_6^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 4\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8\omega_5 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 - \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5 + v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 + v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}v_1\omega_6^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 + \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 cs^2 + 2\omega_{18}v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8\omega_5 + 4v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$4\omega_{18}v_1v_2^2\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8^2\omega_5 - \omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8\omega_5 -$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 + 2v_1^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}v_1^2v_2^2\omega_6^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}\omega_8^2\omega_5 + 2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$14\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8\omega_5 cs^2 - 2\omega_{18}v_2^2\omega_6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 + 2\omega_{18}v_1\omega_6^2v_3\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_5 cs^2 +$$
$$4\omega_{18}v_1\omega_6^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2 - \omega_{18}v_2^2\omega_6^2\omega_{19}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5 cs^2) \dfrac{\rho}{2\omega_{18}\omega_6^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{20}\omega_{17}\omega_{11}^2\omega_8^2\omega_5}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x\text{D}_y^2\text{D}_z v_3} = (2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - \omega_{18}v_1^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$\omega_{18}v_2^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_2^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} -$$
$$\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$4\omega_{18}v_1v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2v_1v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + \omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_2^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 -$$
$$4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} -$$
$$4\omega_{18}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} +$$
$$4v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_2^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4v_1v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1v_2^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} +$$

$$
\begin{aligned}
&v_2^2 cs^2 \omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&2\omega_{18}v_2^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \\
&2\omega_{18}v_1^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + \omega_{18}v_1^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + v_1^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + \\
&4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - \\
&4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17} + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + \\
&2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&4v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \\
&4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \\
&2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + \\
&2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \\
&2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - \\
&4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + \\
&2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - \omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 - 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \\
&2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_2^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \\
&2v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_2^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - \\
&2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 4v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&4\omega_{18}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6 cs^2\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} - \\
&4\omega_{18}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6 cs^2\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6 cs^2\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 4v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 cs^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}) \frac{\rho}{2\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8}
\end{aligned}
$$

$$
\begin{aligned}
C_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3}^{(3),\mathrm{CLBM2}} = &(2\omega_{18}v_1 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&2v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + 4\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_8 + \\
&4\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&\omega_{18}v_1^2\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_6\omega_{19} cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&v_1^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{16} cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 4v_1\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + \\
&2\omega_{18}v_2^2\omega_6\omega_{19} cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - \omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + \\
&4\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 4\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_8 + \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - \\
&2\omega_{18}v_1^2\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + v_1^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - \\
&4\omega_{18}v_1\omega_6 v_3\omega_{19} cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{16} cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - \\
&2v_1 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11} - 2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_8 + 4\omega_{18}v_1\omega_6 v_3\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 - \\
&4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20} - \\
&2\omega_{18}v_1^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6 v_3\omega_{19} cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&4v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 + \omega_{18}v_1^2 v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 - \omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1 v_2^2 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - \\
&2v_1\omega_6 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11} - \\
&2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16} cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6 v_3\omega_{19}\omega_{16} cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + \\
&2\omega_{18}v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2v_1^2 v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 - 4\omega_{18}v_1 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \\
&2\omega_{18}v_2^2\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} - 2\omega_{18}v_1^2\omega_6\omega_{19} cs^2\omega_{23}\omega_{20}\omega_{11} + \\
&\omega_{18}v_2^2\omega_6\omega_{19}\omega_7 cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 4v_1 v_3\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1 v_2^2\omega_6 v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2 v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 +
\end{aligned}
$$

$$4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$4\omega_{18}v_1v_2^2\omega_6v_3\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1\omega_6v_3\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} + 4\omega_{18}v_1\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 +$$
$$4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} - \omega_{18}v_1^2\omega_6\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$v_1^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - 4\omega_{18}v_1\omega_6v_3\omega_9\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 +$$
$$2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 + \omega_{18}v_1^2\omega_6\omega_{19}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} -$$
$$4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11} + \omega_{18}v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} + 4\omega_{18}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} - \omega_{18}v_2^2\omega_6\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11}\omega_8 + \omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6\omega_{19}cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{23}\omega_{20}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6v_3\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 + v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 - \omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 +$$
$$v_1^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}v_1\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1\omega_6v_3\omega_{19}\omega_9\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} -$$
$$2v_1^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_1^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 4\omega_{18}v_1\omega_6v_3\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_8 - 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_8 +$$
$$2v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + \omega_{18}v_1^2\omega_6\omega_{19}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}v_1^2\omega_6\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} + 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} - 4\omega_{18}v_1\omega_6v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{20}\omega_{11} +$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_2^2\omega_6\omega_{19}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_8 - 2\omega_{18}v_1^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} + 2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11} -$$
$$4\omega_{18}v_1\omega_6v_3\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 4\omega_{18}v_1\omega_6v_3\omega_{16}\omega_7cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 -$$
$$2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}v_2^2\omega_6\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2v_1^2\omega_6\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_7\omega_{20}\omega_{17}\omega_8 -$$
$$2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{17}\omega_{11} + 2\omega_{18}v_2^2\omega_6\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{20}\omega_{17}\omega_{11} - 2\omega_{18}v_1^2\omega_6\omega_{16}cs^2\omega_{20}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_{23}\omega_{20}\omega_{11} -$$
$$4\omega_{18}v_1v_2^2v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 + 2\omega_{18}v_1^2v_2^2\omega_6\omega_{16}\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8 +$$
$$2\omega_{18}v_1^2v_2^2\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11} - 4v_1v_2^2\omega_6v_3\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{17}\omega_{11}\omega_8 + 4\omega_{18}v_1v_2^2\omega_6v_3\omega_{19}\omega_{23}\omega_{20}\omega_{11} -$$
$$4\omega_{18}v_1v_3\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8 - 2\omega_{18}v_1^2v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{11} + 2\omega_{18}v_2^2\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{17}\omega_{11}\omega_8\Big) \dfrac{\rho}{2\omega_{18}\omega_6\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{20}\omega_{17}\omega_{11}\omega_8}$$

$C_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_y^2\mathrm{D}_z v_3}^{(3),\mathrm{CuLBM2}} = (27cs^2\omega_3\omega_1\omega_2 - 9\omega_3\omega_1\omega_2 - 9v_1^2\omega_4\omega_1\omega_2 - 2v_1^2\omega_3\omega_4\omega_2 - 2\omega_3\omega_4\omega_1 + 6cs^2\omega_3\omega_4\omega_1 + 9\omega_4\omega_1\omega_2 - 27cs^2\omega_4\omega_1\omega_2 + 9v_1^2\omega_3\omega_1\omega_2 + 2v_1^2\omega_3\omega_4\omega_1 - 6cs^2\omega_3\omega_4\omega_2 + 2\omega_3\omega_4\omega_2)\dfrac{\rho v_1 v_3}{72\omega_3\omega_4\omega_1\omega_2}$

coefficient $C_{\mathrm{D}_y^3\mathrm{D}_z\rho}^{(3)}$ at $\frac{\partial^4\rho}{\partial x_2^3\partial x_3}$:

$C_{\mathrm{D}_y^3\mathrm{D}_z\rho}^{(3),\mathrm{SRT}} = (24 - 42cs^2\omega^2 + 14\omega^2 + 3cs^2\omega^3 - 72cs^2 - \omega^3 + 108cs^2\omega + v_2^2\omega^3 - 14v_2^2\omega^2 + 36v_2^2\omega - 36\omega - 24v_2^2)\dfrac{v_2cs^2}{12\omega^3}$

$C_{\mathrm{D}_y^3\mathrm{D}_z\rho}^{(3),\mathrm{MRT1}} = (36v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{11} + 9v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$
$18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^4 + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 3v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2\omega_{11} - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 12v_2^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 -$
$12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 12\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36v_3^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 12v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} +$
$27v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2\omega_{11} - 6\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^4\omega_{11} + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^4 - 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{11} +$
$48v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 36v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2cs^2\omega_{11} + 72v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 36v_3^2\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} + 54\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4\omega_{11} -$
$24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} + 15\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^4\omega_{11} - 12v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} -$
$12\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{11} - 36v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{11} + 15v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 6v_2^2v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 60\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4\omega_{11} -$
$6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}^3\omega_{23} + 36v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 36\omega_{16}^2\omega_{10}^2\omega_7^3cs^4 + 144v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} +$
$12v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2cs^2\omega_{11} + 6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 12v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3cs^2\omega_{11} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} -$
$36\omega_{16}^2\omega_{10}^3\omega_7^3cs^4\omega_{11} - 18v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{11} + 3\omega_{19}\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}cs^4\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{11} - 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$
$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 - 42\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^4\omega_{11} + 12v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} - 5v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} +$
$18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7cs^4\omega_{11} + 36v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} - 12v_2^2v_3^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} +$
$6v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} - 45v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 108v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} +$
$v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2cs^4\omega_{11} + 36v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} + 12v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} +$

$$18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} - 6v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 15\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}cs^2\omega_{11} -$$
$$6v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2cs^2\omega_{11} + 36\omega_{16}^3\omega_{10}\omega_7^3cs^2 + 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^4\omega_{11} +$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 36\omega_{16}^3\omega_{10}\omega_7^3\omega_{23}cs^4 + 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2\omega_{11} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} -$$
$$36\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^4\omega_{11} + 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3 - 9v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$36\omega_{16}^3\omega_{10}^2\omega_7^2cs^4\omega_{11} + 12v_2^2\omega_{16}^3\omega_{10}^2\omega_7^2cs^2\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} + 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} +$$
$$12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} - 48v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 12v_2^2v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11} -$$
$$36v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11} + 6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} - 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 -$$
$$36v_3^2\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 72v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} + 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 15v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$18v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^2\omega_{11} + 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11} + 12v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 -$$
$$36v_2^2v_3^2\omega_{19}\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 36v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} - 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 96\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}cs^4\omega_{11} +$$
$$156\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^4\omega_{11} - 72v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2\omega_{11} -$$
$$36\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^4\omega_{11} -$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 36\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2cs^4\omega_{11} + 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$18v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} + 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} + 12v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - \omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} -$$
$$12\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 18v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^2 - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^4\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 +$$
$$12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} - 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} +$$
$$6v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^2\omega_{11} + 72v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11})\frac{v_2}{12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}}$$

$C^{(3),\text{MRT2}}_{\text{D}_y^3\text{D}_z\rho} = (-12v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 9v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$
$18v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 18v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^4 - 12\omega_{16}^2\omega_{10}\omega_7^3cs^2 -$
$12v_3^3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} + 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 12v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 -$
$6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} + 48v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 + 3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} -$
$18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 12v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 36\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 +$
$15v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 36v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 6v_2^2v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 72v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 +$
$36\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}cs^4 + 18v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 36\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 -$
$18v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 5\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} -$
$12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 72v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 +$
$6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 + 12v_2^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 156\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 - 96\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}cs^4 + 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} +$
$72v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 36\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^4 + 12v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^2 -$
$12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 6v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 6v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 -$
$18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 - 36v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - \omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} +$
$24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11} + 36v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11}cs^2 + 36v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3 -$
$9v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^4 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 -$
$12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4 + 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 36v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 +$
$36v_3^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 27v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 48v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 -$
$15\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^2 - 3v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 + 6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} -$
$36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 42\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 - 12v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^2 + 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 -$
$18v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 + 144v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 -$
$15v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^2 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 - 36v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} -$
$6v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 45v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 -$
$60\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 - 5v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 36\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 15\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11} +$
$12v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 36\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^4 + 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3 +$
$12v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 36\omega_{16}^2\omega_{10}\omega_7^3cs^4 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^2 - 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 12v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 +$
$12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^4 - 6v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 + 36v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}cs^2 +$
$12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 72v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 - 12v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} +$
$12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 54\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 108v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 18\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^4 +$
$v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 36v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4)\frac{v_2}{12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}}$

$C^{(3),\text{CLBM1}}_{\text{D}_y^3\text{D}_z\rho} = (-12v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 12v_2^2\omega_{16}^2\omega_7^2\omega_{23} - 36cs^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 12v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^2 +$
$5\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11} + 12v_2^2\omega_{16}^2\omega_{10}\omega_7^2 -$
$12\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 3v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36cs^2\omega_{19}\omega_{16}^2\omega_{23}\omega_{11} - 36cs^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{23}\omega_{11} - 9cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$
$54cs^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{11} - 36cs^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 18cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} +$
$12\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - \omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 18cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 36cs^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{23}\omega_{11} + 18cs^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} +$
$3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} + 3cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 18v_2^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{11} - 6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$
$12v_2^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 + 36cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_7\omega_{11} - 15cs^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} +$
$54cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 36cs^2\omega_{16}^2\omega_7^2\omega_{23} - 18\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 36cs^2\omega_{16}^2\omega_{10}\omega_7^2 - 36cs^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} +$
$12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 12v_2^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_7^2\omega_{23} - 36cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 5v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} -$
$12\omega_{16}^2\omega_{10}\omega_7\omega_{11} + 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 36cs^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 18\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$
$12\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 18cs^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_7\omega_{23}\omega_{11} + 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{11} + 12v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{11} +$

$$36cs^2\omega_{16}^2\omega_{10}\omega_7\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 18cs^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11})\frac{v_2cs^2}{12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_y^3\text{D}_z\rho} = (-12v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 12v_2^2\omega_{16}^2\omega_7^2\omega_{23} - 15\omega_{19}\omega_{16}^2\omega_7^2cs^2\omega_{23}\omega_{11} -$$
$$12v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 + 5\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} +$$
$$36\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{11} + 12v_2^2\omega_{16}^2\omega_{10}\omega_7^2 - 12\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 3v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{23}\omega_{11} - 36\omega_{19}\omega_{16}^2\omega_{10}\omega_7cs^2\omega_{11} -$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2 - 6v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 36\omega_{19}\omega_{10}\omega_7cs^2\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - \omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$36\omega_{16}^2\omega_{10}\omega_7^2cs^2 + 12\omega_{19}\omega_{16}^2\omega_{23}\omega_{11} - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2 + 54\omega_{19}\omega_{16}\omega_{10}\omega_7cs^2\omega_{23}\omega_{11} + 3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} +$$
$$6v_2^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23} + 18v_2^2\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{11} + 36\omega_{19}\omega_{16}\omega_{10}\omega_7cs^2\omega_{11} - 6\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + 36\omega_{16}^2\omega_7^2cs^2\omega_{23}\omega_{11} -$$
$$12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11} + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{23}\omega_{11} + 54\omega_{19}\omega_{16}^2\omega_7cs^2\omega_{23}\omega_{11} - 36\omega_{16}^2\omega_7^2cs^2\omega_{23} +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 36\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{11} + 3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{23}\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 36\omega_{19}\omega_{16}^2cs^2\omega_{23}\omega_{11} +$$
$$18\omega_{19}\omega_{16}^2\omega_7^2cs^2\omega_{23} + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 12v_2^2\omega_{16}^2\omega_7\omega_{23}\omega_{11} + 12\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2cs^2\omega_{11} + 12\omega_{16}^2\omega_7^2\omega_{23} -$$
$$5v_2^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7\omega_{11} + 18\omega_{19}\omega_{10}\omega_7^2cs^2\omega_{23}\omega_{11} + 6v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 18\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{11} +$$
$$6v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 36\omega_{16}^2\omega_7cs^2\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_7\omega_{23}\omega_{11} - 36\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} +$$
$$12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}\omega_{11} - 36\omega_{19}\omega_{16}^2cs^2\omega_{23}\omega_{11} + 12v_2^2\omega_{16}^2\omega_{10}\omega_7\omega_{11} - 9\omega_{19}\omega_{16}\omega_{10}\omega_7^2cs^2\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11})\frac{v_2cs^2}{12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_y^3\text{D}_z\rho} = (12\omega_{11}\omega_5 - 6\omega_3^2\omega_5 - 36\omega_3cs^2\omega_5 + 36\omega_{11}^2cs^2\omega_5 - 12v_2^2\omega_3\omega_{11}^2\omega_5 + v_2^2\omega_3^2\omega_{11}^2 - 6\omega_3\omega_{11}^2 - 3v_2^2\omega_3^2\omega_{11}\omega_5 + 12v_2^2\omega_{11}^2\omega_5 +$$
$$3\omega_3^2\omega_{11}^2cs^2\omega_5 - 12v_2^2\omega_3\omega_5 + 36\omega_3\omega_{11}cs^2 - 18\omega_3\omega_{11}\omega_5 - 12\omega_3\omega_{11} + 3\omega_3^2\omega_{11}^2cs^2 + 54\omega_3\omega_{11}cs^2\omega_5 - 12v_2^2\omega_{11}^2 - 6v_2^2\omega_3^2\omega_{11} - \omega_3^2\omega_{11}^2\omega_5 +$$
$$12v_2^2\omega_3\omega_{11} - 18\omega_3^2\omega_{11}cs^2 + 3\omega_3^2\omega_{11}\omega_5 - 36\omega_3\omega_{11}^2cs^2\omega_5 + 18\omega_3\omega_{11}^2cs^2 + 12\omega_3\omega_{11}^2\omega_5 + 6\omega_3^2\omega_{11} + 12\omega_{11}^2 - \omega_3^2\omega_{11}^2 + v_2^2\omega_3^2\omega_{11}\omega_5 +$$
$$18\omega_3^2cs^2\omega_5 - 36\omega_{11}cs^2\omega_5 - 12v_2^2\omega_{11}\omega_5 + 6v_2^2\omega_3^2\omega_5 - 12\omega_{11}^2\omega_5 + 12\omega_3\omega_5 - 9\omega_3^2\omega_{11}cs^2\omega_5 + 6v_2^2\omega_3\omega_{11}^2 + 18v_2^2\omega_3\omega_{11}\omega_5 - 36\omega_{11}^2cs^2)\frac{v_2cs^2}{12\omega_3^2\omega_{11}^2\omega_5}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_y^3\text{D}_z\rho} = (-144cs^4\omega_3^2\omega_4^2\omega_1\omega_2^2 + 160v_2^2\omega_3^2\omega_4^2\omega_2^3 + 108cs^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3 + 18cs^2v_2^2\omega_4^2\omega_1^3\omega_2^3 - 104cs^2\omega_3^2\omega_4^2\omega_1^3 -$$
$$27cs^4\omega_3\omega_4^2\omega_1^3\omega_2 - 8\omega_3^2\omega_4^2\omega_1\omega_2^2 - 36cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 56cs^2\omega_3^2\omega_4\omega_1\omega_2^2 + 18cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 784cs^2v_2^2\omega_3^2\omega_4^2\omega_2^3 + 40cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^2 +$$
$$9cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 108cs^4\omega_3\omega_4^2\omega_1^3\omega_2^2 + 48v_2^4\omega_3^2\omega_4^2\omega_1^3 + 28\omega_3^2\omega_4\omega_1\omega_2^3 - 18cs^2\omega_3^2\omega_1^3\omega_2^3 - 288cs^4\omega_3^2\omega_4^2\omega_2^3 - 6v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 588cs^4\omega_3^2\omega_4^2\omega_1\omega_2^3 +$$
$$36cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 72cs^2v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 16cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_2 + 54cs^4\omega_4^2\omega_1^3\omega_2^3 - 368cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + 6v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 9cs^2v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^3 -$$
$$16cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 72cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 36cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 9cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 1232cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 6v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 24v_4^2\omega_3^2\omega_4^2\omega_1\omega_2^2 +$$
$$216cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 36cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 48cs^4\omega_3\omega_4^2\omega_1^3\omega_2 + 6v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 32v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 27cs^4\omega_3^2\omega_4\omega_1^3\omega_2^3 + 228v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 -$$
$$56cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 18cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 108cs^4\omega_4^2\omega_1^2\omega_2^3 + 36cs^2v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 9cs^2v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 40cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 36cs^2\omega_3^2\omega_1^2\omega_2^3 -$$
$$256v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 120cs^4\omega_3\omega_4^2\omega_1^2\omega_2^2 + 144cs^4\omega_3^2\omega_4^2\omega_1^3 - 132v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 88cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 6cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 78v_2^4\omega_3^2\omega_4^2\omega_1^3\omega_2 -$$
$$412cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 144v_2^4\omega_3^2\omega_4^2\omega_2^3 + 92v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 18cs^2v_2^2\omega_3^2\omega_1^3\omega_2^3 + 18cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 72cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 152v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 +$$
$$16\omega_3^2\omega_4^2\omega_1^3\omega_2 + 54cs^4\omega_3^3\omega_1^3\omega_2^3 + 56cs^2\omega_3\omega_4^2\omega_1\omega_2^3 + 208cs^2\omega_3^2\omega_4^2\omega_2^3 - 16\omega_3^2\omega_4^2\omega_2^3 - 460cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 118cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 96v_4^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 -$$
$$712cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 56v_2^2\omega_3^2\omega_4^2\omega_1^3 + 320cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 - 168cs^4\omega_3\omega_4^2\omega_1\omega_2^3 + 14\omega_3^2\omega_4^2\omega_1^3\omega_2 + 104v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 +$$
$$144cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 14\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 20\omega_3^2\omega_4^2\omega_1^3\omega_2 - 342cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 36cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 136v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 276cs^4\omega_3^2\omega_4^2\omega_1\omega_2 -$$
$$56cs^2v_2^2\omega_3\omega_4^2\omega_1\omega_2^3 + 208cs^2\omega_3^2\omega_4^2\omega_1\omega_2 + 120v_4^2\omega_3^2\omega_4^2\omega_1\omega_2 + 394cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 184cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 12cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 92v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 +$$
$$36cs^2\omega_4^2\omega_1^3\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 78v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 52cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 6cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 448cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 108cs^4\omega_3^2\omega_1^2\omega_2^3)\frac{v_2}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\text{D}_y^3\text{D}_z v_2}$ **at** $\frac{\partial^4 v_2}{\partial x_3^2\partial x_3}$:

$$C^{(3),\text{SRT}}_{\text{D}_y^3\text{D}_z v_2} = (-12 + 2cs^2\omega^2 - 6\omega^2 - cs^2\omega^3 + 18v_2^2\omega^2 - 54v_2^2\omega + 18\omega + 36v_2^2)\frac{\rho cs^2}{12\omega^3}$$

$$C^{(3),\text{MRT1}}_{\text{D}_y^3\text{D}_z v_2} = (12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{11} + 27v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^4 + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 30v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2\omega_{11} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 -$$
$$12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 15v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} +$$
$$9v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^4 - 18v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 144v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2cs^2\omega_{11} +$$
$$24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2cs^2\omega_{11} + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4\omega_{11} - 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23} - 36v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}cs^4\omega_{11} - 12v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} - 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} +$$
$$15v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4\omega_{11} - 18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 36v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$12\omega_{16}^2\omega_{10}\omega_7^3cs^4 + 48v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} - 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} + 36v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} + 18v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} + 54v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^3cs^4\omega_{11} - 6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{11} -$$
$$\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4\omega_{11} + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} - 36v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 - 18\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^4\omega_{11} +$$
$$36v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 15v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^4\omega_{11} + 12v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}cs^2\omega_{11} -$$
$$36v_2^2v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} + 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 48v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{23}cs^2\omega_{11} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{11} -$$
$$15v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} + 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 36v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^4\omega_{11} +$$
$$12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} - 102v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 5\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^4\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} - 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 72v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23} -$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 36v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4 + 72v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} -$$
$$18v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11} - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^4\omega_{11} + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 -$$
$$6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3 - 9v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7^2cs^4\omega_{11} + 36v_2^2\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11} +$$
$$\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} + 18v_2^2v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} + 60v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2\omega_{11} - 48v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} -$$

$$36v_2^2v_3\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 24v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} + 12\omega_{16}^2\omega_{10}^2\omega_7^3cs^2\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^2\omega_{11} +$$
$$6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 36v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_{10}\omega_7^3\omega_{23}cs^2 - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 -$$
$$24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2\omega_{11} + 36v_2^2v_3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} - 45v_3^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 6v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^2\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4\omega_{11} -$$
$$12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^2\omega_{11} + 36v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 - 108v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} -$$
$$6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_{23}cs^4\omega_{11} + 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^4\omega_{11} - 24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} +$$
$$6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^2\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^4\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^4\omega_{11} - 36v_2^2v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11} - 72v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7cs^4\omega_{11} +$$
$$36v_2^2v_3\omega_{16}^2\omega_{10}^2\omega_7^3 + 6v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^2\omega_{11} + 12v_3^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 18v_2^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 -$$
$$12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7cs^4\omega_{11} + 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2\omega_{11} - 18v_2^2v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 + 36v_2^2v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7cs^2\omega_{11} +$$
$$60v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}cs^2\omega_{11} - 36v_2^2v_3\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} - 12v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}cs^2\omega_{11} + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11} -$$
$$24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}) \frac{\rho}{12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}}$$

$C_{D_y^3 D_z v_2}^{(3),\mathrm{MRT2}} = (24v_2^2\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 27v_2^2v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$
$$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^4 - 12\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11} -$$
$$60v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 - 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{11} + 36v_2^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^2 + \omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 - 18v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11} -$$
$$144v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 72v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} - 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 -$$
$$12v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 18v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 15v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} -$$
$$12v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 + 18v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 36v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^2 -$$
$$24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 - 24v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23} - 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}cs^2 + 18v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^4 +$$
$$6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} - 36v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11}cs^4 + 6v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 +$$
$$12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 36v_2^2v_3\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 +$$
$$5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 36v_2^2v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11} - 36v_2^2v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} +$$
$$6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 36v_2^2\omega_{16}^2\omega_{10}^2\omega_7^3cs^2 + 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^4 -$$
$$12\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}cs^4 + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23} + 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^2 + 12\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^4 + 36v_2^2v_3\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} +$$
$$18v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 60v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 - 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} -$$
$$12v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 18\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 72v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23} +$$
$$36v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23} + 72v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} - 36v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11}cs^2 + 12v_3^2\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^2 -$$
$$12v_3^2\omega_{16}^2\omega_{10}^2\omega_7^3 - 9v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^4 + 18v_2^2v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} - 12\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 12\omega_{16}^2\omega_{10}\omega_{23}cs^4\omega_{11} +$$
$$12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 15v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3cs^2 + 9v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 -$$
$$48v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 36v_2^2v_3\omega_{19}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 18v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3cs^2 - 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 - 36v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11}cs^2 +$$
$$30v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 + 6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 - 18\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^4 - 36v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^2 +$$
$$54v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11}cs^2 - \omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^4 + 48v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 + 36v_2^2v_3\omega_{16}^2\omega_{10}^2\omega_7\omega_{11} +$$
$$36v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11}cs^2 - 45v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{11}cs^2 -$$
$$108v_2^2v_3\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 36v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{11}cs^2 + 6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}cs^4 + 12\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11}cs^2 +$$
$$15v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}cs^4 - 15v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 + 12v_3^2\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}cs^2 +$$
$$6\omega_{19}\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}cs^4 - 48v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_{23}\omega_{11}cs^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 36v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36v_2^2v_3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} -$$
$$72v_2^2v_3\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 12\omega_{16}^2\omega_{10}^3\omega_7\omega_{11}cs^4 + 36v_2^2v_3\omega_{16}^2\omega_{10}^2\omega_7^3 + 12v_3^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} + 12\omega_{16}^2\omega_{10}\omega_7^3cs^4 + 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{11}cs^2 -$$
$$18v_2^2v_3\omega_{19}\omega_{16}^2\omega_7^3\omega_{23}\omega_{11} - 36v_2^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 - 6\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7cs^4 - 18v_2^2v_3\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3 +$$
$$12v_3^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}cs^2 - 12\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_7\omega_{11}cs^2 + 36v_2^2v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 6v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 102v_2^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 +$$
$$24v_3^2\omega_{19}\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}cs^2 - 36v_2^2v_3\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^4 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 -$$
$$36v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^4 + 12v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 24v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}) \frac{\rho}{12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}}$$

$C_{D_y^3 D_z v_2}^{(3),\mathrm{CLBM1}} = (-12\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12cs^2\omega_{16}\omega_7^3\omega_{23} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 18cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 36v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} +$
$$54v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 3v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}\omega_7^3\omega_{23} + 12cs^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} + 5\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 6cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} -$$
$$5cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12cs^2\omega_{16}\omega_{10}\omega_7^3 - 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} + 12cs^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 6cs^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$36v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 36v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 12cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} - 12\omega_{16}\omega_{10}\omega_7^3 + 18v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + \omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} +$$
$$18\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 36v_2^2\omega_{16}\omega_7^3\omega_{23} - 18\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12cs^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 18cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11} + 36v_2^2\omega_{16}\omega_{10}\omega_7\omega_{11} -$$
$$15v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{16}\omega_{10}\omega_7^2\omega_7\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 5cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 36v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} +$$
$$12cs^2\omega_{19}\omega_{16}\omega_7\omega_{11} + 12\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23} - 6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$36v_2^2\omega_{16}\omega_{10}\omega_7^3 - 36v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 12cs^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 54v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} - 36v_2^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} -$$
$$18cs^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} - 6cs^2\omega_{19}\omega_{10}\omega_7^3\omega_{11} - 18v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{11} - cs^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 12cs^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{19}\omega_{10}\omega_7^2\omega_{11} + 6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}) \frac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}}$$

$C_{D_y^3 D_z v_2}^{(3),\mathrm{CLBM2}} =$
$(-12\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2\omega_{11} - 6\omega_{19}\omega_{10}\omega_7^3cs^2\omega_{11} + 36v_2^2\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} + 12\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{11} +$
$$18\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} + 54v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 3v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}\omega_7^3\omega_{23} + 5\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} -$$
$$5\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} + 36v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 36v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{11} + 12\omega_{19}\omega_{10}\omega_7cs^2\omega_{23}\omega_{11} - 12\omega_{16}\omega_{10}\omega_7^3 -$$
$$12\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2\omega_{11} + 18v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 18\omega_{19}\omega_{16}\omega_{10}\omega_7cs^2\omega_{23}\omega_{11} + \omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 18\omega_{19}\omega_{10}\omega_7^2cs^2\omega_{23}\omega_{11} - 36v_2^2\omega_{16}\omega_7^3\omega_{23} -$$
$$18\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23} + 36v_2^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 15v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}cs^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} +$$
$$12\omega_{16}\omega_{10}\omega_7^3cs^2 - \omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2\omega_{23}\omega_{11} + 6\omega_{19}\omega_{10}\omega_7^3\omega_{11} + 12\omega_{19}\omega_{10}\omega_7^3cs^2\omega_{11} - 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3cs^2 - 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3 + 36v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{11} -$$

$$6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 6\omega_{19}\omega_{10}\omega_7^3 cs^2\omega_{23}\omega_{11} + 12\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{19}\omega_{10}\omega_7\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2 cs^2\omega_{11} -$$
$$12\omega_{16}\omega_7^3 cs^2\omega_{23} - 12\omega_{19}\omega_{16}\omega_7 cs^2\omega_{23}\omega_{11} - 18\omega_{19}\omega_{10}\omega_7^2 cs^2\omega_{23}\omega_{11} - 12\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 6\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 36v_2^2\omega_{16}\omega_{10}\omega_7^3 -$$
$$36v_2^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 54v_2^2\omega_{19}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}\omega_{10}\omega_7^3 cs^2\omega_{11} - 36v_2^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} -$$
$$18v_2^2\omega_{19}\omega_{10}\omega_7^3\omega_{11} - 5\omega_{19}\omega_{16}\omega_{10}\omega_7^2 cs^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3 - 12\omega_{19}\omega_{10}\omega_7^2\omega_{11})\frac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_y^3\text{D}_z v_2} = (18\omega_3^2\omega_5 + 12\omega_3 cs^2\omega_5 + 6\omega_3^3 + 12\omega_3^2 cs^2 - 12\omega_3^3 - 3v_2^2\omega_3^2\omega_{11}\omega_5 + 3v_2^2\omega_3^3\omega_{11} + \omega_3^3\omega_{11}cs^2 + 36v_2^2\omega_3\omega_5 - 12\omega_3\omega_{11}cs^2 -$$
$$6\omega_3^3 cs^2 - 6\omega_3^3\omega_5 + 12\omega_3\omega_{11} + 6\omega_3^3 cs^2\omega_5 + 18\omega_3\omega_{11}cs^2\omega_5 + 18v_2^2\omega_3^2\omega_{11} + 18v_2^2\omega_3^3\omega_5 - 36v_2^2\omega_3\omega_{11} + 6\omega_3^3\omega_{11}cs^2 + 36v_2^2\omega_3^3 - \omega_3^3\omega_{11}cs^2\omega_5 +$$
$$\omega_3^3\omega_{11}\omega_5 - 18v_2^2\omega_3^3 - 6\omega_3^3\omega_{11} - 18\omega_3^2 cs^2\omega_5 - 12\omega_{11}cs^2\omega_5 - 54v_2^2\omega_3^2\omega_5 - \omega_3^3\omega_{11} - 12\omega_3\omega_5 - 5\omega_3^3\omega_{11}cs^2\omega_5)\frac{\rho cs^2}{12\omega_3^3\omega_{11}\omega_5}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_y^3\text{D}_z v_2} = (-68cs^4\omega_3\omega_4\omega_2^3 - 108cs^2 v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 20cs^2\omega_4\omega_1^2\omega_2^2 + 96v_2^4\omega_3\omega_4\omega_1^3 + 12v_2^2\omega_3\omega_4\omega_1\omega_2^2 + v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 24v_2^4\omega_3\omega_4\omega_1\omega_2^2 -$$
$$v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 432cs^2 v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 8cs^2\omega_4\omega_1^3\omega_2 - 222v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 20cs^2\omega_3\omega_4\omega_1^3 + 18cs^2\omega_4\omega_1^2\omega_2^3 + 144v_2^2\omega_3\omega_4\omega_2^3 + 4\omega_3\omega_4\omega_1^3 -$$
$$3cs^2 v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 60cs^2 v_2^2\omega_3\omega_4\omega_1\omega_2^2 + 408v_2^4\omega_3\omega_4\omega_1\omega_2^3 - 312cs^2 v_2^2\omega_3\omega_4\omega_2^3 - 36cs^4\omega_3\omega_1^2\omega_2^3 + 3cs^2 v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 32cs^2\omega_3\omega_4\omega_1\omega_2^2 +$$
$$8cs^4\omega_4\omega_1\omega_2^3 + 18cs^2\omega_4\omega_1^3\omega_2^2 - 28cs^4\omega_3\omega_4\omega_1\omega_2^2 - 36cs^2\omega_3\omega_1^2\omega_2^3 + 27cs^2 v_2^2\omega_3\omega_1^3\omega_2^2 - 4\omega_3\omega_4\omega_1\omega_2^2 + 9cs^4\omega_3\omega_1^3\omega_2^3 + v_4^3\omega_3\omega_4\omega_1^3\omega_2^2 -$$
$$54cs^2\omega_3\omega_4\omega_1\omega_2^3 + 14\omega_3\omega_4\omega_1\omega_2^3 + 94cs^4\omega_3\omega_4\omega_1\omega_2^3 - v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 24cs^2 v_2^2\omega_4\omega_1\omega_2^3 - 9cs^2\omega_4\omega_1^3\omega_2^2 + 20cs^4\omega_4\omega_1^2\omega_2^3 - 8\omega_3\omega_4\omega_2^3 -$$
$$60v_2^2\omega_3\omega_4\omega_1^3 + 24cs^2\omega_3\omega_4\omega_1^2\omega_2^3 + 153cs^2 v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 192v_2^4\omega_3\omega_4\omega_1^2\omega_2 + 40cs^2\omega_3\omega_4\omega_2^3 + 42cs^2\omega_3\omega_4\omega_1^3\omega_2 - 10\omega_3\omega_4\omega_1^3\omega_2 - 7\omega_3\omega_4\omega_1^2\omega_2^3 +$$
$$144cs^2 v_2^2\omega_3\omega_4\omega_1^3 + 24cs^2 v_2^2\omega_4\omega_1^3\omega_2 - 32cs^4\omega_3\omega_4\omega_1^3\omega_2 - 96v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 29cs^4\omega_3\omega_4\omega_1^2\omega_2^3 - 54cs^2 v_2^2\omega_4\omega_1^2\omega_2^3 - 264v_2^4\omega_3\omega_4\omega_2^3 +$$
$$120cs^2 v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 6cs^2\omega_3\omega_4\omega_1^2\omega_2^2 + 138v_2^4\omega_3\omega_4\omega_1^3\omega_2^2 + 16cs^4\omega_3\omega_4\omega_1^3 + 8cs^4\omega_4\omega_1^3\omega_2 - 18cs^4\omega_4\omega_1^2\omega_2^3 + 60cs^2 v_2^2\omega_4\omega_1^2\omega_2^2 -$$
$$81v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 10cs^4\omega_3\omega_4\omega_1^2\omega_2^2 - 4\omega_3\omega_4\omega_1^2\omega_2^2 + 36cs^2\omega_3\omega_1^2\omega_2^2 + 138v_2^2\omega_3\omega_4\omega_1^3\omega_2 + 8cs^4\omega_3\omega_4\omega_1^2\omega_2 - 8cs^2\omega_4\omega_1\omega_2^2 + 27cs^2 v_2^2\omega_4\omega_1^3\omega_2^2 -$$
$$3cs^4\omega_3\omega_4\omega_1^3\omega_2^3 + 81v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 + 8\omega_3\omega_4\omega_1^2\omega_2 + 36cs^4\omega_3\omega_1\omega_2^3 - 90cs^2 v_2^2\omega_3\omega_4\omega_1^2\omega_2 - 138v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 16cs^2\omega_3\omega_4\omega_1^3\omega_2 -$$
$$240v_2^4\omega_3\omega_4\omega_1^3\omega_2 - 18cs^4\omega_4\omega_1^3\omega_2^2 + 108cs^2 v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 7\omega_3\omega_4\omega_1^3\omega_2^2 - 9cs^2\omega_3\omega_1^3\omega_2^3 + 17cs^4\omega_3\omega_4\omega_1^2\omega_2^2 + 84v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 54cs^2 v_2^2\omega_4\omega_1\omega_2^3 +$$
$$9cs^4\omega_4\omega_1^3\omega_2^3 - 288cs^2 v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 168v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 24cs^2\omega_3\omega_4\omega_1^3\omega_2^2 - 153cs^2 v_2^2\omega_3\omega_4\omega_1\omega_2^3)\frac{\rho}{36\omega_3\omega_4\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\text{D}_y^3\text{D}_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2^3 \partial x_3}$:

$$C^{(3),\text{SRT}}_{\text{D}_y^3\text{D}_z v_3} = (2 - 6cs^2 + 3cs^2\omega + v_2^2\omega - \omega - 2v_2^2)\frac{\rho v_2 v_3}{12\omega}$$

$$C^{(3),\text{MRT1}}_{\text{D}_y^3\text{D}_z v_3} = (-96\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_{23}cs^2\omega_{11}^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 42\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 - 18v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 -$$
$$24v_2^2\omega_{19}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 6\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 24\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 24v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 36\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 36\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$66\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2 cs^2\omega_{11}^2 - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 24\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} +$$
$$12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 24v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} + 84\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11} + 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 -$$
$$6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 24\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} + 90\omega_{19}\omega_{16}\omega_7^2\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7 cs^2\omega_{11}^2 +$$
$$18\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 24v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2 + 12v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 -$$
$$12\omega_{19}\omega_{16}^2\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2 cs^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$72\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 12v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} - 36v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$24v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 cs^2\omega_{11} - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} -$$
$$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 48\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} - 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 -$$
$$12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 60\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7 cs^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 +$$
$$24\omega_{19}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 66v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 24\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 156\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 12v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 -$$
$$36\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 48\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 6\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 -$$
$$24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3 cs^2\omega_{11}^2 + 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 72\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 -$$
$$84\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 66\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7 cs^2\omega_{11}^2 +$$
$$6\omega_{19}^2\omega_{16}^3\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3 cs^2\omega_{11} - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} - 132\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 +$$
$$12v_2^2\omega_{19}^2\omega_{16}^2\omega_7\omega_{23}\omega_{11}^2 - 4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2)\frac{\rho v_2 v_3}{12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2}$$

$$C^{(3),\text{MRT2}}_{\text{D}_y^3\text{D}_z v_3} = (6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 18v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 42\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 -$$
$$24v_2^2\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 96\omega_{19}^2\omega_{16}^2\omega_{10}\omega_{23}\omega_{11}^2 cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11}cs^2 - 18v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 48\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 +$$
$$12v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 12\omega_{19}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11} - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$36\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 24v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 24\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 36\omega_{19}\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 -$$
$$24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 66\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}cs^2 -$$
$$24\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 24v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 72\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}cs^2 + 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 -$$
$$6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 18\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 24v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} +$$
$$90\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2 +$$
$$12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 72\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^2 + 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}cs^2 -$$
$$12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} + 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 36v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} +$$
$$24v_2^2\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} - 84\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}cs^2 - 24\omega_{19}\omega_{16}\omega_{10}\omega_7^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 12v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11} -$$

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$$12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11} + 6v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{11}cs^2 - 12v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 +$$
$$24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 + 60\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2cs^2 + 156\omega_{19}^3\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11} +$$
$$66v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{16}^2\omega_{10}^3\omega_7^3\omega_{23}\omega_{11}cs^2 + 24\omega_{19}^2\omega_{10}^3\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{19}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2 + 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}cs^2 +$$
$$12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} + 12v_2^2\omega_{19}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 24\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}cs^2 + 4v_2^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} -$$
$$48\omega_{19}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 36\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2cs^2 + 12v_2^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$12\omega_{19}^3\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{23}\omega_{11} - 24v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}^2 + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 12\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7^2\omega_{11}^2cs^2 +$$
$$24v_2^2\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{11}^2 + 84\omega_{19}^3\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}cs^2 + 12v_2^2\omega_{19}^3\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11} - 66\omega_{19}^2\omega_{16}\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2 + 24\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^2 +$$
$$12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2cs^2 + 6\omega_{19}\omega_{16}^2\omega_7\omega_{23}\omega_{11}^2 - 132\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 12v_2^2\omega_{19}\omega_{16}^2\omega_{10}^2\omega_7\omega_{23}\omega_{11}^2 - 24\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11} +$$
$$12v_2^2\omega_{19}^2\omega_{16}^2\omega_7\omega_{23}\omega_{11} - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2) \frac{\rho v_2 v_3}{12\omega_{19}^2\omega_{16}^2\omega_{10}^2\omega_7^3\omega_{23}\omega_{11}^2}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_y^3\text{D}_z v_3} = (-\omega_{16} + 3cs^2\omega_{16}\omega_{10} + 3\omega_{10} - \omega_{16}\omega_{10} + v_2^2\omega_{16}\omega_{10} + v_2^2\omega_{16} - 3v_2^2\omega_{10} + 3cs^2\omega_{16} - 9cs^2\omega_{10}) \frac{\rho v_2 v_3}{12\omega_{16}\omega_{10}}$$

$$C^{(3),\text{CLBM2}}_{\text{D}_y^3\text{D}_z v_3} = (-\omega_{16} + 3\omega_{10} - \omega_{16}\omega_{10} + v_2^2\omega_{16}\omega_{10} + v_2^2\omega_{16} + 3\omega_{16}\omega_{10}cs^2 - 3v_2^2\omega_{10} + 3\omega_{16}cs^2 - 9\omega_{10}cs^2) \frac{\rho v_2 v_3}{12\omega_{16}\omega_{10}}$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_y^3\text{D}_z v_3} = (-\omega_{11}\omega_5 + v_2^2\omega_{11} + 3\omega_{11}cs^2 - 9cs^2\omega_5 - 3v_2^2\omega_5 - \omega_{11} + 3\omega_{11}cs^2\omega_5 + v_2^2\omega_{11}\omega_5 + 3\omega_5) \frac{\rho v_2 v_3}{12\omega_{11}\omega_5}$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_y^3\text{D}_z v_3} = (-27cs^2\omega_3\omega_1\omega_2 + 9\omega_3\omega_1\omega_2 - 18v_2^2\omega_3\omega_4\omega_2 - 6\omega_3\omega_4\omega_1\omega_2 + 18cs^2\omega_3\omega_4\omega_1\omega_2 - 9v_2^2\omega_4\omega_1\omega_2 - 8\omega_3\omega_4\omega_1 + 4v_2^2\omega_3\omega_4\omega_2 +$$
$$12cs^2\omega_3\omega_4\omega_1 + 6v_2^2\omega_3\omega_4\omega_1\omega_2 + 9\omega_4\omega_1\omega_2 - 27cs^2\omega_4\omega_1\omega_2 - 9v_2^2\omega_3\omega_1\omega_2 + 18v_3^2\omega_3\omega_4\omega_1 + 6cs^2\omega_3\omega_4\omega_2 + 2v_2^2\omega_3\omega_4\omega_1 + 2\omega_3\omega_4\omega_2) \frac{\rho v_2 v_3}{72\omega_3\omega_4\omega_1\omega_2}$$

coefficient $C^{(3)}_{\text{D}_x^2\text{D}_z^2\rho}$ **at** $\frac{\partial^4\rho}{\partial x_1^2\partial x_3^2}$:

$$C^{(3),\text{SRT}}_{\text{D}_x^2\text{D}_z^2\rho} = (24 - 46cs^2\omega^2 + 14\omega^2 + 5cs^2\omega^3 - 72cs^2 - \omega^3 + 108cs^2\omega + 36v_3^2\omega + v_3^2\omega^3 - 24v_3^2 - 36\omega - 14v_3^2\omega^2) \frac{v_3 cs^2}{12\omega^3}$$

$$C^{(3),\text{MRT1}}_{\text{D}_x^2\text{D}_z^2\rho} = (12\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11}^3 - 6\omega_{18}^2v_1^2\omega_6^3\omega_{13}\omega_{11}^3 + 12\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} - 36v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 150\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11}^2 +$$
$$18\omega_{18}\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{11}^2 - 12\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 36\omega_{18}\omega_6^2\omega_{13}cs^4\omega_{11}^3 + 24\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{13}\omega_{11}^3 -$$
$$18\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 180\omega_{18}^2\omega_6\omega_{22}\omega_{13}cs^4\omega_{11}^3 - 24\omega_{18}^2v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{13}\omega_{11}^3 - 24\omega_{18}^2v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 -$$
$$12\omega_{18}^2v_1^2\omega_6^2\omega_{11}^3 + 6\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 - 54\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} -$$
$$88\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 6\omega_{18}^2v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 24\omega_{18}^2v_1^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}v_1^2\omega_6^3\omega_{13}\omega_{11}^3 +$$
$$6\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 84\omega_{18}^2\omega_6\omega_{22}\omega_{13}cs^4\omega_{11}^2 - 12\omega_{18}^2\omega_6^2v_3^2\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 + 18\omega_{18}^2\omega_6^3\omega_{22}cs^4\omega_{11}^2 - 36\omega_{18}^2\omega_6^2\omega_{13}cs^4\omega_{11}^3 -$$
$$42\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11}^3 - 36\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 18\omega_{18}^2\omega_6cs^4\omega_{11}^3 + 6\omega_{18}^2v_1^2\omega_6^3\omega_{11}^3 + 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 36\omega_{18}\omega_6^3\omega_{13}cs^4\omega_{11}^2 -$$
$$12\omega_{18}^2\omega_6^2v_3^2\omega_{22}cs^2\omega_{11}^2 - 12\omega_{18}^2\omega_6^2cs^2\omega_{11}^3 + 18\omega_{18}\omega_6^3\omega_{13}cs^4\omega_{11}^3 + 18\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 - 36\omega_{18}\omega_6^2\omega_{22}cs^4\omega_{11}^3 + 12\omega_{18}\omega_6^3v_3^2\omega_{13}cs^2\omega_{11}^3 +$$
$$12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{13}\omega_{11}^2 - 72\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^3 - \omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 2\omega_{18}^2\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 24\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^3 -$$
$$36\omega_{18}\omega_6^3\omega_{13}cs^4\omega_{11}^3 - 12v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} - 12\omega_{18}\omega_6v_3^2\omega_{22}cs^2\omega_{11}^3 - 6\omega_{18}\omega_6^3v_3^2cs^2\omega_{11}^3 -$$
$$18\omega_{18}^2v_1^2\omega_6^3cs^2\omega_{11}^3 + 12\omega_{18}^2v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11} + 108\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + \omega_{18}^2\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 -$$
$$12\omega_{18}^2v_1^2\omega_6^2v_3^2\omega_{22}\omega_{11}^2 + 12\omega_{18}\omega_6\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 12\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11}^3 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{13}\omega_{11}^3 + 12\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{11}^3 - 48\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11} +$$
$$36\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4 - 12\omega_{18}^2v_1^2\omega_6^2v_3^2\omega_{13}\omega_{11}^3 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}^2\omega_6^3\omega_{13}cs^4\omega_{11}^2 - 12\omega_{18}\omega_6^3v_3^2\omega_{13}cs^2\omega_{11}^3 + 12\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^2 -$$
$$36\omega_{18}v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 - 12\omega_{18}v_1^2\omega_6^3\omega_{13}\omega_{11}^3 - 24\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 72\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 +$$
$$6\omega_{18}^2\omega_6^3v_3^2\omega_{22}cs^2\omega_{11}^2 - 36\omega_{18}v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 + 18\omega_{18}^2v_1^2\omega_6^3\omega_{22}cs^2\omega_{11}^3 + 24\omega_{18}^2v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 +$$
$$18\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 18\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18}^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 72\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 +$$
$$30\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 12\omega_{18}^2\omega_6^2\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2\omega_6^3\omega_{22}cs^2\omega_{11}^3 - 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 12\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 +$$
$$36\omega_{18}v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 - 18\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 12\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_6^3v_3^2\omega_{13}cs^2\omega_{11}^3 - 12\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3 -$$
$$12\omega_{18}\omega_6^3\omega_{13}cs^2\omega_{11}^3 + 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 36\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 18\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$42\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 12\omega_{18}^2v_1^2\omega_6^3\omega_{13}\omega_{11}^3 + 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2 - 96\omega_{18}^2\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{11}^3 + 72\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^2 -$$
$$6\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 36\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2 + 12\omega_{18}\omega_6^3\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11} + 6\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 -$$
$$36\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2\omega_6^2v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 24\omega_{18}v_1^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - 6\omega_{18}^2\omega_6^3v_3^2\omega_{13}cs^2\omega_{11}^2 - 18\omega_{18}^2v_1^2\omega_6^3\omega_{13}cs^2\omega_{11} - 6\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{11}^3 +$$
$$12\omega_{18}\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 12\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3 - 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 36\omega_{18}^2v_1^2\omega_6^2cs^2\omega_{11}^3 +$$
$$36v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 6\omega_{18}\omega_6^3\omega_{13}cs^2\omega_{11}^3 - 36\omega_{18}v_1^2\omega_6^2\omega_{22}cs^2\omega_{11}^3 + 18\omega_{18}^2v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 - 6\omega_6^3v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 - 18\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 -$$
$$12\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13} - 12\omega_{18}\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 6\omega_{18}^2\omega_6^3v_3^2\omega_{13}cs^2\omega_{11}^3 + 6\omega_{18}^2\omega_6^3cs^2\omega_{11}^3 + 36\omega_{18}^2v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 - 36\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} +$$
$$18\omega_{18}^2\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}\omega_6^3\omega_{13}cs^4\omega_{11}^3 - 36v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18}^2\omega_6\omega_{22}cs^2\omega_{11}^3 - 6\omega_{18}^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 +$$
$$36\omega_{18}^2\omega_6^2cs^4\omega_{11}^3 + 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 36\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^3 -$$
$$12\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_6^3v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 5\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3) \frac{v_3}{12\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3}$$

$$C^{(3),\text{MRT2}}_{\text{D}_x^2\text{D}_z^2\rho} = (-6\omega_{18}^2v_1^2\omega_6^3\omega_{13}\omega_{11}^3 - 18\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2cs^4 + 36\omega_{18}\omega_6^2\omega_{13}\omega_{11}^3cs^4 + \omega_{18}^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^3cs^2 - 6\omega_{18}^2v_1^2\omega_6^3\omega_{22}\omega_{11}^2 +$$
$$24\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^3cs^2 + 6\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{13}\omega_{11}^3 + 108\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3cs^2 - 18\omega_{18}^2v_1^2\omega_6^3\omega_{11}^2cs^2 -$$
$$6\omega_{18}^2\omega_6^3v_3^2\omega_{11}^2cs^2 - 24\omega_{18}^2v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 18\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 12\omega_{18}v_1^2\omega_6^2v_3^2\omega_{13}\omega_{11}^3 - 24\omega_{18}^2v_1^2\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2v_1^2\omega_6^2\omega_{11}^3 +$$
$$180\omega_{18}^2\omega_6\omega_{22}\omega_{13}\omega_{11}^3cs^4 + 6\omega_{18}^2v_1^2\omega_6^3v_3^2\omega_{22}\omega_{11}^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 12\omega_6^2v_3^2\omega_{22}\omega_{13}\omega_{11}^3cs^2 - 12\omega_{18}v_1^2\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18}\omega_6^2v_3^2\omega_{13}\omega_{11}^3cs^2 -$$
$$\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3cs^2 - 72\omega_{18}v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^3cs^2 - 12\omega_{18}^2\omega_6^2\omega_{11}^3cs^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2cs^2 + 6\omega_{18}^2v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 36\omega_6^2\omega_{22}\omega_{11}^2cs^4 -$$
$$88\omega_{18}^2\omega_6\omega_{22}\omega_{13}\omega_{11}^3cs^4 + 24\omega_{18}^2v_1^2\omega_6v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^4 + 12\omega_{18}v_1^2\omega_6^3\omega_{13}\omega_{11}^3 + 36\omega_{18}\omega_6^3\omega_{13}\omega_{11}^2cs^4 - 36\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^3cs^4 -$$

$$6\omega_{18}^2 v_1^2 \omega_6^3 v_3^2 \omega_{13}\omega_{11}^2 + 18\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{11}^2 cs^4 - 12\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} cs^2 + 6\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 84\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^2 cs^4 - 12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{13}\omega_{11}^3 cs^2 +$$
$$6\omega_{18}^2 v_1^2 \omega_6^3 \omega_{11}^3 + 12 v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 42\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 - 36\omega_{18}^2 \omega_6^3 \omega_{11}^3 cs^4 - 36\omega_{18} v_1^2 \omega_6^3 \omega_{22}\omega_{11}^2 cs^2 -$$
$$2\omega_{18}^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 36\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{13} cs^2 + 12\omega_{18}^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13} cs^2 + 18\omega_{18}^2 \omega_6 \omega_{13}\omega_{11}^3 cs^2 + 12\omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{13}\omega_{11} - 12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{11}^2 cs^2 +$$
$$24\omega_{18} v_1^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^3 + 18\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 36\omega_{18}^2 v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11} cs^2 - 12 v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}\omega_6^3 \omega_{13}\omega_{11}^3 cs^4 +$$
$$12\omega_{18}^2 v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11} - 36\omega_{18} v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} cs^2 - 12\omega_{18}^2 v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{11}^2 - 12\omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{13}\omega_{11}^3 - 12\omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 +$$
$$18\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 150\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^4 + 12\omega_{18}^2 v_1^2 \omega_6^2 v_3^2 \omega_{11}^3 + 12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{11}^3 cs^2 + 12\omega_{18}\omega_6 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 - 36 v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 +$$
$$2\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 - 12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11} cs^2 - 12\omega_{18}^2 v_1^2 \omega_6^3 v_3^2 \omega_{13}\omega_{11}^3 - 12\omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11} +$$
$$18\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{11}^2 cs^2 - 12\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 72\omega_{18}^2 v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18} v_1^2 \omega_6^2 \omega_{13}\omega_{11}^3 - 24\omega_{18} v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 +$$
$$6\omega_{18}^2 \omega_6^3 v_3^2 \omega_{22}\omega_{11}^3 cs^2 - 6\omega_{18}^2 \omega_6^3 \omega_{13}\omega_{11} cs^2 + 24\omega_{18}^2 v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{11}^2 cs^2 + 18\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} - 48\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} cs^4 +$$
$$36\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13} cs^4 + 36\omega_{18} v_1^2 \omega_6^3 \omega_{13}\omega_{11}^3 cs^2 - 12 v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 + 30\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 12\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 +$$
$$72\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 18\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 18\omega_{18}^2 v_1^2 \omega_6^3 \omega_{13}\omega_{11}^3 cs^2 + 12\omega_{18}^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 18\omega_{18}^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 +$$
$$6\omega_{18}^2 \omega_6^3 \omega_{11}^3 cs^2 + 6\omega_{18}^2 \omega_6^3 v_3^2 \omega_{13}\omega_{11}^3 cs^2 - 12 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}\omega_6^3 v_3^2 \omega_{13}\omega_{11}^2 cs^2 + 36\omega_{18}^2 v_1^2 \omega_6^2 \omega_{11}^3 cs^2 + 36\omega_{18} v_1^2 \omega_6^3 \omega_{13}\omega_{11}^2 cs^2 -$$
$$12\omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 36 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 18\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 12\omega_{18}\omega_6 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 +$$
$$12\omega_{18} v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^4 + 12\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 96\omega_{18}^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 12 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}^2 v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11} +$$
$$72\omega_{18}^2 v_1^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11} cs^2 + 12\omega_{18}^2 v_1^2 \omega_6 \omega_{13}\omega_{11}^3 - 54\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} cs^2 + 12\omega_{18}\omega_6^3 \omega_{13}\omega_{11}^3 cs^2 +$$
$$12\omega_{18}^2 v_1^2 \omega_6^2 \omega_{22}\omega_{11}^2 - 12\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 6\omega_{18}\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 18\omega_{18}^2 v_1^2 \omega_6^3 \omega_{13}\omega_{11}^2 cs^2 + 6\omega_{18}^2 v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 -$$
$$36\omega_{18} v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 - 6\omega_{18}\omega_6^3 v_3^2 \omega_{13}\omega_{11}^3 cs^2 - 42\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^2 cs^4 - 24\omega_{18} v_1^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_{18} v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 -$$
$$12\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 6\omega_{18}^2 v_1^2 \omega_6^3 v_3^2 \omega_{11}^3 + 6\omega_{18}^2 \omega_6^3 \omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18} v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 -$$
$$12\omega_{18}^2 \omega_6^3 v_3^2 \omega_{11}^3 cs^2 - 6\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{11}^2 - 12\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{11}^2 cs^2 + 12\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 12\omega_{18} v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11} -$$
$$36\omega_{18}^2 v_1^2 \omega_6^3 \omega_{22}\omega_{11}^2 cs^2 - 12\omega_6^3 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12 v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18} v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11} + 5\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 12\omega_{18}^2 v_1^2 \omega_6^3 v_3^2 \omega_{22}\omega_{13} -$$
$$36\omega_{18}^2 v_1^2 \omega_6^2 \omega_{13}\omega_{11}^3 cs^2 - 12\omega_{18}\omega_6^3 v_3^2 \omega_{13}\omega_{11}^3 cs^2 + 36\omega_{18}^2 \omega_6^2 \omega_{11}^3 cs^4 + 36\omega_{18} v_1^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2 v_1^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11} + 12\omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3 cs^4 +$$
$$12\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 36 v_1^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{11}^2 cs^2 + 12\omega_{18}\omega_6^3 \omega_{22}\omega_{13}\omega_{11} cs^2 - 36\omega_{18} v_1^2 \omega_6^3 \omega_{13}\omega_{11}^3 cs^2 \Big) \frac{v_3}{12\omega_{18}^2 \omega_6^3 \omega_{22}\omega_{13}\omega_{11}^3}$$

$C^{(3),\text{CLBM1}}_{\text{D}_x^2 \text{D}_\rho^2} = (12\omega_6 \omega_{22}\omega_{13}\omega_{11}^3 + 36\omega_{18}\omega_6^2 cs^2 \omega_{13}\omega_{11}^2 - 18\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}^2 \omega_6 cs^2 \omega_{11}^3 + 18\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 +$
$\omega_{18}^3 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 + 6\omega_{18}^2 \omega_6^2 \omega_{13}\omega_{11}^2 + 18\omega_{18}^2 \omega_6 cs^2 \omega_{22}\omega_{11}^2 - 18\omega_{18}\omega_6 \omega_{22}\omega_{13}\omega_{11}^3 + 18\omega_{18}^2 \omega_6^2 cs^2 \omega_{13}\omega_{11}^3 - 12\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 -$
$12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_6^2 cs^2 \omega_{13}\omega_{11}^3 + 12\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^3 - 6\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{11}^2 - 18\omega_{18}^2 \omega_6 cs^2 \omega_{13}\omega_{11}^2 + 12\omega_{18}^2 \omega_6 v_3^2 \omega_{11}^3 - 6\omega_{18}^2 \omega_6^2 \omega_{13}\omega_{11}^3 -$
$12\omega_{18}^2 \omega_6 \omega_{11}^3 - 2\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{13}\omega_{11}^3 + 12\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 + 18\omega_{18}\omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_{18}^2 cs^2 \omega_{22}\omega_{13}\omega_{11}^2 -$
$12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2 \omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18} cs^2 \omega_{22}\omega_{13}\omega_{11}^3 + 18\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_6^2 v_3^2 \omega_{13}\omega_{11}^3 + 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{11}^2 +$
$36\omega_{18}^2 cs^2 \omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_6 \omega_{13}\omega_{11}^3 - 12\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{13}\omega_{11}^3 + 12\omega_{18}\omega_6^2 v_3^2 \omega_{13}\omega_{11}^2 - 12\omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 -$
$6\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2 \omega_{22}\omega_{13}\omega_{11}^3 + 6\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_{18}^2 \omega_6 cs^2 \omega_{13}\omega_{11}^3 - 36\omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13} -$
$12\omega_{18}\omega_6^2 \omega_{13}\omega_{11}^2 + 12\omega_{18}^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_{18}\omega_6 cs^2 \omega_{22}\omega_{11}^2 - 36\omega_6 cs^2 \omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 + 2\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^2 -$
$18\omega_{18}\omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}^2 \omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}\omega_6^2 \omega_{13}\omega_{11}^3 + 36\omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_{11}^3 + 54\omega_{18}\omega_6 cs^2 \omega_{22}\omega_{13}\omega_{11}^3 -$
$18\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18}\omega_6^2 cs^2 \omega_{13}\omega_{11}^3 + 54\omega_{18}\omega_6 cs^2 \omega_{13}\omega_{11}^3 - \omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18} v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 -$
$36\omega_{18}\omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}\omega_6 v_3^2 \omega_{13}\omega_{11}^3 - 40\omega_{18} \omega_6 cs^2 \omega_{22}\omega_{13}\omega_{11}^3 - 18\omega_{18}^2 \omega_6^2 cs^2 \omega_{11}^3 - 6\omega_{18}^2 \omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}^2 \omega_6 \omega_{11}^3 -$
$12\omega_{18}^2 \omega_6 \omega_{22}\omega_{13} + 12\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2 \omega_{22}\omega_{13}\omega_{11}^3 + 54\omega_{18}^2 \omega_6 cs^2 \omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{11}^3 + 12\omega_{18}\omega_6 \omega_{13}\omega_{11}^3 -$
$12\omega_{18}^2 \omega_6 v_3^2 \omega_{13}\omega_{11}^3 + 5\omega_{18}^2 \omega_6^2 cs^2 \omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{11}^2 + 12\omega_{18}^2 \omega_6 \omega_{22}\omega_{11}^2 + 36\omega_{18}^2 \omega_6^2 cs^2 \omega_{22}\omega_{13}) \frac{cs^2 v_3}{12\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3}$

$C^{(3),\text{CLBM2}}_{\text{D}_x^2 \text{D}_\rho^2} = (12\omega_6 \omega_{22}\omega_{13}\omega_{11}^3 - 18\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^2 - 18\omega_{18}^2 \omega_6^2 cs^2 \omega_{11}^3 + 18\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 + \omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 + 6\omega_{18}^2 \omega_6^2 \omega_{13}\omega_{11}^2 -$
$18\omega_{18}\omega_6 \omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11}^3 - 6\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{11}^2 + 12\omega_{18}^2 \omega_6 v_3^2 \omega_{11}^3 -$
$36\omega_{18}^2 \omega_6 \omega_{22} cs^2 \omega_{11}^2 - 6\omega_{18}^2 \omega_6^2 \omega_{13}\omega_{11}^3 - 12\omega_{18}^2 \omega_6 \omega_{11}^3 - 2\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{13}\omega_{11}^3 + 12\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 + 18\omega_{18}\omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 -$
$12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}\omega_{22}\omega_{13} cs^2 \omega_{11}^3 + 12\omega_{18}^2 \omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_6^2 v_3^2 \omega_{13}\omega_{11}^3 +$
$36\omega_{18}\omega_6 \omega_{13} cs^2 \omega_{11}^3 + 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{11}^2 - 36\omega_{18}\omega_{22}\omega_{13} cs^2 \omega_{11}^2 - 12\omega_{18}\omega_6 \omega_{13}\omega_{11}^3 - 12\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{13}\omega_{11}^3 +$
$12\omega_{18}\omega_6^2 v_3^2 \omega_{13}\omega_{11}^2 - 12\omega_6 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 6\omega_{18}\omega_6^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_{18}\omega_{22}\omega_{13} cs^2 \omega_{11}^3 - 12\omega_{18}^2 \omega_{22}\omega_{13}\omega_{11}^3 + 6\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 +$
$36\omega_6^2 \omega_{22}\omega_{13} cs^2 \omega_{11}^3 + 54\omega_{18}\omega_6 \omega_{22}\omega_{13} cs^2 \omega_{11}^3 + 12\omega_{18}^2 \omega_6^2 v_3^2 \omega_{22}\omega_{13} - 12\omega_{18}\omega_6 \omega_{13}\omega_{11}^2 + 12\omega_{18}^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13} cs^2 \omega_{11} +$
$54\omega_{18}\omega_6^2 \omega_{22}\omega_{13} cs^2 \omega_{11}^2 - 12\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 + 2\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_3^2 \omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_6^2 \omega_{13}\omega_{11}^3 + 18\omega_{18}\omega_6^2 \omega_{22} cs^2 \omega_{11}^2 -$
$36\omega_6^2 \omega_{22}\omega_{13} cs^2 \omega_{11}^2 - 18\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^2 - \omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 - 36\omega_6 \omega_{22}\omega_{13} cs^2 \omega_{11}^3 - 18\omega_{18}^2 \omega_{22}\omega_{13} cs^2 \omega_{11}^3 + 12\omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3 -$
$12\omega_{18} v_3^2 \omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18}\omega_6 v_3^2 \omega_{13}\omega_{11}^3 + 36\omega_{18}^2 \omega_6 cs^2 \omega_{11}^3 + 18\omega_{18}^2 \omega_6^2 \omega_{13} cs^2 \omega_{11}^3 + 54\omega_{18}^2 \omega_6 \omega_{22}\omega_{13} cs^2 \omega_{11}^2 + 5\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13} cs^2 \omega_{11}^3 +$
$36\omega_{18}^2 \omega_6 \omega_{13} cs^2 \omega_{11}^2 + 6\omega_{18}^2 \omega_6 \omega_{11}^3 - 12\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13} + 12\omega_{18}\omega_6^2 \omega_{22}\omega_{13}\omega_{11} - 40\omega_{18}^2 \omega_6 \omega_{22}\omega_{13} cs^2 \omega_{11}^3 + 12\omega_{18}\omega_{22}\omega_{13}\omega_{11}^3 -$
$18\omega_{18}^2 \omega_6^2 \omega_{13} cs^2 \omega_{11}^3 + 36\omega_{18}^2 \omega_6 \omega_{22}\omega_{13} cs^2 - 36\omega_{18}\omega_6^2 \omega_{22}\omega_{13} cs^2 \omega_{11} + 12\omega_{18}^2 \omega_6 \omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2 \omega_6^2 v_3^2 \omega_{11}^3 + 12\omega_{18}^2 \omega_6 \omega_{13}\omega_{11}^3 -$
$12\omega_{18}^2 \omega_6 v_3^2 \omega_{13}\omega_{11}^3 - 36\omega_{18}^2 \omega_6^2 \omega_{13} cs^2 \omega_{11}^3 - 12\omega_{18}^2 \omega_6 v_3^2 \omega_{22}\omega_{11}^2 - 6\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13} cs^2 \omega_{11}^2 + 12\omega_{18}^2 \omega_6 \omega_{22}\omega_{11}^2) \frac{v_3 cs^2}{12\omega_{18}^2 \omega_6^2 \omega_{22}\omega_{13}\omega_{11}^3}$

$C^{(3),\text{CuLBM1}}_{\text{D}_x^2 \text{D}_\rho^2} = (18\omega_6^3 v_3^2 \omega_8 \omega_2 - 12\omega_6^3 \omega_8 \omega_2 - 40\omega_6^3 \omega_8^2 cs^2 \omega_2 + 12 v_3^2 \omega_8^2 \omega_2^2 + 12\omega_6^2 \omega_8^2 cs^2 \omega_2^2 + 6\omega_6^2 v_3^2 \omega_8 \omega_2 - 12\omega_6^2 v_3^2 \omega_8 - \omega_6^3 \omega_8^2 \omega_2^2 -$
$36\omega_6^3 cs^2 \omega_2 + 12\omega_6^2 \omega_8^2 \omega_2 - 12\omega_6^2 v_3^2 \omega_2 + 18\omega_6 \omega_8^2 \omega_2^2 + 36\omega_6^3 cs^2 \omega_2 + 36\omega_6^3 \omega_8^2 cs^2 + 18\omega_6^2 \omega_8^2 cs^2 \omega_2 - 18\omega_6 v_3^2 \omega_8 \omega_2^2 + 12\omega_6^2 v_3^2 \omega_8 \omega_2 - 12\omega_6^2 \omega_2 -$
$6\omega_6^2 \omega_8 \omega_2 - 6\omega_6^3 v_3^2 \omega_8 \omega_2 + 5\omega_6^3 \omega_8^2 cs^2 \omega_2 - 36\omega_6^3 \omega_8 cs^2 - 54\omega_6 \omega_8^2 cs^2 \omega_2 + 6\omega_6^2 v_3^2 \omega_8 \omega_2 - 4\omega_2^2 \omega_8^2 \omega_2 + \omega_6^3 v_3^2 \omega_8^2 \omega_2 + 12\omega_6^3 v_3^2 \omega_8 + 12\omega_6^2 \omega_8 -$
$12\omega_6^2 v_3^2 \omega_2 + 36\omega_6^2 \omega_8 cs^2 \omega_2 - 18\omega_6^3 \omega_8 \omega_2 - 12\omega_6^2 \omega_2 - 18\omega_6^3 \omega_8 cs^2 \omega_2^2 + 12\omega_6^2 \omega_8 + 6\omega_6^3 \omega_8 \omega_2^2 + 54\omega_6^3 \omega_8 cs^2 \omega_2 + 12\omega_6^3 \omega_2 - 12\omega_6^2 \omega_8^2 - 36\omega_6^2 \omega_8^2 cs^2 +$
$18\omega_6^2 \omega_8 cs^2 \omega_2^2 - 12\omega_6^3 v_3^2 \omega_8^2 \omega_2 - 6\omega_6^2 \omega_8^2 \omega_2 + 36\omega_6^2 cs^2 \omega_2 - 12\omega_6^3 v_3^2 \omega_8 - 36\omega_6^2 cs^2 \omega_2 + 12\omega_6^2 \omega_2 + 12\omega_6^3 v_3^2 \omega_2 + 4\omega_6^2 v_3^2 \omega_8^2 \omega_2) \frac{v_3 cs^2}{12\omega_6^3 \omega_8^2 \omega_2}$

$C^{(3),\text{CuLBM2}}_{\text{D}_x^2 \text{D}_\rho^2} = (-72 cs^4 \omega_3^2 \omega_4^2 \omega_1 \omega_2 + 4 v_3^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 + 108 cs^4 \omega_3^2 \omega_4 \omega_1 \omega_2^3 + 4\omega_3^2 \omega_4^2 \omega_1^3 - 52 cs^2 \omega_3^2 \omega_4^2 \omega_1^3 - 27 cs^4 \omega_3 \omega_4^2 \omega_1^3 \omega_2^3 -$
$324 v_1^2 cs^2 \omega_3^2 \omega_4^2 \omega_1 \omega_2 - 4\omega_3^2 \omega_4^2 \omega_1 \omega_2^2 - 138 v_1^2 cs^2 \omega_3^2 \omega_4^2 \omega_1^2 \omega_2 + 36 v_1^2 v_3^2 \omega_3^2 \omega_4^2 \omega_2 - 36 cs^2 \omega_3^2 \omega_4 \omega_1 \omega_2^2 - 36 cs^4 \omega_4^2 \omega_1^2 \omega_2 + 28 cs^2 \omega_3^2 \omega_4^2 \omega_1 \omega_2^2 +$

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$8cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 24v_1^2\omega_3^2\omega_4^2\omega_2^3 - 28cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 9cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 18cs^2\omega_3^2\omega_3^3\omega_2^3 + 78cs^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 24cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^3 +$
$24v_1^4\omega_3^2\omega_4^2\omega_1^3 + 54cs^4\omega_4^2\omega_1^3\omega_2^3 + 3cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 58cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 4cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 12cs^2v_3^2\omega_4^3\omega_1^3\omega_2^2 - 48v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 +$
$4cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 36cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 9cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 16cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 42v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 108cs^4\omega_3\omega_4^2\omega_1^2\omega_2^3 - 12cs^4\omega_3\omega_4^2\omega_1^3\omega_2 +$
$72v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 27cs^4\omega_3^2\omega_4\omega_1^3\omega_2^3 + 4v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 32cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 216v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 72cs^4\omega_4^2\omega_1^2\omega_2^3 + 12v_1^2\omega_3^2\omega_4\omega_1\omega_2^2 - 4v_3^2\omega_3^2\omega_4^2\omega_2^3 -$
$20cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 32cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 30v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 18cs^2v_3^2\omega_4^2\omega_1^3\omega_2^3 + 36cs^2\omega_3^2\omega_1^2\omega_2^3 + 36v_1^4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 8v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 +$
$16cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 + 138v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 96cs^4\omega_3\omega_4^2\omega_1^2\omega_2^2 + 72cs^4\omega_3^2\omega_4^2\omega_1^3 + 4cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 24v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 3cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 +$
$4cs^2v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 - 30v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 4v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 15cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 36v_1^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 60v_1^4\omega_3^2\omega_4^2\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 12cs^2\omega_4^2\omega_1^3\omega_2^2 +$
$54cs^4\omega_3^2\omega_1^3\omega_2^3 + 28cs^2\omega_3\omega_4^2\omega_1\omega_2^3 + 24v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3 - 9cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 20cs^2\omega_3^2\omega_4^2\omega_2^3 + 60v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 27v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 4\omega_3^2\omega_4^2\omega_2^3 -$
$28cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 25cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 36cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 66v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 36cs^2v_3^2\omega_3\omega_3^2\omega_1^3\omega_2 - 48v_1^2\omega_3^2\omega_4\omega_1^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 -$
$84cs^4\omega_3\omega_4^2\omega_1\omega_2 - 36v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 4v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 35cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 27v_1^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 4\omega_3^2\omega_4\omega_1^3\omega_2 + 27v_1^4\omega_3^2\omega_4^2\omega_3^2\omega_2 - 4v_3^2\omega_3^2\omega_4^2\omega_1^3 -$
$119cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 102cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 216v_1^2cs^2\omega_3^2\omega_4^2\omega_2^3 - 12v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 32cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2 + 16cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3 + 74cs^2\omega_3^2\omega_4^2\omega_1\omega_2 +$
$49cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 27v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 24cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 24cs^2\omega_4^2\omega_1^2\omega_2^3 + 324v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^2\omega_2 - 16cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 +$
$18cs^2v_3^2\omega_3^2\omega_1^3\omega_2^3 + 12v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 9cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 + 36cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2 - 108cs^4\omega_3^2\omega_1^3\omega_2^3 - 4cs^2v_3^2\omega_3\omega_4^2\omega_1\omega_2)\dfrac{v_3}{36\omega_3^2\omega_4^3\omega_1^3\omega_2^3}$

coefficient $C_{D_x^2 D_z^2 v_1}^{(3)}$ at $\dfrac{\partial^4 v_1}{\partial x_1^2 \partial x_3^2}$:

$C_{D_x^2 D_z^2 v_1}^{(3),\text{SRT}} = 0$

$C_{D_x^2 D_z^2 v_1}^{(3),\text{MRT1}} = (-3\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}^3 - 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}cs^2\omega_{11}^3 - 4\omega_{18}\omega_9\omega_6^3\omega_{13}^2\omega_{11}^3 - 8\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11}^3 + 2\omega_{18}^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11}^2 -$
$\omega_{18}^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2 + 2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11} + 4\omega_{18}\omega_9\omega_6^2v_3^2\omega_{13}^2\omega_{11} + 2\omega_{18}^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$
$4\omega_{18}\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 16\omega_{18}^2\omega_9\omega_{22}\omega_{13}^2cs^2\omega_{11}^3 - 15\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2\omega_{11} + \omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} - \omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 7\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}^2 +$
$4\omega_{18}^2\omega_9\omega_6^2\omega_{22}cs^2\omega_{11}^2 + 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 3\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11} -$
$2\omega_{18}^2\omega_9\omega_6^2\omega_{22}cs^2\omega_{11} - 4\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_9\omega_6\omega_{13}^2\omega_{11} + 2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11} + 2\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11} + 2\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} +$
$8\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 12\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11} - 6\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11}^2 + 3\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} + 6\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} -$
$2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} + 4\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 4\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 24\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 11\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11}^3 -$
$4\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 4\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 4\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2cs^2\omega_{11}^3 - 4\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11} -$
$4\omega_{18}^2\omega_9\omega_6^2v_3^2\omega_{13}^2\omega_{11} - 7\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11} + 4\omega_{18}\omega_9\omega_6^3\omega_{13}^2cs^2\omega_{11} + 4\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} + 3\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} -$
$4\omega_{18}\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 13\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2\omega_{11}^2 - 4\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 5\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 5\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} +$
$26\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11} + 4\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11} + 4\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} - 4\omega_{18}\omega_9\omega_6^2\omega_{13}^2cs^2\omega_{11} + \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}\omega_9\omega_6^3\omega_{13}^2cs^2\omega_{11} -$
$8\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 3\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2cs^2\omega_{11} - 4\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 12\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 +$
$8\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} - 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2\omega_{11} - 9\omega_{18}\omega_9\omega_6^2\omega_{22}cs^2\omega_{13}\omega_{11} + 4\omega_{18}\omega_9\omega_6^3\omega_{13}^2cs^2\omega_{11} + 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2cs^2\omega_{11} +$
$8\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2\omega_{11} + 9\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 8\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2cs^2\omega_{11} - \omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + \omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$
$6\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2cs^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11} + 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}\omega_{11} -$
$2\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + 4\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 8\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2\omega_{11})\dfrac{\rho v_1 v_3}{2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3}$

$C_{D_x^2 D_z^2 v_1}^{(3),\text{MRT2}} = (-3\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}^3 - 4\omega_{18}^2\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 4\omega_{18}\omega_9\omega_6^3\omega_{13}^2\omega_{11}^3 + 2\omega_{18}^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11}^2 - \omega_{18}^2\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$
$2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^2 + 4\omega_{18}^2\omega_9\omega_6^2\omega_{13}\omega_{11}^3cs^2 + 2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 24\omega_{18}^2\omega_9\omega_{22}\omega_{13}\omega_{11}^3cs^2 + 4\omega_{18}\omega_9\omega_6^2v_3^2\omega_{13}^2\omega_{11} +$
$11\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 + 2\omega_{18}^2\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11}^3 + 4\omega_{18}\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3cs^2 + 12\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 -$
$6\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 + \omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - \omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 7\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11}^3 + 2\omega_{18}^2\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 -$
$2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{11}^3cs^2 + 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 3\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} +$
$8\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3cs^2 - 4\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 4\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 2\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} +$
$4\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{11}^3cs^2 + 3\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 + 12\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2cs^2 + 6\omega_{18}\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11} - 16\omega_{18}^2\omega_9\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 +$
$4\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 4\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2 + 4\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2 + 2\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 + 4\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$
$4\omega_{18}\omega_9\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 8\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 8\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 2\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2\omega_{11}^3cs^2 - 4\omega_{18}^2\omega_6\omega_6^3v_3^2\omega_{13}^2\omega_{11} - 7\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} +$
$4\omega_{18}\omega_9\omega_6^3\omega_{13}^2\omega_{11}^3cs^2 + 3\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 4\omega_{18}\omega_9\omega_6^2\omega_{13}^2\omega_{11} + 5\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} -$
$5\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 4\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11} + 13\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 +$
$4\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2\omega_{11} + \omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3 + 8\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 + 3\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 4\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - 15\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 +$
$2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11}^3cs^2 + 4\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 6\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 + 4\omega_{18}\omega_9\omega_6^2\omega_{13}^2\omega_{11}^3cs^2 + 8\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3cs^2 -$
$9\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 5\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 4\omega_{18}\omega_9\omega_6^2\omega_{13}^2\omega_{11}^3cs^2 - 8\omega_{18}^2\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 4\omega_{18}^2\omega_9\omega_6^2\omega_{13}^2\omega_{11}^3cs^2 +$
$9\omega_{18}\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} - \omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} + \omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}^2\omega_{11} + 26\omega_{18}^2\omega_9\omega_6\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 6\omega_{18}\omega_9\omega_6v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$
$2\omega_{18}^2\omega_9\omega_6^3\omega_{13}^2\omega_{11}^3cs^2 + 2\omega_{18}\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} + 4\omega_{18}\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11} - 2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{13}\omega_{11} + 2\omega_{18}^2\omega_9\omega_6^3\omega_{13}\omega_{11} - 2\omega_{18}\omega_9\omega_6^2v_3^2\omega_{22}\omega_{13}^2\omega_{11} -$
$2\omega_{18}^2\omega_9\omega_6^3v_3^2\omega_{22}\omega_{13}\omega_{11} + 4\omega_9\omega_6^2\omega_{22}\omega_{13}^2\omega_{11} - 8\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3cs^2 - 2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 4\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3cs^2)\dfrac{\rho v_1 v_3}{2\omega_{18}^2\omega_9\omega_6^3\omega_{22}\omega_{13}^2\omega_{11}^3}$

$C_{D_x^2 D_z^2 v_1}^{(3),\text{CLBM1}} = 0$

$C_{D_x^2 D_z^2 v_1}^{(3),\text{CLBM2}} = 0$

$C_{D_x^2 D_z^2 v_1}^{(3),\text{CuLBM1}} = 0$

$$C^{(3),\text{CuLBM2}}_{\text{D}^2_x\text{D}^2_z v_1} =$$

$$(-75v_1^2\omega_3\omega_1^3\omega_2 - 50v_1^2\omega_3\omega_1^2\omega_2^3 + 6\omega_1\omega_2^3 - 66cs^2\omega_3\omega_2^3 - 12v_3^2\omega_3\omega_1^2\omega_2 - 66v_1^2\omega_3\omega_1^2\omega_2^2 - 36\omega_3\omega_1^3 + 36cs^2\omega_1^2\omega_2^2 + 18v_3^2\omega_3\omega_1^2\omega_2^2 - 60\omega_3\omega_1\omega_2^3 +$$
$$12v_3^2\omega_3\omega_1^3 + 6v_1^2\omega_3\omega_1^2\omega_2 + 108cs^2\omega_3\omega_1\omega_2^3 + 48v_1^2\omega_3\omega_2^3 - 6v_3^2\omega_3\omega_1\omega_2^3 - 18cs^2\omega_1^3\omega_2 + 50v_1^2\omega_3\omega_1^3\omega_2^2 - 12\omega_3\omega_1\omega_2^3 - 9v_3^2\omega_3\omega_3\omega_1\omega_2^3 - 18cs^2\omega_1\omega_2^3 - 6v_3^2\omega_3\omega_1^3\omega_2 +$$
$$42\omega_3\omega_2^3 - 9v_3^2\omega_3\omega_1\omega_2^3 + 12\omega_3\omega_1^2\omega_2^2 + 12v_3^2\omega_1^2\omega_2^2 + 23\omega_3\omega_1^2\omega_2^3 - 12v_3^2\omega_3\omega_1\omega_2^2 + 48\omega_3\omega_1^3\omega_2 - 108cs^2\omega_3\omega_1^3\omega_2 + 84cs^2\omega_3\omega_1^3 - 42cs^2\omega_3\omega_1^2\omega_2^3 -$$
$$12\omega_1^2\omega_2^3 - 23\omega_3\omega_1^3\omega_2^2 + 42cs^2\omega_3\omega_1^3\omega_2^2 - 114v_1^2\omega_3\omega_2^3 + 60v_1^2\omega_3\omega_1\omega_2^3 + 141v_1^2\omega_3\omega_1\omega_2^3 - 18cs^2\omega_3\omega_1^2\omega_2 + 6\omega_1^3\omega_2 + 6\omega_3\omega_1^2\omega_2 + 12v_3^2\omega_3\omega_2^3)\frac{\rho v_1 v_3}{18\omega_3\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\text{D}^2_x\text{D}^2_z v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1^2 \partial x_3^2}$:

$$C^{(3),\text{SRT}}_{\text{D}^2_x\text{D}^2_z v_3} = (-24 + 8cs^2\omega^2 - 12\omega^2 - cs^2\omega^3 + 12cs^2 - 18cs^2\omega - 108v_3^2\omega + 72v_3^2 + 36\omega + 36v_3^2\omega^2)\frac{\rho cs^2}{12\omega^3}$$

$$C^{(3),\text{MRT1}}_{\text{D}^2_x\text{D}^2_z v_3} = (36\omega_{18}^2\omega_6^2 v_3^2 cs^2\omega_{11}^3 - 6\omega_{18}^2 v_1^3\omega_6^3\omega_{13}\omega_{11}^3 - 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} - 12v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 24\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11}^2 -$$
$$132\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2 v_1^3\omega_6^3\omega_{22}\omega_{11}^2 + 12\omega_{18}\omega_6^2\omega_{13}cs^4\omega_{11}^3 + 72\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^3 +$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 18\omega_{18}^2\omega_6\omega_{22}\omega_{13}cs^4\omega_{11}^3 - 24\omega_{18}^2 v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_{18} v_1^2\omega_6^2 v_3^2\omega_{13}\omega_{11}^3 - 72\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_6^2\omega_{11}^3 +$$
$$18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{11}^2 - 12\omega_{18} v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 36\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - 18\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} + 60\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 -$$
$$4\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^2 + 18\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 72\omega_{18}^2 v_1^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18} v_1^2\omega_6^3\omega_{13}\omega_{11}^3 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 12\omega_{18}^2\omega_6\omega_{22}\omega_{13}cs^4\omega_{11}^2 - 36\omega_{18}^2\omega_6^2 v_3^2\omega_{13}cs^2\omega_{11}^3 - 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 + 6\omega_{18}^2\omega_6^3\omega_{22}cs^4\omega_{11}^2 - 12\omega_{18}^2\omega_6^2\omega_{13}cs^4\omega_{11}^2 -$$
$$24\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11}^3 - 12\omega_{18} v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 - 6\omega_{18}^2\omega_6^3 cs^4\omega_{11}^3 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{11}^3 + 36v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18}\omega_6^3\omega_{13}cs^4\omega_{11}^2 -$$
$$36\omega_{18}^2\omega_6^2 v_3^2\omega_{22}cs^2\omega_{11}^2 - 12\omega_{18}^2\omega_6^2 cs^2\omega_{11}^3 + 6\omega_{18}^2\omega_6^3\omega_{13}cs^4\omega_{11}^3 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 - 12\omega_{18}^2\omega_6^2\omega_{22}cs^4\omega_{11}^2 + 36\omega_{18}\omega_6^2 v_3^2\omega_{13}cs^2\omega_{11}^3 +$$
$$36\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^3 - 24\omega_{18} v_1^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 18\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 24\omega_{18} v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}\omega_6^3\omega_{13}cs^4\omega_{11}^3 -$$
$$36v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 24\omega_6 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 60\omega_{18}\omega_6 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3 - 18\omega_{18}^2\omega_6 v_3^2\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2 v_1^2\omega_6^3 cs^2\omega_{11}^3 +$$
$$36\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18} v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 - 36\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{11}^2 + 12\omega_{18}\omega_6\omega_{22}\omega_{13}cs^4\omega_{11}^3 -$$
$$36\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^3 + 36\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{11}^3 - 12\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^4\omega_{11} - 36\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{13}\omega_{11}^3 - 36\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_6^3\omega_{13}cs^4\omega_{11}^2 -$$
$$36\omega_{18}\omega_6^3 v_3^2\omega_{13}cs^2\omega_{11}^3 - 12\omega_{18} v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 - 12\omega_{18} v_1^2\omega_6^2\omega_{13}\omega_{11}^3 - 24\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 24\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 +$$
$$18\omega_{18}^2\omega_6^3 v_3^2\omega_{22}cs^2\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_6^2\omega_{13}cs^2\omega_{11}^3 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}cs^2\omega_{11}^2 + 24\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 84\omega_{18}^2\omega_6 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 +$$
$$18\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 36v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - 144\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 12\omega_{18}^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 24\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 -$$
$$108\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 12\omega_{18}^2\omega_6^2\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2\omega_6^3\omega_{22}cs^2\omega_{11}^2 - 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 + 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11} +$$
$$84\omega_{18}^2\omega_6 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18} v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^2 + 12\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 36\omega_{18}\omega_6^3 v_3^2\omega_{13}cs^2\omega_{11}^2 -$$
$$12\omega_{18}\omega_6^3\omega_{13}cs^2\omega_{11}^3 + 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18} v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 54\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^2 + 12\omega_{18}^2 v_1^2\omega_6^2\omega_{13}\omega_{11}^3 -$$
$$12\omega_{18}^2\omega_{22}\omega_{13}cs^4\omega_{11}^3 + 12\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{11}^2 + 24\omega_{18}^2 v_1^2\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 78\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 + 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2 +$$
$$12\omega_{18}\omega_6^3\omega_{13}cs^2\omega_{11}^3 + 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18} v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 42\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 72\omega_{18} v_1^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 -$$
$$18\omega_{18}^2\omega_6^3 v_3^2\omega_{13}cs^2\omega_{11}^2 - 6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^2 - 12\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 - 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{11}^2 - 12\omega_{18}\omega_6\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 24\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 -$$
$$6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^2 - 36\omega_{18} v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}^2 v_1^2\omega_6^2 cs^2\omega_{11}^3 + 12\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} + 12v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^3 +$$
$$6\omega_{18}^2\omega_6^3\omega_{13}cs^2\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_6^2\omega_{22}cs^2\omega_{11}^2 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 - 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 24\omega_{18}\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 - 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13} +$$
$$72\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11} + 18\omega_{18}^2\omega_6^3 v_3^2\omega_{13}cs^2\omega_{11}^3 + 6\omega_{18}^2\omega_6^3 cs^2\omega_{11}^3 + 12\omega_{18} v_1^2\omega_6^2\omega_{13}cs^2\omega_{11}^3 - 12\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11} +$$
$$180\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 12\omega_{18} v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_6^3\omega_{13}cs^2\omega_{11}^2 - 12v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2\omega_{11}^2 + 12\omega_{18}^2\omega_6^2\omega_{22}cs^2\omega_{11}^2 - 6\omega_{18}^2\omega_6^3\omega_{13}cs^2\omega_{11}^3 +$$
$$12\omega_{18}^2\omega_6^2 cs^4\omega_{11}^3 + 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 + 12\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 36\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}cs^2\omega_{11} - 48\omega_{18}^2 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^3 +$$
$$108\omega_{18} v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_6^3 v_3^2\omega_{22}\omega_{13}cs^2\omega_{11}^2 - \omega_{18}^2\omega_6^3\omega_{22}\omega_{13}cs^4\omega_{11}^3)\frac{\rho}{12\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3}$$

$$C^{(3),\text{MRT2}}_{\text{D}^2_x\text{D}^2_z v_3} = (-6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^3 - 6\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2 cs^4 - 108\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 12\omega_{18}\omega_6^2\omega_{13}\omega_{11}cs^4 - 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{11}^2 +$$
$$72\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^4 + 60\omega_{18}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^3 + 36\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 cs^2 -$$
$$6\omega_{18}^2 v_1^2\omega_6^3\omega_{11}^3 cs^2 - 18\omega_{18}^2\omega_6^3 v_3^2\omega_{11}^3 cs^2 - 24\omega_{18}^2 v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 36\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 72\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} -$$
$$12\omega_{18}^2 v_1^2\omega_6^2\omega_{11}^3 + 18\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{11}^2 - 12\omega_{18} v_1^2\omega_6^3\omega_{13}\omega_{11}^2 + 24\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 36\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 +$$
$$36\omega_{18}\omega_6^2 v_3^2\omega_{13}\omega_{11}^3 cs^2 - 24\omega_{18} v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 12\omega_{18}^2\omega_6^3\omega_{11}^3 cs^2 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^2 - 12\omega_{18}^2\omega_6^2\omega_{22}\omega_{11}^2 cs^4 + 60\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 -$$
$$4\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 72\omega_{18}^2 v_1^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18} v_1^2\omega_6^3\omega_{13}\omega_{11}^3 + 12\omega_{18}\omega_6^3\omega_{13}\omega_{11}^2 cs^4 - 12\omega_{18}^2\omega_6^2\omega_{13}\omega_{11}^3 cs^4 - 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 +$$
$$12\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 + 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{11}^2 cs^4 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 12\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11}^2 cs^4 - 36\omega_{18}^2\omega_6^2 v_3^2\omega_{13}\omega_{11}^3 cs^2 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{11}^3 +$$
$$36v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - 24\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{11}cs^4 - 6\omega_{18}^2\omega_6^3\omega_{11}^3 cs^4 - 12\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 -$$
$$18\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}cs^2 + 6\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2 cs^4 + 36\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 - 36\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{11}^2 cs^2 +$$
$$24\omega_{18} v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^3 + 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 36v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_6^3\omega_{13}\omega_{11}^3 cs^4 +$$
$$36\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 36v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{11}^2 - 36\omega_{18} v_1^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^3 - 132\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 +$$
$$24\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^4 + 36\omega_{18}^2 v_1^2\omega_6^2 v_3^2\omega_{11}^3 + 36\omega_{18}\omega_6^3 v_3^2\omega_{11}^2 cs^2 + 12\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 +$$
$$72\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}cs^2 - 36\omega_{18} v_1^2\omega_6^2 v_3^2\omega_{13}\omega_{11}^3 - 36v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 48\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 6\omega_6^3 v_1^2\omega_6^3\omega_{22}\omega_{11}^2 cs^2 -$$
$$84\omega_{18}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 24\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18} v_1^2\omega_6^2\omega_{13}\omega_{11}^3 - 24\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 + 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{11}^2 cs^2 -$$
$$6\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^3 cs^2 + 24\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{11}^2 cs^2 + 18\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}cs^4 + 12\omega_{18} v_1^2\omega_6^2\omega_{13}\omega_{11}^3 cs^2 -$$
$$36v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 12\omega_{18}^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 24\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 24\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 +$$
$$6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^2 cs^2 - 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 - 144\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 6\omega_{18}^2\omega_6^3\omega_{11}^3 cs^2 + 18\omega_{18}^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^3 cs^2 - 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 +$$
$$36\omega_{18}\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}^2 v_1^2\omega_6^3\omega_{11}^3 cs^2 + 12\omega_{18} v_1^2\omega_6^3\omega_{13}\omega_{11}^2 cs^2 + 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 24\omega_{18}^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 -$$
$$24\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 12\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 12\omega_{18} v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^4 - 12\omega_{18}^2\omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} -$$
$$54\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} + 24\omega_{18}^2 v_1^2\omega_6\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 18\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}^2 v_1^2\omega_6^2\omega_{13}\omega_{11} - 18\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}cs^2 +$$
$$12\omega_{18}\omega_6^3\omega_{13}\omega_{11}^3 cs^2 + 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{11}^2 - 42\omega_{18}^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 + 78\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 6\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}cs^2 -$$
$$12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18} v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}^2\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^4 -$$

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$$72\omega_{18}v_1^2\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 18\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{11}^3 + 6\omega_{18}^2\omega_6^3\omega_{13}\omega_{11}^2 cs^2 - 12\omega_{18}\omega_6^2\omega_{13}\omega_{11}^3 cs^2 -$$
$$36\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 + 84\omega_{18}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 cs^2 - 12\omega_{18}\omega_6^3\omega_{13}\omega_{11}^2 cs^2 - 6\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13} + 12\omega_6^2\omega_{13}\omega_{11}^3 cs^2 +$$
$$180\omega_{18}^2\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}^2 v_1^2\omega_6^2\omega_{22}\omega_{11}^2 cs^2 + 24\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12v_1^2\omega_6^2\omega_{22}\omega_{13}\omega_{11}^3 +$$
$$12\omega_{18}v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - \omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3 cs^4 + 36\omega_{18}^2 v_1^2\omega_6^3 v_3^2\omega_{22}\omega_{13} - 12\omega_{18}^2 v_1^2\omega_6^3\omega_{13}\omega_{11}^3 cs^2 - 36\omega_6^3 v_3^2\omega_{13}\omega_{11}^3 cs^2 + 12\omega_{18}^2\omega_6^3\omega_{11}^3 cs^4 +$$
$$108\omega_{18}v_1^2\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^3 - 12\omega_{18}^2 v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11} - 12v_1^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 cs^2 + 12\omega_{18}^2\omega_6^3\omega_{22}\omega_{11}^2 cs^2 - 12\omega_{18}v_1^2\omega_6^3\omega_{13}\omega_{11}^3 cs^2) \frac{\rho}{12\omega_{18}^2\omega_6^3\omega_{22}\omega_{13}\omega_{11}^3}$$

$C^{(3),\text{CLBM1}}_{\text{D}_x^2\text{D}_z^2 v_3} = (12\omega_6^3 cs^2\omega_{13}\omega_{11} - 12\omega_{18}\omega_6^2 cs^2\omega_{13}\omega_{11}^2 - 12\omega_6^2\omega_{13}\omega_{11}^2 - 36\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 - 6\omega_{18}\omega_6^3 cs^2\omega_{13}\omega_{11} - 6\omega_{18}\omega_6^3 cs^2\omega_{22}\omega_{13}\omega_{11} -$
$36\omega_{18}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 + 36\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_6^2 cs^2\omega_{13}\omega_{11}^2 - 36\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{11} + 72\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} -$
$12\omega_6^3 cs^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 12\omega_{18}\omega_6^2\omega_{11}^2 + 6\omega_{18}\omega_6^3 cs^2\omega_{22}\omega_{11} - 6\omega_{18}\omega_6^3\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{13} + 36\omega_{18}\omega_6^2 v_3^2\omega_{11}^2 +$
$12\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}\omega_6^3\omega_{13}\omega_{11} + 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{11} - 12\omega_{18}\omega_6^2 cs^2\omega_{22}\omega_{11} + 36\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_6^3 cs^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_6^3\omega_{11}^2 +$
$6\omega_{18}\omega_6^3 cs^2\omega_{13}\omega_{11}^2 - \omega_{18}\omega_6^3 cs^2\omega_{22}\omega_{13}\omega_{11}^2 + 36\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{11} - 72\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 18\omega_{18}\omega_6^3 v_3^2\omega_{13}\omega_{11} - 36\omega_{18}\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 -$
$12\omega_6^3 cs^2\omega_{13}\omega_{11}^2 + 36\omega_6^3 v_3^2\omega_{13}\omega_{11} - 12\omega_{18} cs^2\omega_{22}\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_6^2 cs^2\omega_{11}^2 + 18\omega_{18}\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11}^2 - 24\omega_6^2 cs^2\omega_{22}\omega_{13}\omega_{11}^2 +$
$12\omega_{18}\omega_6^2\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_6^3 cs^2\omega_{22}\omega_{13} + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_6^3\omega_{13}\omega_{11}^2 - 4\omega_{18}\omega_6^2 cs^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 12\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11}^2 +$
$36\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 - 36\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13} + 24\omega_{18}\omega_6^2 cs^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_6^3\omega_{13}\omega_{11} - 12\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} -$
$6\omega_{18}\omega_6^3 cs^2\omega_{11}^2 - 12\omega_{18}\omega_6^2 cs^2\omega_{22}\omega_{13} + 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13} + 12\omega_{18}\omega_6^2\omega_{22}\omega_{11} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 24\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_{11} -$
$18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_{18}\omega_6 cs^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}\omega_6^3 v_3^2\omega_{11}^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} + 12\omega_6^2 cs^2\omega_{22}\omega_{13}\omega_{11}) \frac{\rho cs^2}{12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2}$

$C^{(3),\text{CLBM2}}_{\text{D}_x^2\text{D}_z^2 v_3} = (-6\omega_{18}\omega_6^3 cs^2\omega_{11}^2 - 12\omega_6^3\omega_{22}\omega_{13} cs^2\omega_{11} - 12\omega_6^2\omega_{13}\omega_{11}^2 - 36\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 - 36\omega_{18}\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_6^3 v_3^2\omega_{13}\omega_{11}^2 +$
$36\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{11} + 72\omega_{18}\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11} - 12\omega_6\omega_{22}\omega_{13}\omega_{11}^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} cs^2\omega_{11} - 12\omega_{18}\omega_6^2\omega_{11}^2 - 6\omega_{18}\omega_6^3\omega_{13}\omega_{11}^2 +$
$12\omega_{18}\omega_6^2\omega_{22}\omega_{13} - \omega_{18}\omega_6^3\omega_{22}\omega_{13} cs^2\omega_{11}^2 + 36\omega_{18}\omega_6^2 v_3^2\omega_{11}^2 + 12\omega_{18}\omega_6\omega_{22}\omega_{13}\omega_{11} + 6\omega_{18}\omega_6^3\omega_{13}\omega_{11} + 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{11} -$
$12\omega_{18}\omega_{22}\omega_{13} cs^2\omega_{11}^2 + 36\omega_6 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_6^3\omega_{11}^2 + 36\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{11} - 72\omega_6^2 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 - 18\omega_{18}\omega_6^3 v_3^2\omega_{13}\omega_{11} -$
$36\omega_{18}\omega_6^2 v_3^2\omega_{13}\omega_{11}^2 + 36\omega_6^3 v_3^2\omega_{13}\omega_{11} + 12\omega_6^3\omega_{22}\omega_{13} cs^2\omega_{11}^2 + 6\omega_{18}\omega_6^3\omega_{22} cs^2\omega_{11} + 12\omega_{18}\omega_6^2\omega_{13}\omega_{11}^2 - 4\omega_{18}\omega_6^2\omega_{22}\omega_{13} cs^2\omega_{11}^2 +$
$12\omega_6\omega_{22}\omega_{13} cs^2\omega_{11}^2 - 12\omega_6^3\omega_{13} cs^2\omega_{11}^2 + 12\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 18\omega_{18}\omega_6\omega_{22}\omega_{13} cs^2\omega_{11}^2 - 24\omega_6^2\omega_{22}\omega_{13} cs^2\omega_{11}^2 + 12\omega_6^3\omega_{13}\omega_{11}^2 + 12\omega_{18}\omega_6^2 cs^2\omega_{11}^2 +$
$6\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11} + 36\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_6^3\omega_{22}\omega_{13} cs^2 + 24\omega_6^2\omega_{22}\omega_{13}\omega_{11}^2 + 6\omega_{18}\omega_6^3\omega_{13} cs^2\omega_{11}^2 - 36\omega_6^3 v_3^2\omega_{22}\omega_{13} - 12\omega_6^3\omega_{13}\omega_{11} -$
$12\omega_6^2\omega_{22}\omega_{13}\omega_{11} - 36\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 6\omega_{18}\omega_6^3\omega_{13} cs^2\omega_{11} + 12\omega_6^3\omega_{13} cs^2\omega_{11}^2 + 12\omega_6^3\omega_{13} cs^2\omega_{11} + 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13} - 12\omega_{18}\omega_6^2\omega_{13} cs^2\omega_{11}^2 -$
$12\omega_{18}\omega_6^2\omega_{22}\omega_{13} cs^2 + 12\omega_{18}\omega_6^2\omega_{22}\omega_{11} - 12\omega_{18}\omega_6\omega_{22}\omega_{13} cs^2\omega_{11} - 12\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2 - 24\omega_{18}\omega_6^2\omega_{22}\omega_{13}\omega_{11} + 12\omega_6^2\omega_{22}\omega_{13} cs^2\omega_{11} -$
$12\omega_{18}\omega_6^2\omega_{22} cs^2\omega_{11} + 24\omega_{18}\omega_6^2\omega_{22}\omega_{13} cs^2\omega_{11} - 18\omega_{18}\omega_6^3 v_3^2\omega_{22}\omega_{13}\omega_{11} - 18\omega_{18}\omega_6^3 v_3^2\omega_{11}^2 - 6\omega_{18}\omega_6^3\omega_{22}\omega_{13}) \frac{\rho cs^2}{12\omega_{18}\omega_6^3\omega_{22}\omega_{13}\omega_{11}^2}$

$C^{(3),\text{CuLBM1}}_{\text{D}_x^2\text{D}_z^2 v_3} = (-24\omega_6\omega_2^2 - 24\omega_6 cs^2\omega_2^3 + 24\omega_6\omega_2^3 + 24\omega_6 cs^2\omega_2^2 - 12\omega_8 cs^2\omega_2^2 + 36\omega_6^2 v_3^2\omega_2 - 12\omega_6\omega_8 cs^2\omega_2 - 12\omega_6^2\omega_8 cs^2 + 12 cs^2\omega_2^3 +$
$12\omega_6\omega_8 cs^2\omega_2^2 - 72\omega_6^2 v_3^2\omega_2^2 + 36\omega_6^2 v_3^2\omega_2^3 - 12\omega_2^3 + 36\omega_6 v_3^2\omega_8\omega_2^2 + 36 v_3^2\omega_2^3 + 12\omega_8\omega_2^2 + 72\omega_6 v_3^2\omega_2^2 + 12\omega_6^2 cs^2\omega_2 - 12\omega_6^2\omega_2 + 18\omega_6^2\omega_8 cs^2\omega_2 - 72\omega_6 v_3^2\omega_2^2 -$
$12\omega_6\omega_8\omega_2^2 - 12\omega_6^2\omega_2^3 + 12\omega_6^2 cs^2\omega_2^3 + 12\omega_6\omega_8\omega_2 - 4\omega_6^2\omega_8 cs^2\omega_2^2 - 36 v_3^2\omega_8\omega_2^2 - 24\omega_6^2 cs^2\omega_2^2 + 24\omega_6^2\omega_2^2 - 36\omega_6 v_3^2\omega_8\omega_2 - \omega_6^2\omega_8 cs^2\omega_2^2) \frac{\rho cs^2}{12\omega_6^2\omega_8\omega_2^3}$

$C^{(3),\text{CuLBM2}}_{\text{D}_x^2\text{D}_z^2 v_3} = (-14 cs^4\omega_3^2\omega_4\omega_1^3\omega_2 + 9v_1^4\omega_3^2\omega_4\omega_1^2\omega_2 - 18v_1^2\omega_3\omega_1^2\omega_2^3 - 14 cs^4\omega_3^2\omega_4\omega_1^2\omega_2^3 - 4\omega_3^2\omega_4\omega_1^2\omega_2 - 12v_1^2 cs^2\omega_3^2\omega_4\omega_1\omega_2^2 + 6v_1^4\omega_3\omega_4\omega_1\omega_2^3 +$
$2 cs^2\omega_3^2\omega_4\omega_1^2\omega_2 - 9v_1^2\omega_3^2\omega_4\omega_1^3\omega_2 + 18 cs^2\omega_3^2\omega_4\omega_1^3\omega_2 + 18v_1^4\omega_4\omega_1^2\omega_2^3 - 54v_1^2 cs^2\omega_3^2\omega_4^2\omega_2^2 - 36v_1^2 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 + 132 cs^2 v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 -$
$6v_1^2\omega_3\omega_4\omega_1\omega_2^2 + 72 cs^4\omega_3^2\omega_1\omega_2^2 + 8\omega_3^2\omega_4\omega_1^2\omega_2^2 + 150v_1^2 cs^2\omega_3^2\omega_4\omega_1\omega_2^2 - 108v_1^2 cs^2\omega_3^2\omega_4\omega_2^3 + 28 cs^4\omega_3^2\omega_4\omega_1^2\omega_2 - 18 cs^2\omega_3^2\omega_1^3\omega_2^2 - 12v_3^2\omega_3^2\omega_4\omega_1^3 +$
$12v_1^4\omega_3^2\omega_4\omega_1^2\omega_2 - 18v_1^2\omega_3^2\omega_1\omega_2^3 + 90v_1^2 cs^2\omega_3\omega_4\omega_1^3\omega_2^2 + 12 cs^2 v_3^2\omega_3^2\omega_4\omega_1^3 + 24 cs^2 v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 126 cs^2 v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 54v_1^2 cs^2\omega_3^2\omega_1^2\omega_2^2 +$
$18v_1^4\omega_3^2\omega_1^3\omega_2^2 - 54v_1^2 cs^2\omega_4\omega_1^3\omega_2^2 - 36 cs^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 28 cs^2\omega_3^2\omega_4\omega_2^3 - 18v_1^4\omega_3^2\omega_1^2\omega_2^3 - 90 cs^2 v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 90v_1^2 v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 72v_1^2 v_3^2\omega_3^2\omega_4\omega_1^3 +$
$216 cs^2 v_3^2\omega_3^2\omega_1\omega_2^3 - 42v_1^2\omega_3^2\omega_4\omega_1^2\omega_2 + 48 cs^2 v_3^2\omega_3\omega_4\omega_1\omega_2^3 + 54v_1^2 cs^2\omega_4\omega_1^2\omega_2^3 + 32 cs^2\omega_3^2\omega_4\omega_1^2\omega_2 + 4\omega_3^2\omega_4\omega_2^3 - 4\omega_3^2\omega_4\omega_1^2\omega_2 - 48v_1^2\omega_3^2\omega_4\omega_1^3 -$
$90v_1^2 cs^2\omega_3\omega_4\omega_1^2\omega_2^3 - 28 cs^4\omega_3^2\omega_4\omega_1^3\omega_2 + 12v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 - 36v_1^2 cs^2\omega_3\omega_4\omega_1^3\omega_2 - 3 cs^4\omega_3^2\omega_4\omega_1^3\omega_2 - 18v_1^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 66v_1^2\omega_3\omega_4\omega_1^3\omega_2 -$
$18v_1^4\omega_4\omega_1^3\omega_2 + 16 cs^4\omega_3^2\omega_4\omega_1^3 + 9v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^3 - 84 cs^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2 - 2 cs^2\omega_3^2\omega_4\omega_1\omega_2^2 + 180v_1^2 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 18v_1^4\omega_3^2\omega_1^2\omega_2^2 - 8 cs^2\omega_3\omega_4\omega_1\omega_2^3 +$
$54v_1^2 cs^2\omega_3^2\omega_1^3\omega_2^2 + 54v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 + 72 cs^2\omega_3^2\omega_1^2\omega_2^3 - 48v_1^4\omega_3^2\omega_4\omega_2^3 + 18v_1^2\omega_3\omega_1^3\omega_2^2 + 12v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 2 cs^4\omega_3^2\omega_4\omega_1^3\omega_2^2 - 9v_1^4\omega_3^2\omega_4\omega_1^2\omega_2^3 +$
$54v_1^2 cs^2\omega_3\omega_4\omega_1^2\omega_2^2 - 36v_1^4\omega_3^2\omega_4\omega_1^3\omega_2 + 8 cs^4\omega_3\omega_4\omega_1\omega_2^3 + 66 cs^2 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - v_3^4\omega_3^2\omega_4\omega_1^2\omega_2^3 - 12v_3^2\omega_3^2\omega_4\omega_2^3 - 24v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 + 132v_1^2 cs^2\omega_3^2\omega_4\omega_1^3 +$
$36 cs^2\omega_3\omega_4\omega_1^2\omega_2^3 - 36v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 + 18v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 - 144v_1^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 - 8 cs^2\omega_3\omega_4\omega_1^3\omega_2 + 12v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 54v_1^4\omega_3^2\omega_4\omega_1\omega_2^3 - 72 cs^2\omega_3^2\omega_1\omega_2^3 +$
$v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 8 cs^4\omega_3\omega_4\omega_1^3\omega_2 + 36v_1^4\omega_3\omega_4\omega_1^3\omega_2^2 - 36 cs^4\omega_3\omega_4\omega_1^2\omega_2^3 - 12v_1^2 cs^2\omega_3^2\omega_4\omega_1^2\omega_2 - 18v_1^4\omega_4\omega_1^2\omega_2^3 - 96 cs^2 v_3^2\omega_3^2\omega_4\omega_2^3 - 90v_1^2 v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 +$
$18 cs^4\omega_3^2\omega_1^3\omega_2^2 - 54v_1^2 cs^2\omega_3\omega_1^3\omega_2^2 - 56 cs^2\omega_3\omega_4\omega_1^2\omega_2^3 + 18v_1^4\omega_3^2\omega_1\omega_2^3 - 6 cs^2 v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 6 cs^2 v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 216 cs^2 v_3^2\omega_3^2\omega_1^2\omega_2^3 + 36v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 +$
$56 cs^4\omega_3\omega_4\omega_1^2\omega_2^2 + 30v_1^2 cs^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 12v_1^4\omega_3^2\omega_4\omega_1\omega_2^2 - 24v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 18v_1^2\omega_3^2\omega_1^3\omega_2^2 - 18v_1^2 cs^2\omega_3\omega_4\omega_1\omega_2^3 - 30v_1^2 cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 -$
$174v_1^2 cs^2\omega_3^2\omega_4\omega_1^3\omega_2 + 18 cs^4\omega_3\omega_4\omega_1^3\omega_2^2 + 6v_1^4\omega_3\omega_4\omega_1^2\omega_2^2 - 4\omega_3^2\omega_4\omega_1\omega_2^3 + 12v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 - 68 cs^2\omega_3^2\omega_4\omega_2^3 + 18v_1^2\omega_3^2\omega_1^2\omega_2^3 - 28 cs^4\omega_3^2\omega_4\omega_1\omega_2^2 -$
$6v_1^2\omega_3\omega_4\omega_1^2\omega_2 + 60 cs^2 v_3^2\omega_3\omega_4\omega_1\omega_2^3 - 18 cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 54v_1^2 cs^2\omega_3^2\omega_1^3\omega_2^3 + 32 cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + 6 cs^2 v_3^2\omega_3\omega_4\omega_1^3\omega_2 + 24v_1^4\omega_3^2\omega_4\omega_1^3 - v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 +$
$76 cs^4\omega_3\omega_4\omega_1\omega_2^3 + 4\omega_3^2\omega_4\omega_1^3 + 18v_1^2\omega_3^2\omega_1^2\omega_2^2 + 18v_1^4\omega_4\omega_1^3\omega_2 - 36 cs^4\omega_3\omega_4\omega_1^3\omega_2 - 4\omega_3^2\omega_4\omega_1\omega_2^3 + 108v_1^2 v_3^2\omega_3^2\omega_4\omega_2^3 - 36v_1^4\omega_3\omega_4\omega_1^2\omega_2^3 +$
$24v_1^2 cs^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 12v_1^4\omega_3\omega_4\omega_1^3\omega_2 - 20 cs^2\omega_3^2\omega_4\omega_1^3 - 48 cs^2 v_3^2\omega_3\omega_4\omega_1^2\omega_2 + 54 cs^2 v_3^2\omega_3^2\omega_1^3\omega_2^2 - 18 cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + v_3^4\omega_3^2\omega_4\omega_1\omega_2^2 +$
$12v_1^2\omega_3\omega_4\omega_1^3\omega_2 - 72 cs^4\omega_3^2\omega_1^2\omega_2^3 + 12v_1^2\omega_3^2\omega_4\omega_2^3 - 18v_1^4\omega_3\omega_1^3\omega_2^2 + 36v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 + 36 cs^2\omega_3\omega_4\omega_1^3\omega_2^2 + 54v_1^2 cs^2\omega_3^2\omega_1\omega_2^3) \frac{\rho}{36\omega_3^2\omega_4\omega_1^3\omega_2^3}$

coefficient $C^{(3)}_{\text{D}_x\text{D}_y\text{D}_z^2\rho}$ at $\frac{\partial^4\rho}{\partial x_1\partial x_2\partial x_3^2}$:

$C^{(3),\text{SRT}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = 0$

$C^{(3),\text{MRT1}}_{\text{D}_x\text{D}_y\text{D}_z^2\rho} = (-\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 +$
$2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11} - \omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8 +$

$$\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 + \omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 + \omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{11}^2\omega_8 + \cdots$$

$$\left(\cdots - 3\omega_{18}\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 \right) \frac{v_1 v_2 v_3}{\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8}$$

$$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = \left(-3\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3 cs^2 - \omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8 - 3\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 cs^2 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + \cdots \right.$$

$$\left. \cdots - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8 cs^2 \right) \frac{v_1 v_2 v_3}{\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8}$$

$$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = 0$$

$$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = 0$$

$$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho} = 0$$

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$$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2\rho}^{(3),\mathrm{CuLBM2}} = (6\omega_1\omega_2^3 + 2v_1^2\omega_2^3 + 6v_2^2\omega_1^2\omega_2^2 + 4v_3^2\omega_1^3 - 12\omega_1\omega_2^2 - 72cs^2\omega_1^2\omega_2 - 3v_2^2\omega_1^3\omega_2 + 12v_3^2\omega_1\omega_2^2 + 36cs^2\omega_1^2\omega_2^2 - 3v_1^2\omega_1\omega_2^2 + 36cs^2\omega_1^3 - 6v_2^2\omega_1^2\omega_2 - 18cs^2\omega_1^3\omega_2 + 4v_2^2\omega_1^3 - 4v_3^2\omega_2^2 - 18cs^2\omega_1\omega_2^2 + 6v_1^2\omega_1^2\omega_2^2 + 36cs^2\omega_1\omega_2 - 3v_1^2\omega_1^3\omega_2 + 24\omega_1^2\omega_2 + 4v_1^2\omega_1^3 - 12\omega_1^2\omega_2 - 12\omega_1^3 + 2v_2^2\omega_2^3 - 12v_3^2\omega_1^2\omega_2 - 3v_2^2\omega_1\omega_2^3 + 6\omega_1^3\omega_2 - 6v_1^2\omega_1^2\omega_2)\frac{v_1 v_2 v_3}{6\omega_1^3\omega_2^3}$$

coefficient $C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1}^{(3)}$ **at** $\frac{\partial^4 v_1}{\partial x_1 \partial x_2 \partial x_3^2}$:

$$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1}^{(3),\mathrm{SRT}} = 0$$

$$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1}^{(3),\mathrm{MRT1}} = (-9\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6^3\omega_{19}\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^3\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^3\omega_{19}^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_5 + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2 cs^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 + 8\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8\omega_5 - 4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_7^3\omega_{11}^3\omega_8\omega_5 + \omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_7^3\omega_{11}^3\omega_8^2 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2 - 2\omega_{18}^2\omega_6^2\omega_{19}^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 4\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 11\omega_{18}^2\omega_6^3\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 2\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 - 6\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 11\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2 cs^2\omega_{20}\omega_{11}^3\omega_8 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^3\omega_{19}^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^3\omega_{19}^2 cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^3\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 9\omega_{18}^2\omega_6^3\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 15\omega_{18}^2\omega_6\omega_6\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 15\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^3\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 9\omega_{18}^2\omega_6^3\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7 cs^2\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6\omega_6\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_7^3\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6\omega_6\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2 + 5\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2 cs^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_7^3\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_7^3\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_7^3\omega_{11}^2\omega_8^2\omega_5 + 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 13\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_8^2\omega_5 + 4\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^3\omega_{19} cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 8\omega_{18}^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5)\frac{\rho v_2 v_3}{2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5}$$

$$C_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_1}^{(3),\mathrm{MRT2}} = (-2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 13\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 + 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 5\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2 cs^2 + 2\omega_{18}^2\omega_6^3\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 9\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 3\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 + 3\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_7^3\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 - 6\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5 cs^2 - \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 - 8\omega_{18}^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2\omega_6\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 6\omega_{18}^2\omega_6^3\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 6\omega_{18}^2\omega_6^3\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 + 3\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_7^3\omega_{11}^2\omega_8^2\omega_5 cs^2 - \omega_{18}^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 15\omega_{18}^2\omega_6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 + 2\omega_{18}\omega_6^3\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$

$$4\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2 cs^2 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$\omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_{11}^3\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_5 cs^2 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_5 cs^2 +$$
$$4\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + \omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5 +$$
$$2\omega_{18}^2\omega_6^3\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_5 + 4\omega_{18}^2\omega_6^3\omega_{19}\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 +$$
$$\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 11\omega_{18}^2\omega_6^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 + 3\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - \omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + \omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8^2\omega_5 -$$
$$11\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 + 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_7\omega_{11}^3\omega_8^2\omega_5 cs^2 - 6\omega_{18}^2\omega_6^3\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 9\omega_{18}^2\omega_6^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_5 cs^2 - 2\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8\omega_5 - 4\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 +$$
$$5\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 6\omega_{18}^2\omega_6^3\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 9\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + \omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 - 8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8\omega_5 - 8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}^2\omega_6^3 v_3^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^3\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 +$$
$$8\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_5 cs^2 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2 cs^2 +$$
$$2\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8\omega_5 - 2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8\omega_5 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8\omega_5 cs^2 - 2\omega_{18}\omega_6^3\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{20}\omega_8^2\omega_5 +$$
$$4\omega_{18}^2\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 15\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6^3 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$12\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^3 v_3^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_6^3 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5)\frac{\rho v_2 v_3}{2\omega_{18}^2\omega_6^3\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5}$$

$C^{(3),\text{CLBM1}}_{D_x D_y D_z^2 v_1} = 0$

$C^{(3),\text{CLBM2}}_{D_x D_y D_z^2 v_1} = 0$

$C^{(3),\text{CuLBM1}}_{D_x D_y D_z^2 v_1} = 0$

$C^{(3),\text{CuLBM2}}_{D_x D_y D_z^2 v_1} = (-96 v_2^2\omega_3^2\omega_4^2\omega_2^3 + 63\omega_3\omega_4^2\omega_1^3\omega_2^2 - 48 v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 63 v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 144\omega_3^2\omega_4^2\omega_1^3 + 336 cs^2\omega_3^2\omega_4^2\omega_1^3 + 144 v_2^2\omega_3\omega_4^2\omega_1^2\omega_2^3 +$
$24\omega_3^2\omega_4^2\omega_1\omega_2^2 - 24 v_2^2\omega_3\omega_4^2\omega_1^3\omega_2 + 144\omega_3^2\omega_4\omega_1^2\omega_2^3 + 180 v_3^2\omega_3\omega_3\omega_4\omega_1^2\omega_2^3 - 432 cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 54 v_2^2\omega_4^2\omega_1^3\omega_2 - 72 cs^2\omega_3^2\omega_4^2\omega_1\omega_2 + 72 v_1^2\omega_3^2\omega_4^2\omega_2 -$
$189 cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 72\omega_3\omega_4\omega_1^2\omega_2^2 - 60 v_2^2\omega_3\omega_4^2\omega_1^2\omega_2 + 12 v_3\omega_3\omega_4\omega_1\omega_2 - 36\omega_3^2\omega_4^2\omega_1\omega_2^2 - 36 v_2^2\omega_3\omega_4\omega_1\omega_2^2 - 72 v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 108\omega_3\omega_4^2\omega_1^3\omega_2 +$
$324 cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 36 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 180 cs^2\omega_3^2\omega_4\omega_1\omega_2^2 + 216 cs^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 144 cs^2\omega_3\omega_4^2\omega_1^3\omega_2 + 324 cs^2\omega_3\omega_4^2\omega_1^3\omega_2 + 189 cs^2\omega_3^2\omega_4\omega_1^3\omega_2^2 -$
$72 v_2^2\omega_4^2\omega_1^2\omega_2^3 - 108 v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 63 v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 108 v_3^2\omega_3\omega_4\omega_4\omega_1^3\omega_2^2 - 63\omega_3\omega_4\omega_1^3\omega_2^2 - 108\omega_3\omega_4^2\omega_1^3\omega_2^3 + 24 v_2^2\omega_4^2\omega_4\omega_1\omega_2^2 - 180 v_2^2\omega_3\omega_4\omega_4\omega_1^2\omega_2^3 +$
$48\omega_3\omega_4^2\omega_1^3\omega_2 - 36 v_3^2\omega_4^2\omega_1^3\omega_2 - 36 v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 48 v_3^2\omega_3^2\omega_4^2\omega_2^3 - 216 cs^2\omega_3^2\omega_4\omega_1^3\omega_2 - 144 cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 54 v_3^2\omega_3^2\omega_1^3\omega_2^3 - 36 v_3^2\omega_3\omega_4\omega_1\omega_2^3 +$
$36 v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 48\omega_3\omega_4^2\omega_1^2\omega_2^2 + 108 v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 72 v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 36 v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 72\omega_3^2\omega_4\omega_1^3\omega_2^2 + 72 v_2^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 144 cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 +$
$216 v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 432 cs^2\omega_3\omega_4\omega_1^2\omega_2^3 - 54 v_2^2\omega_3^2\omega_1^3\omega_2^3 - 48 v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 20 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 72\omega_4^2\omega_1^3\omega_2^2 - 144\omega_3\omega_4^2\omega_1^2\omega_2^3 - 72 v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 +$
$36 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 96\omega_3^2\omega_4^2\omega_1^2\omega_2 - 216 cs^2\omega_4^2\omega_1^3\omega_2^2 - 36 cs^2\omega_3\omega_4^2\omega_1\omega_2^3 - 120 cs^2\omega_3^2\omega_4\omega_4^3 + 24\omega_3^2\omega_4^2\omega_2^3 + 60 cs^2\omega_3^2\omega_4\omega_1^3\omega_2 - 108 v_1^2\omega_3^2\omega_4\omega_4\omega_1^3\omega_2 +$
$48 v_2^2\omega_3^2\omega_4^2\omega_1 - 108 v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 36 v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 144 v_1^2\omega_3^2\omega_4\omega_4^3 + 324 cs^2\omega_4^2\omega_1^3\omega_2^3 + 36 v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 - 20\omega_3^2\omega_4\omega_1^3\omega_2^2 + 36 v_3^2\omega_3\omega_4\omega_1\omega_2^3 +$
$72 v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 - 36 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 36 v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 108\omega_4^2\omega_1^3\omega_2^3 + 12\omega_3\omega_4^2\omega_1\omega_2^3 + 20\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 36 v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1^3\omega_2 -$
$36 v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 24 v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 48 v_3^2\omega_3^2\omega_4^2\omega_1^3 + 24 v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 108\omega_3\omega_4\omega_1^3\omega_2^3 - 324 cs^2\omega_3\omega_4\omega_1^3\omega_2^3 + 108 v_2^2\omega_3^2\omega_1^3\omega_2^3 - 360 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 -$
$60 cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 36 v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 - 72\omega_3\omega_4\omega_1^3\omega_2^2 + 144\omega_4^2\omega_1^2\omega_2^3 + 20 v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 54 v_3^2\omega_3^2\omega_1^3\omega_2^3 - 432 cs^2\omega_4^2\omega_1^2\omega_2^3 - 36\omega_3\omega_4\omega_1\omega_2^3 -$
$108\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 24 v_2^2\omega_3\omega_4\omega_1\omega_2^2 + 12 v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 180 cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 216 v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 108 cs^2\omega_3\omega_4\omega_1^3\omega_2^2 + 216 cs^2\omega_3\omega_4\omega_1^3\omega_2^2)\frac{\rho v_2 v_3}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(3)}_{D_x D_y D_z^2 v_2}$ at $\frac{\partial^4 v_2}{\partial x_1 \partial x_2 \partial x_3^2}$:

$C^{(3),\text{SRT}}_{D_x D_y D_z^2 v_2} = 0$

$C^{(3),\text{MRT1}}_{D_x D_y D_z^2 v_2} = (9\omega_{18}\omega_6\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6\omega_7 v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 +$
$2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^3\omega_8 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}^2\omega_7^3 cs^2\omega_3^2\omega_{11}^3\omega_8^2\omega_5 -$
$5\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 12\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$
$8\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 5\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_2^2\omega_5 +$
$2\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 9\omega_{18}\omega_6^2\omega_6^2\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$
$4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 - 3\omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$
$8\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2 v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 6\omega_6^2\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$
$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^3\omega_{11}^2\omega_8^2\omega_5 - 2\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^3\omega_{11}\omega_8\omega_5 + \omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$
$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2 v_3^2\omega_3^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_6^2 v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$
$2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}^2\omega_6\omega_6 v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$
$2\omega_{18}^2\omega_6\omega_{19}\omega_7^3 cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^3 cs^2\omega_7\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3 cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 +$
$2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 +$

$$8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - \omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_5 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 15\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2cs^2\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_6v_3^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8^3\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3cs^2\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 +$$
$$4\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6v_3^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^3cs^2\omega_{20}\omega_{11}^3\omega_5 - 6\omega_6^2\omega_{19}^3\omega_7^3cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3cs^2\omega_{11}^3\omega_8^2\omega_5 +$$
$$2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6v_3^3\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2v_3^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 -$$
$$\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 - 3\omega_{18}\omega_6^2\omega_{19}^3\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6^2v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 + 4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 + \omega_{18}^2\omega_6^3v_3^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 9\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 11\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 +$$
$$2\omega_{18}^2\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3cs^2\omega_{11}^3\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 6\omega_6^2\omega_{19}^3\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 +$$
$$4\omega_{18}^2\omega_6\omega_{19}^3cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - \omega_{18}^2\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{11}\omega_8\omega_5 + 2\omega_{18}^2\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 -$$
$$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_7^3\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2 + 8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 15\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{11}^3\omega_8^2\omega_5 -$$
$$\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}\omega_6\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$\omega_{18}^2\omega_6^2v_3^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 11\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$3\omega_{18}\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8 -$$
$$2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 6\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3cs^2\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}\omega_6^2v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$2\omega_{18}^2\omega_6\omega_{19}\omega_7cs^2\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}\omega_8\omega_5 - 13\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 -$$
$$6\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$6\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3cs^2\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_{19}^2\omega_7^2cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$8\omega_{18}^2\omega_6^2\omega_{19}^2cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6\omega_{19}^2\omega_7cs^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2v_3^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5)\,\dfrac{\rho v_1 v_3}{2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5}$$

$$C_{D_xD_yD_z^2v_2}^{(3),\mathrm{MRT2}} = (-\omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6^2\omega_{19}^3\omega_7\omega_{11}^2\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}^2\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 13\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 - 5\omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^3\omega_5 +$$
$$4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 5\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}v_3^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 6\omega_{18}^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 6\omega_{18}^2\omega_6\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 -$$
$$2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 3\omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 11\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 + 9\omega_{18}\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2v_3^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 -$$
$$2\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3cs^2\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8\omega_5 cs^2 + 2\omega_{18}^2\omega_6v_3^2\omega_{19}^3\omega_7^3\omega_{11}^3\omega_8^2\omega_5 -$$
$$8\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6\omega_{19}^3\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6v_3^3\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 +$$
$$2\omega_{18}^2\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 8\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8^2\omega_5 cs^2 + 12\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 +$$
$$\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2v_3^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 - \omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_6^2v_3^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 - 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 11\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 3\omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$3\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 -$$
$$\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_5 cs^2 - 3\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 -$$
$$2\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 - 6\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 - 2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 6\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 - 2\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 -$$
$$2\omega_{18}^2\omega_6v_3^3\omega_{19}^3\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6^2v_3^3\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 15\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_5 cs^2 + 2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 9\omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2v_3^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}^2\omega_6\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_5 cs^2 + \omega_{18}^2\omega_6^2v_3^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 - 6\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}^2\omega_6^2v_3^3\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6^2v_3^3\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$2\omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 + 15\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 4\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 -$$
$$6\omega_{18}\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 cs^2 - \omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 + 8\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 cs^2 + \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 -$$
$$2\omega_{18}^2\omega_6\omega_{19}^3\omega_7^3\omega_{11}^3\omega_8\omega_5 + 2\omega_{18}^2\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 - 2\omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 -$$
$$2\omega_{18}^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6\omega_{19}\omega_{19}^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 8\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7^3\omega_{20}\omega_{11}\omega_8\omega_5 cs^2 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 - 8\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + \omega_{18}^2\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8^2\omega_5 +$$
$$3\omega_{18}\omega_6v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 9\omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$4\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 4\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8\omega_5 cs^2 + 2\omega_{18}^2\omega_6^2\omega_{19}^3\omega_7^3\omega_{11}^3\omega_8\omega_5 + 4\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 -$$
$$2\omega_{18}^2\omega_6\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + \omega_{18}\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8\omega_5 cs^2 -$$
$$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 3\omega_{18}^2\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5 + 6\omega_{18}^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 -$$
$$4\omega_{18}\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 + 2\omega_{18}\omega_6v_3^3\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8^2\omega_5 + 4\omega_{18}^2\omega_6^2v_3^3\omega_{19}^2\omega_7^3\omega_{20}\omega_8^2\omega_5 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8\omega_5 cs^2 + 2\omega_6\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 6\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 cs^2 +$$
$$2\omega_6^2v_3^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 - 2\omega_{18}^2\omega_6^2v_3^2\omega_{19}\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{11}^3\omega_8^2\omega_5 cs^2 - 2\omega_{18}^2\omega_6^2v_3^3\omega_7^3\omega_{20}\omega_{11}^2\omega_8^2\omega_5)\,\dfrac{\rho v_1 v_3}{2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^3\omega_{20}\omega_{11}^3\omega_8^2\omega_5}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_2} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_2} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_2} = 0$$

$C^{(3),\text{CuLBM2}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_2} = (72v_2^2\omega_3^2\omega_4^2\omega_2^3 + 63\omega_3\omega_4^2\omega_1^3\omega_2^3 - 48v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 144\omega_3^2\omega_4^2\omega_1^3 + 54v_1^2\omega_4^2\omega_1^3\omega_2^3 + 336cs^2\omega_3^2\omega_4^2\omega_1^3 + 24\omega_3^2\omega_4^2\omega_1\omega_2^3 + 144\omega_3^2\omega_4\omega_1^2\omega_2^3 + 180v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 432cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 36v_1^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 72cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 60v_1^2\omega_3\omega_4\omega_1^2\omega_2^2 - 96v_1^2\omega_3^2\omega_4^2\omega_2^2 - 189cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 72\omega_3^2\omega_4\omega_1^2\omega_2^2 + 12v_3\omega_3\omega_4^2\omega_1\omega_2^3 - 36v_1^2\omega_4^2\omega_1^3\omega_2^2 - 36\omega_3^2\omega_4\omega_1\omega_2^3 - 72v_3^2\omega_4^2\omega_1^2\omega_2^3 - 108\omega_3\omega_4^2\omega_1^3\omega_2^3 + 144v_1^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 324cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 24v_1^2\omega_3\omega_4^2\omega_1^3\omega_2 + 180cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 216cs^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 63v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 - 144cs^2\omega_3\omega_4^2\omega_1^3\omega_2 + 324cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 72v_1^2\omega_3\omega_4\omega_1^3\omega_2^3 + 36v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 189cs^2\omega_3\omega_4\omega_1^3\omega_2^3 + 108v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 72v_1^2\omega_4^2\omega_1^2\omega_2^3 - 108v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 - 63\omega_3^2\omega_4\omega_1^3\omega_2^3 - 108\omega_3\omega_4^2\omega_1^2\omega_2^3 + 48\omega_3\omega_4^2\omega_1^3\omega_2 - 36v_3^2\omega_4^2\omega_1^3\omega_2 - 36v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 + 24v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 + 48v_3^2\omega_3^2\omega_4^2\omega_2 - 180v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 - 216cs^2\omega_3\omega_4\omega_1^3\omega_2^2 - 144cs^2\omega_3\omega_4\omega_1^2\omega_2^2 - 63v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 + 54v_3^2\omega_4^2\omega_1^3\omega_2^3 - 36v_3^2\omega_3\omega_4\omega_1\omega_2^3 + 48\omega_3\omega_4^2\omega_1^2\omega_2 - 108v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 + 72v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 36v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 + 72\omega_3^2\omega_4\omega_1^2\omega_2^2 + 72v_1^2\omega_3\omega_4\omega_1\omega_2^3 - 144cs^2\omega_3^2\omega_4^2\omega_1\omega_2 - 36v_1^2\omega_3^2\omega_4\omega_1^2\omega_2 + 432cs^2\omega_3\omega_4\omega_1^2\omega_2^3 + 36v_1^2\omega_3\omega_4\omega_1^3\omega_2^2 - 48v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 + 72\omega_4^2\omega_1^3\omega_2^2 - 54v_1^2\omega_3^2\omega_1^3\omega_2^3 - 144\omega_3\omega_4\omega_1^2\omega_2^3 - 108v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 36v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 96\omega_3^2\omega_4^2\omega_1^2\omega_2 - 216cs^2\omega_4^2\omega_1^3\omega_2^2 - 36cs^2\omega_3\omega_4^2\omega_1\omega_2^3 - 120cs^2\omega_3^2\omega_4^2\omega_2^3 - 20v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 24\omega_3^2\omega_4\omega_2^3 + 60cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 72v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 144v_2^2\omega_3^2\omega_4^2\omega_1^3 - 108v_3^2\omega_3^2\omega_4^2\omega_1^3 + 48v_1^2\omega_3^2\omega_4^2\omega_1^3 + 324cs^2\omega_4^2\omega_1^3\omega_2^3 + 36v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 20\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 36v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 216v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 36v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 108\omega_4^2\omega_1^3\omega_2^3 + 12\omega_3\omega_4^2\omega_1\omega_2^3 + 20\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 36v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 144\omega_3^2\omega_4^2\omega_1\omega_2 - 24v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 + 48v_3^2\omega_3^2\omega_4^2\omega_1^3 + 108v_1^2\omega_3^2\omega_1^2\omega_2^3 - 216v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 108\omega_3\omega_4\omega_1^3\omega_2^3 - 324cs^2\omega_3\omega_4\omega_1^3\omega_2^3 - 24v_1^2\omega_3\omega_4^2\omega_1\omega_2^3 - 360cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 60cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 20v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 36v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 - 72\omega_3\omega_4\omega_1^3\omega_2^2 + 144\omega_4^2\omega_1^2\omega_2^3 + 54v_3^2\omega_3^2\omega_1^3\omega_2^3 - 432cs^2\omega_4^2\omega_1^2\omega_2^3 - 36\omega_3\omega_4\omega_1\omega_2^3 - 108\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 12v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 + 180cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 24v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 + 108cs^2\omega_3^2\omega_4\omega_1\omega_2^3 - 36v_1^2\omega_3\omega_4\omega_1^2\omega_2^2 + 216cs^2\omega_3\omega_4\omega_1^3\omega_2^2)\frac{\rho v_1 v_3}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(3)}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_1 \partial x_2 \partial x_3^2}$:

$$C^{(3),\text{SRT}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3} = 0$$

$C^{(3),\text{MRT1}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3} =$
$(-3\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + 6\omega_{18}\omega_6 v_3^2\omega_3^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8 + \omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + 3\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 + \omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}^2 cs^2\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_{19}^2\omega_7^2 cs^2\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7 cs^2\omega_{11}^3\omega_8 - \omega_{18}\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2 + \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{11}^2\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8 - 3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^2\omega_8 - 2\omega_{18}\omega_6^2\omega_{19}^2\omega_2^2\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{11}^3\omega_8 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_8 + \omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19} cs^2\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7 cs^2\omega_{11}^3 + 3\omega_{18}^2\omega_6 v_3^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 - 3\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 - \omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}^2\omega_6^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{11}^3 + 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{11}^2 - \omega_{18}\omega_6\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^3 + 3\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7 cs^2\omega_7^3\omega_{11}\omega_8 - \omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^2\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 - 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{11}^3 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_7\omega_{11}^3\omega_8 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - 2\omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{11}^3\omega_8 - \omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - \omega_{18}\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{11}^3\omega_8 + \omega_{18}\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{11}^3 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 - \omega_6\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - 3\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 + 6\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8 + \omega_{18}\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 + \omega_6^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2 - \omega_{18}\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}^3\omega_8 - \omega_{18}^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{11}^3 - \omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8 - 3\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 - 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2 cs^2\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 - 6\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^3 + 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{11}^2\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 + \omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 3\omega_6 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 3\omega_{18}^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_7^3\omega_{11}\omega_8 - \omega_{18}\omega_6^2\omega_7 cs^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 + \omega_{18}^2\omega_6\omega_{19}\omega_7 cs^2\omega_{11}^3\omega_8 + \omega_{18}\omega_6\omega_{19}^2\omega_7 cs^2\omega_{11}^3\omega_8 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 - 9\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}\omega_8 - 3\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6\omega_{19}\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{11}^3\omega_8 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}\omega_6^2\omega_{19}^2\omega_7 cs^2\omega_{20}\omega_{11}^2\omega_8)\frac{\rho v_1 v_2}{\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8}$

$C^{(3),\text{MRT2}}_{\text{D}_x\text{D}_y\text{D}_z^2 v_3} = (-\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{11}^3 cs^2 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_8 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{11}\omega_8 cs^2 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + 6\omega_{18}\omega_6 v_3^2\omega_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^3\omega_{11}\omega_8 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}\omega_8 + \omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + 3\omega_6^2 v_3^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}^2\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 + \omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + 2\omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 - \omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 - \omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 +$

$$3\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_7\omega_{11}^3 + \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3 cs^2 -$$
$$3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2\omega_8 - 3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2 cs^2 +$$
$$6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^3\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_8 -$$
$$3\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^2\omega_8 cs^2 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 - 3\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 +$$
$$\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2 - \omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^3\omega_{11} - \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8 cs^2 + \omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 +$$
$$6\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{11}^3 + 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 +$$
$$2\omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}\omega_6\omega_{19}^2\omega_7^3\omega_{11}\omega_8 cs^2 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8 cs^2 + 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 +$$
$$3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}^3 + 3\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 +$$
$$2\omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^2\omega_8 cs^2 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}\omega_8 cs^2 - 2\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 cs^2 +$$
$$\omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}\omega_8 cs^2 -$$
$$2\omega_{18}\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 + \omega_{18}^2\omega_6^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 -$$
$$\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 + \omega_{18}^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^3 -$$
$$\omega_{18}^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 - 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^2\omega_8 + 2\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_8 cs^2 + \omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 -$$
$$3\omega_{18}\omega_6 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3 + 6\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 -$$
$$\omega_{18}^2\omega_6\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 cs^2 + \omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{11}^3\omega_8 -$$
$$\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{11}^3\omega_8 cs^2 + 3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}^3 - \omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 +$$
$$\omega_{18}\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 cs^2 - \omega_{18}^2\omega_6^2\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 - \omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 - \omega_{18}^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}\omega_6^2\omega_{19}\omega_{20}\omega_{11}^2\omega_8 -$$
$$2\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 cs^2 - 3\omega_{18}^2\omega_6 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 - 2\omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 6\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - \omega_{18}\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2 cs^2 +$$
$$3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3\omega_8 - 3\omega_{18}\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^3 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3 cs^2 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^3 cs^2 - \omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 -$$
$$\omega_{18}\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 cs^2 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_7\omega_{20}\omega_{11}\omega_8 + \omega_{18}\omega_6^2\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2 + \omega_{18}^2\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}\omega_8 +$$
$$3\omega_0 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 - 3\omega_{18} v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + \omega_{18}\omega_6\omega_{19}^2\omega_7\omega_{20}\omega_{11}^3\omega_8 +$$
$$\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 + 2\omega_{18}^2\omega_6\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^2\omega_8 - 9\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{20}\omega_{11}\omega_8 + 2\omega_{18}^2\omega_6\omega_{19}\omega_7^2\omega_{20}\omega_{11}^2\omega_8 cs^2 +$$
$$\omega_{18}^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}^3\omega_8 cs^2 - 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 - 3\omega_{18}^2\omega_6 v_3^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8 + \omega_{18}^2\omega_6^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 cs^2 + 3\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_{20}\omega_{11}^3\omega_8 -$$
$$\omega_{18}^2\omega_6^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 + 3\omega_{18}\omega_6^2 v_3^2\omega_{19}^2\omega_7^2\omega_{11}^3\omega_8 + 6\omega_{18}^2\omega_6^2 v_3^2\omega_{19}\omega_7\omega_{20}\omega_{11}^3\omega_8 - \omega_{18}^2\omega_6^2\omega_{19}\omega_7^2\omega_{11}^3\omega_8 cs^2) \frac{\rho v_1 v_2}{\omega_{18}^2\omega_6^2\omega_{19}^2\omega_7^2\omega_{20}\omega_{11}\omega_8}$$

$$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$$

$$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_3} = 0$$

$$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_3}$$

$$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_x\mathrm{D}_y\mathrm{D}_z^2 v_3} = (-4v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 - 3v_1^2\omega_3\omega_1^2\omega_2^3 - 18cs^2\omega_3^2\omega_1^3\omega_2^2 + 6\omega_3^2\omega_1^3\omega_2^2 + 6\omega_3^2\omega_4\omega_1^3\omega_2 - 18cs^2\omega_3^2\omega_4\omega_1^3\omega_2 - 3v_2^2\omega_3\omega_1^2\omega_2^3 + v_1^3\omega_3\omega_4\omega_1\omega_2^3 -$$
$$12\omega_3^2\omega_4\omega_1^2\omega_2^2 + v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 18cs^2\omega_4\omega_1^2\omega_2^3 - 6\omega_4\omega_1^2\omega_2^3 + 12v_3^2\omega_3^2\omega_4\omega_1^3 - 3v_1^2\omega_3^2\omega_1\omega_2^3 - 3v_2^2\omega_3^2\omega_1\omega_2^3 - 4v_1^2\omega_3^2\omega_4\omega_1^2\omega_2 + 36cs^2\omega_3^2\omega_4\omega_1^2\omega_2^2 +$$
$$20cs^2\omega_3^2\omega_4\omega_2^3 + 6v_1^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 4v_2^2\omega_3^2\omega_4\omega_1^3 - 36cs^2\omega_3^2\omega_4\omega_1^2\omega_2 - 4\omega_3^2\omega_4\omega_2^3 + 20\omega_3^2\omega_4\omega_1^2\omega_2 - 18cs^2\omega_4\omega_1^3\omega_2^2 - 6\omega_3^2\omega_1^2\omega_2^2 + 4v_1^2\omega_3^2\omega_4\omega_1^3 -$$
$$3v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + 36v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 6\omega_4\omega_1^3\omega_2^2 + 18cs^2\omega_3^2\omega_1^2\omega_2^2 - 3v_1^2\omega_3^2\omega_4\omega_1^3\omega_2 + 3v_2^2\omega_3\omega_4\omega_1^3\omega_2 + 6cs^2\omega_3\omega_4\omega_1\omega_2^3 + 18cs^2\omega_3^2\omega_1^2\omega_2^3 +$$
$$3v_1^2\omega_3\omega_1^3\omega_2^2 + 6v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 2\omega_3\omega_4\omega_1\omega_2^3 - 6\omega_3^2\omega_1^2\omega_2^3 - 12v_3^2\omega_3^2\omega_4\omega_2^3 + 3v_2^2\omega_4\omega_1^2\omega_2^3 - 3v_1^2\omega_3\omega_4\omega_1\omega_2^3 - 18cs^2\omega_3\omega_4\omega_1^2\omega_2^3 + 3v_1^3\omega_3\omega_4\omega_1^3\omega_2^2 -$$
$$12cs^2\omega_3\omega_4\omega_1^3\omega_2 + 4\omega_3\omega_4\omega_1^3\omega_2 + 6\omega_3\omega_4\omega_1^2\omega_2^3 - 18cs^2\omega_3^2\omega_1\omega_2^3 - 4v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 + 6\omega_3^2\omega_1\omega_2^3 + 3v_1^2\omega_4\omega_1^2\omega_2^3 - 3v_2^2\omega_3^2\omega_1^3\omega_2^2 + 6cs^2\omega_3\omega_4\omega_1^2\omega_2^2 -$$
$$4v_1^2\omega_3\omega_4\omega_1\omega_2^2 + 6\omega_3\omega_1^2\omega_2^3 + 3v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 2\omega_3\omega_4\omega_1^2\omega_2^2 - 3v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 3v_1^2\omega_3^2\omega_1^3\omega_2^3 - 18cs^2\omega_3\omega_1^2\omega_2^3 - 2v_2^2\omega_3\omega_4\omega_1^3\omega_2 - 6\omega_3\omega_1^3\omega_2^2 -$$
$$3v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 4\omega_3^2\omega_4\omega_1\omega_2^3 - 36v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 + 18cs^2\omega_3\omega_1^3\omega_2^2 + 3v_1^2\omega_3^2\omega_1^2\omega_2^3 + v_1^3\omega_3\omega_4\omega_1^2\omega_2^2 + 3v_2^2\omega_3^2\omega_1^2\omega_2^3 - 12cs^2\omega_3^2\omega_4\omega_1\omega_2^2 - 12v_3^2\omega_3\omega_4\omega_1^3 -$$
$$6\omega_3\omega_4\omega_1^3\omega_2^2 + 3v_1^2\omega_3^2\omega_1^2\omega_2^2 + 4v_2^2\omega_3^2\omega_4\omega_2^3 - 3v_1^2\omega_4\omega_1^2\omega_2^3 + v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 + 6\omega_3^2\omega_4\omega_1^3 + 28cs^2\omega_3^2\omega_4\omega_1^3 - 3v_2^2\omega_4\omega_1^3\omega_2^2 - 18cs^2\omega_3^2\omega_4\omega_1\omega_2^2 -$$
$$2v_1^2\omega_3\omega_4\omega_1^3\omega_2 + 3v_2^2\omega_3^2\omega_1^2\omega_2^2 + 4v_1^2\omega_3^2\omega_4\omega_2^3 - 3v_1^2\omega_3\omega_4\omega_1^2\omega_2^3 + 18cs^2\omega_3\omega_4\omega_1^3\omega_2^2) \frac{\rho v_1 v_2}{6\omega_3^2\omega_4\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}$ **at** $\frac{\partial^4\rho}{\partial x_2^2\partial x_3^2}$ **:**

$$C^{(3),\mathrm{SRT}}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho} = (24 - 46cs^2\omega^2 + 14\omega^2 + 5cs^2\omega^3 - 72cs^2 - \omega^3 + 108cs^2\omega + 36v_3^2\omega + v_3^2\omega^3 - 24v_3^2 - 36\omega - 14v_3^2\omega^2) \frac{v_3 cs^2}{12\omega^3}$$

$$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho} = (6v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11} - 6v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 - 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 - 12v_3^2\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 +$$
$$6v_3^2\omega_{19}^2\omega_7^3\omega_{23} cs^2\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11} + 180\omega_{19}^2\omega_{16}\omega_7\omega_{23} cs^4\omega_{11}^3 - 18\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^2 + 108v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 -$$
$$12v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 12v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 18v_2^2\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^2 - 12v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 +$$
$$12v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2 - 2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11} - 84\omega_{19}^2\omega_{16}\omega_7\omega_{23} cs^4\omega_{11}^2 + 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$6v_2^2 v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 - 18v_2^2\omega_{19}^2\omega_7 cs^2\omega_{11}^3 + 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11} - 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} cs^2 + 12v_2^2\omega_{19}\omega_7^2\omega_{23}\omega_{11} + 24v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} +$$
$$18v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 + v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^3 - 6v_2^2\omega_{19}\omega_7^3\omega_{23} cs^2\omega_{11}^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^2 +$$
$$6\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^3 + 18v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 + 12\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 - 12v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 54v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11} -$$
$$12v_3^2\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 - 36v_2^2\omega_{19}\omega_{16}\omega_7^3 cs^2\omega_{11}^3 - 12v_2^2 v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 36\omega_{19}\omega_{16}\omega_7^3 cs^4\omega_{11}^3 - 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3 - 18\omega_{19}\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 +$$
$$72v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^2 - 18\omega_{19}^2\omega_{16}\omega_7^3 cs^4\omega_{11}^2 - 12\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^3 - 6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^3 - 18v_2^2\omega_{19}^2\omega_{16}\omega_7^3 cs^2\omega_{11}^2 +$$
$$12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_3^2\omega_{19}^2\omega_7 cs^2\omega_{11}^3 + 12\omega_{19}\omega_7^3\omega_{23} cs^2\omega_{11}^2 - \omega_{19}^2\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^3 - 72v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^2 - 12v_2^2 v_3^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11} -$$
$$12\omega_{19}\omega_{16}\omega_7^2 cs^2\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} cs^2\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2 cs^2\omega_{11}^3 - 12v_3^2\omega_{19}^2\omega_7^2\omega_{23} cs^2\omega_{11}^2 + 36v_2^2\omega_{19}\omega_{16}\omega_7^3 cs^2\omega_{11}^2 +$$
$$12\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11} + 36\omega_{19}\omega_{16}\omega_7^3 cs^4\omega_{11}^2 + 6v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2 - 24v_2^2 v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11}^3 +$$
$$24v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} cs^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^3 cs^2\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7\omega_{23} cs^4\omega_{11}^3 + 36\omega_{19}^2\omega_7^3 cs^4\omega_{11}^3 +$$

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$$12v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 18v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 18v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 +$$
$$6\omega_{19}^2\omega_7^3cs^2\omega_{11}^3 + 24v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 + 18\omega_{19}^2\omega_{16}\omega_7^3cs^4\omega_{11}^3 - 12v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23} - 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 18v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 +$$
$$18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 + 12\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$72\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^3 + 12v_2^2v_3^2\omega_{19}^2\omega_7^2\omega_{11}^3 - 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^2 -$$
$$88\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^3 - 96\omega_{19}^2\omega_{16}\omega_{23}cs^4\omega_{11}^3 + 18\omega_{19}^2\omega_7^3\omega_{23}cs^4\omega_{11}^2 + 18v_2^2\omega_{19}^2\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 12\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^3 + 36v_2^2\omega_{19}^2\omega_7^2cs^2\omega_{11}^3 -$$
$$36v_2^2\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{11}^3 + 30\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11}^3 + 18v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 36\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11} - 12v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^3 -$$
$$24v_2^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11} - 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^3 + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 24v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 42\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11}^2 +$$
$$24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 150\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^3 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 12v_2^2\omega_{19}^2\omega_7^2\omega_{11}^3 + 12v_2^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 72v_2^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 +$$
$$12\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11} - 12\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^2 + 12v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^2 -$$
$$36v_2^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11} - 48\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11} - 36\omega_{19}^2\omega_{16}\omega_7^2cs^4\omega_{11}^3 - 12\omega_{19}^2\omega_7^2cs^2\omega_{11}^3 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 -$$
$$6v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{11}^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 -$$
$$18\omega_{19}^2\omega_7^3cs^4\omega_{11}^3 + 12\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11}^2 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^3 - 36v_2^2\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 6v_3^2\omega_{19}^2\omega_7^3cs^2\omega_{11}^2 - 24v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 + 6v_2^2\omega_{19}\omega_7^3\omega_{11}^3 +$$
$$12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 6v_3^2\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^3 + 6v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 - 12\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11}^3 -$$
$$42\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^3 + 36v_2^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 6\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{11}^2 - 36\omega_{19}^2\omega_7^2\omega_{23}cs^4\omega_{11}^3 + 12v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 36v_2^2\omega_{19}^2\omega_7^2\omega_{23}cs^2\omega_{11}^2 +$$
$$36\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{11}^3 + 36v_2^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 5\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11}^3 + 36\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^4)\dfrac{v_3}{12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3}$$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(3),\mathrm{MRT2}} =$

$$(6v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 6\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 + 18v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2 + 180\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 + 6v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 -$$
$$6v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 - 12v_2^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 36\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^4 + 12\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 18\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 +$$
$$12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 - 2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^2 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} -$$
$$18\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 36\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^4 + 12v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^2 -$$
$$48\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^4 - \omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^2 + 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 + 6v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 -$$
$$12\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^4 - 18\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 + 12v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 - 18\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^4 - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 +$$
$$12v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{11}^2 + 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 18v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 12\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 +$$
$$18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 12v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 36\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^4 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} +$$
$$v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 18v_2^2\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 -$$
$$72v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 12v_2^2v_3^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 72v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 -$$
$$84\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 - 18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 24v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 +$$
$$12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 + 12v_3^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 + 36\omega_{19}^2\omega_7^3\omega_{11}^3cs^4 + 24v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 108v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 -$$
$$12v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 + 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 12v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 +$$
$$18\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3cs^4 - 18v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 18v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 +$$
$$24v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 + 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 6v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$36v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 36v_2^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}^2cs^4 + 12v_3^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 96\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3cs^4 +$$
$$12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 + 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 - 12v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 +$$
$$18v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 30\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 - 6v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 + 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 - 88\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 -$$
$$12v_2^2\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 18v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 - 24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 +$$
$$36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 24v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 - 36v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3cs^2 -$$
$$12\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 + 24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 12v_2^2v_3^2\omega_{19}^2\omega_7^2\omega_{11}^3 +$$
$$12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2 - 36\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}cs^4 + 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 150\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 - 6v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2 -$$
$$42\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 + 72v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 - 6v_2^2v_3^2\omega_{19}\omega_7^3\omega_{11}^3 - 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 -$$
$$36v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 18\omega_{19}\omega_7^3\omega_{11}^3cs^4 - 12v_2^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 -$$
$$54v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 - 24v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 12v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 36v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 6v_2^2\omega_{19}^2\omega_7^3\omega_{11}^3 +$$
$$12v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 + 18\omega_{19}\omega_7^3\omega_{23}\omega_{11}^3cs^4 + 6v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{11}^2 + 36\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 + 5\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 +$$
$$72v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 + 12v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2 - 12\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 42\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 +$$
$$12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}\omega_{11}cs^2 + 12v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2cs^2 - 36v_2^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2cs^2)\dfrac{v_3}{12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3}$$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(3),\mathrm{CLBM1}} = (-18\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 36cs^2\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^2 + 18cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3 - 36cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_7^2\omega_{19}\omega_7\omega_{23}\omega_{11}^3 -$

$$18\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 6\omega_{19}^2\omega_7^2\omega_{11}^3 + 18v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 12\omega_{16}\omega_7\omega_{23}\omega_{11}^3 - 36cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 18cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 +$$
$$36cs^2\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 18cs^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2 - 18cs^2\omega_{19}^2\omega_7^3\omega_{11}^3 - 12v_3^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 -$$
$$12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 36cs^2\omega_{19}^2\omega_{16}\omega_7\omega_{23} + 18v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{19}\omega_7\omega_{11}^3 + 12\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3 - 6\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 -$$
$$18cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 6cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 12v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 6\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^3 + 54cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 6\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 -$$
$$36cs^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 - 12\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3 + 36cs^2\omega_{19}\omega_{16}\omega_7\omega_{11}^3 + 12v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 -$$
$$12\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 5cs^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 54cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 - 12v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 36cs^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 -$$
$$36cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 54cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2 + 12v_3^2\omega_{19}\omega_{16}\omega_7\omega_{11}^3 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{11}^3 + 36cs^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 12\omega_{19}\omega_7\omega_{23}\omega_{11}^3 -$$
$$12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 40cs^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 36cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{11} - 36cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3 +$$
$$18v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 12\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 36cs^2\omega_{19}\omega_7\omega_{11}^3 + 6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3 - 6v_3^2\omega_{19}\omega_7\omega_{11}^3 +$$
$$v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 + 6v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3 - 36cs^2\omega_{19}\omega_7^2\omega_{23}\omega_{11}^3 - 36cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 - \omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} +$$
$$12v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 12\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 6v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 12\omega_{19}\omega_7\omega_{11}^3 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 - 2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 6v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 -$$
$$18\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3 + 6v_3^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^3)\dfrac{cs^2v_3}{12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3}$$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2\rho}^{(3),\mathrm{CLBM2}} = (-18\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 36\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 + 36\omega_{19}^2\omega_{16}\omega_7^2cs^2\omega_{23} - 12v_3^2\omega_{19}^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 36\omega_{19}^2\omega_{16}cs^2\omega_{23}\omega_{11}^3 -$

$18\omega_{19}^2\omega_{16}\omega_7^2cs^2\omega_{11} - 18\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 6\omega_{19}^2\omega_7^2\omega_{11}^3 + 36\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11}^3 + 5\omega_{19}^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{11}^3 - 36\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{11}^3 + 36\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 + 18v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 12\omega_{16}\omega_7\omega_{23}\omega_{11}^3 - 36\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 6v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_7\omega_{23}\omega_{11} - 12v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{11}^3 - 36\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_7\omega_{11}^3 + 18v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 + 12v_3^2\omega_{19}^2\omega_7\omega_{11}^3 + 18\omega_{19}^2\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 36\omega_{19}^2\omega_{16}cs^2\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 36\omega_{19}^2\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 36\omega_{19}^2\omega_7cs^2\omega_{11}^3 + 54\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11}^2 - 12v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 6\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2 + 6v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^2 + 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3 - 12v_3^2\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 18\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{11}^3 + 18\omega_{19}^2\omega_7^2cs^2\omega_{23}\omega_{11}^2 - 12v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 40\omega_{19}^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 36\omega_{16}\omega_7cs^2\omega_{23}\omega_{11}^3 - 18\omega_{19}^2\omega_7cs^2\omega_{11}^3 + 12v_3^2\omega_{19}\omega_{16}\omega_7\omega_{11}^3 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{11}^3 + 54\omega_{19}^2\omega_{16}\omega_7cs^2\omega_{23}\omega_{11}^2 + 12\omega_{19}^2\omega_7\omega_{23}\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 12v_3^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 36\omega_{19}\omega_{16}\omega_7cs^2\omega_{11}^3 + 18v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 12\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 6\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 12v_3^2\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^2 - 6v_3^2\omega_{19}^2\omega_7^2\omega_{11}^3 + v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 6v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^3 + 54\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{11}^3 - 36\omega_{19}^2\omega_7cs^2\omega_{23}\omega_{11}^2 - \omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 12\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 6v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 12\omega_{19}^2\omega_7\omega_{11}^3 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 - 2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 36\omega_{19}\omega_{16}\omega_7cs^2\omega_{11}^3 - 6v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2 - 18\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3 + 12v_3^2\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3 + 6v_3^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^3)\dfrac{v_3cs^2}{12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3}$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho} = (12v_3^2\omega_3^3\omega_{10}^2 + 18\omega_6^3v_3^2\omega_3\omega_{10} - 12\omega_6^2\omega_3\omega_{10} + 18\omega_6^2\omega_3\omega_{10}^2cs^2 - 36\omega_6^3\omega_{10}cs^2 + 6\omega_6^2v_3^2\omega_3\omega_{10} + 18\omega_6^2\omega_3\omega_{10}cs^2 - \omega_6^3\omega_3^2\omega_{10} + 36\omega_6^3\omega_{10}^2cs^2 - 12\omega_6^2v_3^2\omega_3^2 - 18\omega_6^3\omega_3^2\omega_{10}cs^2 + 18\omega_6\omega_3^2\omega_{10}^2 + 36\omega_6^3\omega_3^2cs^2 + 6\omega_6^3\omega_3^2\omega_{10} - 54\omega_6\omega_3^2\omega_{10}^2cs^2 - 36\omega_6^2\omega_{10}cs^2 - 12\omega_3^2\omega_{10} + 12\omega_6^2v_3^2\omega_3\omega_{10} - 12\omega_6^2v_3^2\omega_{10}^2 - 40\omega_6^3\omega_3\omega_{10}^2cs^2 - 18\omega_6v_3^2\omega_3^2\omega_{10} - 6\omega_6^2\omega_3\omega_{10} - 12\omega_6^3v_3^2\omega_3\omega_{10} + 54\omega_6^3\omega_3\omega_{10}cs^2 + 6\omega_6^2v_3^2\omega_3\omega_{10} - 12\omega_6^3\omega_{10} + 12\omega_6^3v_3^2\omega_3 + 12\omega_6^2\omega_3^2 - 4\omega_6^2\omega_3^2\omega_{10} + \omega_6^3v_3^2\omega_3\omega_{10}^2 - 12\omega_6^3v_3^2\omega_{10} + 12\omega_6^3\omega_3 + 5\omega_6^3\omega_3^2\omega_{10}^2cs^2 - 36\omega_6^3\omega_3cs^2 - 18\omega_6^3\omega_3\omega_{10} + 12\omega_6^2\omega_3^2\omega_{10}^2cs^2 + 12\omega_6^3\omega_3\omega_{10} + 12\omega_6^2\omega_{10}^2 + 12\omega_6^3v_3^2\omega_{10}^2 - 12\omega_6^3\omega_3^2 - 36\omega_6^2\omega_3^2cs^2 + 36\omega_6^3\omega_{10}^2cs^2 + 36\omega_6\omega_3\omega_{10}cs^2 - 6\omega_6^2v_3^2\omega_3^2\omega_{10} - 6\omega_6^2\omega_3^2\omega_{10} + 4\omega_6^3v_3^2\omega_3^2\omega_{10}^2 + 12\omega_6^3\omega_{10} - 12\omega_6^3v_3^2\omega_3)\dfrac{v_3cs^2}{12\omega_6^3\omega_3^2\omega_{10}^2}$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_y^2\mathrm{D}_z^2\rho} = (-72cs^4\omega_3^2\omega_4^2\omega_1\omega_2^2 + 24v_2^2\omega_3^2\omega_4^2\omega_2^3 + 4v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 108cs^4\omega_3^2\omega_4\omega_1^2\omega_2^2 + 4\omega_3^2\omega_4^2\omega_1^3 - 52cs^2\omega_3^2\omega_4\omega_1^3 - 27cs^4\omega_3\omega_4^2\omega_1^3\omega_2^3 - 4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 36cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 36cs^4\omega_4^2\omega_1^3\omega_2^2 + 28cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 8cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 216cs^2v_2^2\omega_3^2\omega_4^2\omega_2^3 - 30v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 28cs^2v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 + 9cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 24v_4^2\omega_3^2\omega_4^2\omega_1^3 - 4\omega_3^2\omega_4\omega_1\omega_2^3 - 18cs^2\omega_3^2\omega_1^3\omega_2^3 + 78cs^4\omega_3^2\omega_4\omega_1\omega_2^3 - 48v_2^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 36v_2^2v_3^2\omega_3^2\omega_4^2\omega_2^3 - 24cs^2v_3^2\omega_3^2\omega_1^2\omega_2^3 + 54cs^4\omega_3^2\omega_1^3\omega_2^3 + 3cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 58cs^2\omega_3^2\omega_4\omega_1\omega_2^3 - 4cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 12cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 4cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 36cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 + 9cs^2\omega_3^2\omega_4\omega_4^3\omega_2^3 + 16cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 324cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 36v_4^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 108cs^4\omega_3\omega_4^2\omega_1^2\omega_2^3 - 12cs^4\omega_3\omega_4^2\omega_1^3\omega_2 + 12v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 27cs^4\omega_3^2\omega_4\omega_4^3\omega_2^3 + 4v_3^2\omega_3^2\omega_4^2\omega_4^3\omega_1\omega_2 + 72v_4^2\omega_3^2\omega_4\omega_1\omega_2^3 - 32cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 72cs^4\omega_4^2\omega_1^2\omega_2^3 - 4v_3^2\omega_3^2\omega_4^2\omega_2^3 - 20cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 32cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 18cs^2v_3^2\omega_4^2\omega_1^3\omega_2^3 + 36cs^2\omega_3^2\omega_1^2\omega_2^3 - 42v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 8v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 16cs^2v_3^2\omega_3^2\omega_4^2\omega_2^3 + 96cs^4\omega_3\omega_4^2\omega_1^2\omega_2^2 + 72cs^4\omega_3^2\omega_4^2\omega_4^3 - 36v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 4cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 3cs^2\omega_3^2\omega_4\omega_4^3\omega_2^3 - 27v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 4cs^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 60v_2^4\omega_3^2\omega_4^2\omega_2^3 + 4v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 27v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 15cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 66v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 24v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3 - 4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 12cs^2\omega_4^2\omega_1^3\omega_2^3 + 54cs^4\omega_3^2\omega_1^3\omega_2^3 + 28cs^2\omega_3\omega_4\omega_1\omega_2^3 - 9cs^2v_3^2\omega_3\omega_4^2\omega_4^3\omega_2^3 - 12v_2^2\omega_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 20cs^2\omega_3^2\omega_4^2\omega_2^3 + 4\omega_3^2\omega_4^2\omega_2^3 - 138cs^2v_2^2\omega_3^2\omega_4^2\omega_2^3 - 28cs^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 25cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 - 36v_2^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 36cs^2v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 36cs^2v_3^2\omega_3^2\omega_1^2\omega_2^3 - 324cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 - 48v_2^2\omega_3^2\omega_4^2\omega_1^3 + 216cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3 - 18cs^2\omega_4^2\omega_1^3\omega_2^3 - 84cs^4\omega_3\omega_4^2\omega_1\omega_2^3 - 24v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 4v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 35cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 4v_3^2\omega_3^2\omega_4^2\omega_1^3 - 119cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 12v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 102cs^4\omega_3^2\omega_4\omega_1^3\omega_2 + 32cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 60v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 16cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3 + 74cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 138cs^2v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 49cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 24cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 27v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 24cs^2\omega_4^2\omega_1^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_2^2 + 27v_4^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 16cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 18cs^2v_3^2\omega_3^2\omega_1^3\omega_2^3 - 9cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 36cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 108cs^4\omega_3^2\omega_1^3\omega_2^3 - 4cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 - 30v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2)\dfrac{v_3}{36\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C^{(3)}_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2}$ **at** $\dfrac{\partial^4 v_2}{\partial x_2^2 \partial x_3^2}$**:**

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_y^2\mathrm{D}_z^2 v_2} = (-9\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^3 + 2\omega_{19}^2\omega_{16}^2\omega_7^2\omega_{23}cs^2\omega_{11}^3 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 4v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^3 - v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11}^2 - 15\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} + 8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 3v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 8\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^3 + 2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^3 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11}^3 - 4v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^3 + 4\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 8\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 - 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 + 3v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2cs^2\omega_{11}^3 + 8\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^3 + 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3 - 4v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 4v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^3 + 8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2cs^2\omega_{11}^3 + \omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^3 + 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3 + 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 9v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 4v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}cs^2\omega_{11}^2 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11}^2 - 8\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2cs^2\omega_{11}^3 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 4v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11} - 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^3 + 5\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 7\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^2 - 6\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 4\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^3 + 12\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2 + 13\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 6v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 4v_3^2\omega_{19}\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3 + 26\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^3 - 16\omega_{19}^2\omega_{16}\omega_{10}\omega_{23}cs^2\omega_{11}^3 + 3\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 - 2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^3 + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3 - 4v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 8\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11} + 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^3 + 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2cs^2\omega_{11}^3 + 12\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 - 3v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 11\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 5v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 4\omega_{16}^2\omega_{10}\omega_7^3cs^2\omega_{11}^3 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^3 + 4v_3^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 7v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 + 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2)\dfrac{\rho v_2 v_3}{2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3}$

$$C_{D_y^2 D_z^2 v_2}^{(3),\text{MRT2}} = (-9\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^3 - 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3 cs^2 + 4v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{11}^3 - v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 - \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 cs^2 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 cs^2 - 2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 cs^2 - 3v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 + 8\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 cs^2 + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 cs^2 + 2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^4\omega_{11}^2 - 24\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 cs^2 - 4v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^3 - 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 - 8\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 cs^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^4\omega_{11}^2 + 3\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 8\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} cs^2 + 4\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 cs^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}cs^2 - 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} cs^2 + 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^2 + 8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 cs^2 - 4v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 4v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23} - 4v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 + \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 3\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23} + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^3 + 2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 + 4\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 9v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 8\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 cs^2 + 4v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 cs^2 - 8\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 + 2\omega_{19}^2\omega_{16}^2\omega_7^2\omega_{23}\omega_{11}^3 cs^2 - 15\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} cs^2 - 2\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^2 - 4v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} + 5\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^2 - 6\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 cs^2 + 11\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 cs^2 - 7\omega_{19}\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 - 4\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^3 - 4\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{11}^2 cs^2 - 6v_3^2\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3 + 4\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 cs^2 - 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3 + 4v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^2\omega_{11}^3 + 13\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 + 12\omega_{19}^2\omega_{16}\omega_{10}\omega_7\omega_{23}\omega_{11}^3 cs^2 + 4\omega_{19}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 cs^2 + 3\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{11}^2 + 2\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 cs^2 - 4v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} - 2\omega_{19}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 cs^2 + 2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3 + 26\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3 cs^2 + 6\omega_{19}\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^3 - 16\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 cs^2 - 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 - 3v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 - \omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 - 5v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} - 4\omega_{19}^2\omega_{16}^2\omega_7\omega_{23}\omega_{11}^3 cs^2 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11} + 2v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7\omega_{23}\omega_{11}^2 + 2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11} cs^2 + 4v_3^2\omega_{16}^2\omega_{10}\omega_7^2\omega_{23}\omega_{11}^3 + 7v_3^2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 + 4\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^2 - 2v_3^2\omega_{19}^2\omega_{16}\omega_{10}\omega_7^3\omega_{11}^3 - 5\omega_{19}\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3 cs^2 + 4\omega_{19}\omega_{16}^2\omega_{10}\omega_7^4\omega_{11}^2 cs^2 - \omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}) \frac{\rho v_2 v_3}{2\omega_{19}^2\omega_{16}^2\omega_{10}\omega_7^3\omega_{23}\omega_{11}^3}$$

$$C_{D_y^2 D_z^2 v_2}^{(3),\text{CLBM1}} = 0$$

$$C_{D_y^2 D_z^2 v_2}^{(3),\text{CLBM2}} = 0$$

$$C_{D_y^2 D_z^2 v_2}^{(3),\text{CuLBM1}} = 0$$

$$C_{D_y^2 D_z^2 v_2}^{(3),\text{CuLBM2}} =$$
$$(6\omega_1\omega_2^3 - 66cs^2\omega_3\omega_2^3 - 50v_2^2\omega_3\omega_1^2\omega_2^3 - 75v_2^2\omega_3\omega_1^3\omega_2 - 12v_3^2\omega_3\omega_1^2\omega_2 - 66v_2^2\omega_3\omega_1^2\omega_2^2 - 36\omega_3\omega_1^3 - 114v_2^2\omega_3\omega_2^3 + 6v_2^2\omega_3\omega_1^2\omega_2 + 36cs^2\omega_1^2\omega_2^2 + 18v_3^2\omega_3\omega_1^2\omega_2^2 - 60\omega_3\omega_1\omega_2^3 + 12v_3^2\omega_3\omega_1^3 + 108cs^2\omega_3\omega_1\omega_2^3 + 50v_2^2\omega_3\omega_1^3\omega_2^2 - 6v_3^2\omega_1\omega_2^3 - 18cs^2\omega_1^3\omega_2 - 12\omega_3\omega_1\omega_2^2 - 9v_3^2\omega_3\omega_1^3\omega_2 - 18cs^2\omega_1\omega_2^3 - 6v_3^2\omega_3\omega_1^3\omega_2 + 42\omega_3\omega_2^3 - 9v_3^2\omega_3\omega_1\omega_2^3 + 12\omega_3\omega_1^2\omega_2^2 + 12v_3^2\omega_1^2\omega_2^2 + 23\omega_3\omega_1^2\omega_2^3 - 12v_3^2\omega_3\omega_1\omega_2^2 + 48\omega_3\omega_1^3\omega_2 - 108cs^2\omega_3\omega_1^3\omega_2^3 + 84cs^2\omega_3\omega_1^3 - 42cs^2\omega_3\omega_1^2\omega_2^3 - 12\omega_1^2\omega_2^2 - 23\omega_3\omega_1^3\omega_2^2 + 42cs^2\omega_3\omega_1^3\omega_2^2 + 60v_2^2\omega_3\omega_1\omega_2^3 - 18cs^2\omega_3\omega_1^2\omega_2 + 6\omega_1^3\omega_2 + 48v_2^2\omega_3\omega_1^3 + 6\omega_3\omega_1^2\omega_2 + 12v_3^2\omega_3\omega_2^3 + 141v_2^2\omega_3\omega_1\omega_2^3) \frac{\rho v_2 v_3}{18\omega_3\omega_1^3\omega_2^3}$$

coefficient $C_{D_y^2 D_z^2 v_3}^{(3)}$ **at** $\frac{\partial^4 v_3}{\partial x_2^2 \partial x_3^2}$:

$$C_{D_y^2 D_z^2 v_3}^{(3),\text{SRT}} = (-24 + 8cs^2\omega^2 - 12\omega^2 - cs^2\omega^3 + 12cs^2 - 18cs^2\omega - 108v_3^2\omega + 72v_3^2 + 36\omega + 36v_3^2\omega^2) \frac{\rho cs^2}{12\omega^3}$$

$$C_{D_y^2 D_z^2 v_3}^{(3),\text{MRT1}} = (-108v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11} + 18v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11} - 18v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 - 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 + 24v_3^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 + 18v_3^2\omega_{19}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 48v_3^2\omega_{19}^2\omega_{16}\omega_{23}cs^2\omega_{11}^3 + 72v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11} + 18\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^4 + 12\omega_{19}\omega_{16}^3\omega_{23}cs^2\omega_{11}^2 + 36\omega_7^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 + 60v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 12v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{11}^2 + 36v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 24\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11} - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11} - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11} - 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^4\omega_{11} + 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 + 18v_2^2v_3^2\omega_{19}\omega_{16}^3\omega_7^3\omega_{11}^2 - 6v_2^2\omega_{19}^2\omega_7^3cs^2\omega_{11}^3 + 12v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11} + 12v_2^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2 + 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 + 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 6\omega_{19}^2\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^3 - 132v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11} + 24v_3^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 12v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^3 - 36v_2^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{11}^3 - 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 + 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 + 24v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 6\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{11}^2 + 78v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^3 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 + 36\omega_3^3\omega_{19}\omega_7^2cs^2\omega_{11}^3 + 12\omega_{19}^2\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 24v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 36v_2^2v_3^2\omega_{19}^2\omega_7^2\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 42v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 - 36v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 36v_3^2\omega_{19}^2\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{11}^2 + 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^2 - 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 36v_2^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 - 24v_3^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^3 + 24v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^3 + 18v_2^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11} + 12\omega_{19}\omega_{16}\omega_7\omega_{23}cs^4\omega_{11}^3 + 12\omega_{19}^2\omega_7cs^4\omega_{11}^3 + 36v_3^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 54v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 180v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 - 36v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 6v_2^2\omega_{19}^2\omega_7^3cs^2\omega_{11}^2 + 72v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3cs^4\omega_{11}^3 - 12v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23} - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^3 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^3 - 144v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 12\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 6v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2 - 24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^3 + 36v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3 - 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 12v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 - 4v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^3 - 12\omega_{19}\omega_{16}\omega_{23}cs^4\omega_{11}^3 + 6\omega_{19}\omega_7^3\omega_{23}cs^4\omega_{11}^2 + 6v_2^2\omega_{19}^2\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 12v_2^2\omega_{19}\omega_7^2cs^2\omega_{11}^2 - 12v_2^2\omega_{16}\omega_7^2\omega_{23}cs^2\omega_{11}^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11}^3 + 18v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11} + 60v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^3 - 24v_2^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 + 108v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 72v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^3 + 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^3 - 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 12v_2^2\omega_{19}\omega_7^2\omega_{11}^3 + 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 + 24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^2 + 84v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 18v_3^2\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{11}^2 - 12v_2^2\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11} - 12\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{11}^3 - 12\omega_{19}\omega_7^2cs^2\omega_{11}^3 + 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 18v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3 - 6v_2^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 36v_2^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^4\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 36v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^3 -$$

$$6\omega_{19}^2\omega_7^3cs^4\omega_{11}^3 - 6\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11}^2 - 12v_2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 - 18v_3^2\omega_{19}^2\omega_7^3cs^2\omega_{11}^3 - 24v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 +$$
$$6v_2^2\omega_{19}^2\omega_7^3\omega_{11}^3 + 36v_3^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3 + 18v_3^2\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^3 + 18v_2^2v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{11}^2 - 84v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}cs^2\omega_{11}^2 -$$
$$24\omega_{19}\omega_{16}\omega_7^2\omega_{23}cs^4\omega_{11} + 12v_2^2\omega_{16}\omega_7^3\omega_{23}cs^2\omega_{11}^2 + 6\omega_{19}^2\omega_{16}\omega_7^3cs^2\omega_{11}^2 - 12\omega_{19}^2\omega_7^3\omega_{23}cs^4\omega_{11}^2 + 36v_3^2\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11}^2 - 12v_2^2\omega_{19}\omega_7^2\omega_{23}cs^2\omega_{11}^2 +$$
$$12\omega_{19}\omega_{16}\omega_7^2cs^4\omega_{11}^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^3 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} - \omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^4\omega_{11}^3)\frac{\rho}{12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3}$$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(3),\mathrm{MRT2}} = (18v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 6\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 + 6v_2^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 18\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 + 18v_2^2v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 -$
$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 18v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 12v_2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 +$
$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 36v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36v_3^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 +$
$12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 + 60v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 - 24v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 42v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 -$
$12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^2 - 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 - 36v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^2 + 12v_2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 + 18v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 + 78v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 +$
$24\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 36v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 - 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 + 12v_2^2\omega_{19}\omega_7^2\omega_{23}\omega_{11}^3 + 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 -$
$6\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 132v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 24v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 -$
$12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 - 36v_3^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 36v_3^2v_3\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^4 -$
$6v_2^2\omega_{19}\omega_7^3\omega_{11}^3cs^2 - 24v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 36v_3^2v_3\omega_{19}\omega_7^3\omega_{23}\omega_{11}^3 + 12\omega_{19}\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 24v_2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 -$
$12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^4 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}cs^2 + 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3 - 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 +$
$12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 + 36v_2^2v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3 + 12\omega_{19}^2\omega_7^3\omega_{11}^3cs^4 + 24v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 + 36v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 - 36v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 +$
$12v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 + 24v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 144v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 -$
$54v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 48v_3^2\omega_{19}^2\omega_{16}\omega_{23}\omega_{11}^3cs^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 36v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 180v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2cs^2 +$
$72v_2^2v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 36v_3^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 - 36v_3^2v_3\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6v_2^2\omega_{19}\omega_7^3\omega_{23}\omega_{11} +$
$12v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 12\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 36v_3^2\omega_{19}^2\omega_7^2\omega_{11}^3 + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{11} - 12\omega_{19}\omega_{16}\omega_{23}\omega_{11}^3cs^4 +$
$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 72v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 + 6v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 +$
$12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 - 18v_3^2\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 - 108v_3^2\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 - 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 -$
$4\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 - 36v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 + 18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 -$
$6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 - 24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3 + 108v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3 - 72v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12v_2^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 -$
$12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 - 12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 - 12\omega_{19}^2\omega_7^3\omega_{11}^3cs^2 + 24v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 84v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^2 -$
$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 - 36v_3^2v_3\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 12v_2^2\omega_{19}\omega_7^3\omega_{11} + 12v_2^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^4 + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} +$
$24\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^4 - 18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^4 - 12\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 + 24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 +$
$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18v_2^2v_3^2\omega_{19}\omega_7^3\omega_{11}^3 - 6v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12v_2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2cs^2 - 6\omega_{19}^2\omega_7^3\omega_{11}^3cs^4 - 36v_2^2v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} +$
$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 60v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 - 18v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 - 24v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 84v_3^2\omega_{19}^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2cs^2 +$
$12v_2^2\omega_{19}\omega_7^3\omega_{11}cs^2 - 12v_2^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^2 + 6v_2^2\omega_{19}^2\omega_7^3\omega_{11} + 36v_2^2v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 6\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^4 + 18v_2^2v_3^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2 +$
$12\omega_{19}\omega_{16}\omega_7^2\omega_{11}^3cs^4 + 18v_3^2\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}cs^2 - \omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3cs^4 + 12\omega_{19}^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}cs^2 - 24v_2^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^3cs^2 -$
$12v_2^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11}^3cs^4 + 36v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^3cs^2 - 12v_2^2\omega_{19}^2\omega_7^3\omega_{23}\omega_{11}^2cs^2 + 6\omega_{19}^2\omega_{16}\omega_7^3\omega_{11}^3cs^2)\frac{\rho}{12\omega_{19}^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^3}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(3),\mathrm{CLBM1}} = (12\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{16}\omega_7\omega_{23}\omega_{11}^2 + 24cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 36v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{11} -$
$12cs^2\omega_{16}\omega_7^3\omega_{11}^2 + 36v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} + 12\omega_{16}\omega_7^3\omega_{11}^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 + 36v_3^2\omega_{19}\omega_7^2\omega_{11}^2 -$
$6\omega_{19}\omega_7^3\omega_{23}\omega_{11} + 12cs^2\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2 - 12\omega_{16}\omega_7^3\omega_{11} - 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 12cs^2\omega_{16}\omega_7\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} - 12cs^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} +$
$12cs^2\omega_{16}\omega_7^2\omega_{11} - 72v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11}^2 - 18v_3^2\omega_{19}\omega_7^3\omega_{11} - 4cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12cs^2\omega_{16}\omega_7^3\omega_{11} - 36v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11} - 12\omega_{16}\omega_7^3\omega_{11} -$
$36v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 6cs^2\omega_{19}\omega_7^3\omega_{23}\omega_{11} - 36v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 24cs^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} -$
$6cs^2\omega_{19}\omega_7^3\omega_{11} + 12\omega_{19}\omega_7^2\omega_{23}\omega_{11} + 36v_3^2\omega_{16}\omega_7^3\omega_{11} - 6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 12cs^2\omega_{19}\omega_{16}\omega_{23}\omega_{11}^2 + 36v_3^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 36v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} -$
$12cs^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 18v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{11} - 6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 36v_3^2\omega_{16}\omega_7^2\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 6\omega_{19}\omega_7^3\omega_{11} + 18cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11}^2 +$
$72v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 12\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12cs^2\omega_{19}\omega_7^2\omega_{23}\omega_{11} - 12cs^2\omega_{19}\omega_7^2\omega_{11} + 24\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12cs^2\omega_{19}\omega_7^2\omega_{11} -$
$cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_7^3\omega_{11} - 12cs^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} + 6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 36v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23} +$
$12\omega_{19}\omega_{16}\omega_7^2\omega_{11} - 12\omega_{19}\omega_7^2\omega_{11} + 12cs^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 36v_3^2\omega_{16}\omega_7^3\omega_{11} + 6cs^2\omega_{19}\omega_{16}\omega_7^3\omega_{23})\frac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(3),\mathrm{CLBM2}} = (12\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 12\omega_{19}\omega_{16}cs^2\omega_{23}\omega_{11}^2 - 12\omega_{16}\omega_7\omega_{23}\omega_{11}^2 - 36v_3^2\omega_{19}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{16}\omega_7^2cs^2\omega_{11}^2 -$
$12\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{11}^2 - 12\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{11} + 24\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} + 36v_3^2\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 12\omega_{19}\omega_7^2cs^2\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{23} +$
$12\omega_{16}\omega_7^3\omega_{11}^2 + 6\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11}^2 - \omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{11} - 24\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} + 36v_3^2\omega_{19}\omega_7^2\omega_{11}^2 - 6\omega_{19}\omega_7^3\omega_{23}\omega_{11} -$
$12\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23} - 12\omega_{19}\omega_7^2cs^2\omega_{23}\omega_{11} - 12\omega_{16}\omega_7^2cs^2\omega_{11} - 18v_3^2\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 12\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} +$
$12\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} + 6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23}\omega_{11} - 4\omega_{19}\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} + 12\omega_{16}\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 72\omega_{16}\omega_7^2cs^2\omega_{23}\omega_{11} - 18v_3^2\omega_{19}\omega_7^3\omega_{11} -$
$36v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{11} - 12\omega_{16}\omega_7^2\omega_{11} - 36v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23} - 12\omega_{16}\omega_7^3\omega_{23}\omega_{11} - 36v_3^2\omega_{19}\omega_{16}\omega_7\omega_{23}\omega_{11} - 24\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} +$
$6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{23} + 12\omega_{19}\omega_7^2\omega_{23}\omega_{11} + 36v_3^2\omega_{16}\omega_7^3\omega_{11} + 36v_3^2\omega_{16}\omega_7\omega_{23}\omega_{11}^2 + 6\omega_{19}\omega_{16}\omega_7cs^2\omega_{11}^2 - 6\omega_{19}\omega_7^3cs^2\omega_{11}^2 - 36v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} -$
$12\omega_{16}\omega_7^3cs^2\omega_{11} + 12\omega_{16}\omega_7cs^2\omega_{23}\omega_{11} + 18v_3^2\omega_{19}\omega_7^3\omega_{23}\omega_{11} + 36v_3^2\omega_{16}\omega_7^2\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{11} + 6\omega_{19}\omega_7^3\omega_{11} + 72v_3^2\omega_{19}\omega_{16}\omega_7^2\omega_{23}\omega_{11} -$
$12\omega_{16}\omega_7^2\omega_{23}\omega_{11} - 6\omega_{19}\omega_{16}\omega_7^3\omega_{23} - 12\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{11} + 24\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 18\omega_{19}\omega_{16}\omega_7cs^2\omega_{23}\omega_{11} + 12\omega_{16}\omega_7^3cs^2\omega_{11} + 6\omega_{19}\omega_{16}\omega_7^3\omega_{11} -$
$6\omega_{19}\omega_{16}\omega_7^3cs^2\omega_{11} + 36v_3^2\omega_{16}\omega_7^3\omega_{23}\omega_{11} + 12\omega_{19}\omega_{16}\omega_7^2\omega_{23} + 12\omega_{19}\omega_{16}\omega_7^2\omega_{11} - 12\omega_{19}\omega_7^2\omega_{11} - 36v_3^2\omega_{16}\omega_7^3\omega_{11})\frac{\rho cs^2}{12\omega_{19}\omega_{16}\omega_7^3\omega_{23}\omega_{11}^2}$

$C_{\mathrm{D}_y^2\mathrm{D}_z^2 v_3}^{(3),\mathrm{CuLBM1}} = (12\omega_6^2\omega_3cs^2 + 12\omega_3^2\omega_{10} + 36\omega_6^2v_3\omega_3^3 + 36\omega_6v_3^2\omega_3^2\omega_{10} - 12\omega_3^3 - 4\omega_6^2\omega_3^2\omega_{10}cs^2 - 12\omega_6\omega_3^2\omega_{10} + 24\omega_6^2\omega_3cs^2 - 72\omega_6^2v_3^2\omega_3^2 + 24\omega_6\omega_3^3 +$
$12\omega_3^3cs^2 + 36\omega_6^2v_3^2\omega_3 - 24\omega_6\omega_3^2 - 36v_3^2\omega_3^2\omega_{10} - 24\omega_6\omega_3^3cs^2 - 12\omega_6\omega_3\omega_{10}cs^2 + 24\omega_6^2\omega_3 - \omega_6^2\omega_3^3\omega_{10}cs^2 - 12\omega_6^2\omega_3 - 12\omega_6^2\omega_{10}cs^2 + 12\omega_6\omega_3\omega_{10}cs^2 +$
$12\omega_6^2\omega_3^3cs^2 + 12\omega_6\omega_3\omega_{10} - 12\omega_3^3\omega_{10}cs^2 - 72\omega_6v_3^2\omega_3^3 - 24\omega_6^2\omega_3cs^2 + 18\omega_6^2\omega_3\omega_{10}cs^2 + 36v_3^2\omega_3^3 + 72\omega_6v_3^2\omega_3^3 - 36\omega_6v_3^2\omega_3\omega_{10} - 12\omega_6^2\omega_3)\frac{\rho cs^2}{12\omega_6^2\omega_3^3\omega_{10}}$

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$$C^{(3),\text{CuLBM2}}_{\text{D}_y^2\text{D}_z^2 v_3} = (-14cs^4\omega_3^2\omega_4\omega_1^3\omega_2 - 14cs^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 54cs^2v_2^2\omega_3\omega_1^2\omega_2^3 - 4\omega_3^2\omega_4\omega_1^3\omega_2 + 18v_2^2\omega_4\omega_1^2\omega_2^3 + 30cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 + 2cs^2\omega_3^2\omega_4\omega_1^2\omega_2^2 +$$
$$18cs^2\omega_3^2\omega_4\omega_1^3\omega_2 + 12v_2^4\omega_3^2\omega_4\omega_1^2\omega_2 - 18cs^2v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 132cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 - 18v_2^2\omega_3\omega_1^2\omega_2^3 + 180v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 72cs^4\omega_3^2\omega_1\omega_2^3 +$$
$$8\omega_3^2\omega_4\omega_1^2\omega_2^2 - 6v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 28cs^4\omega_3^2\omega_4\omega_1^2\omega_2^2 - 9v_2^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 18cs^2\omega_3^2\omega_1^3\omega_2^2 + 18v_2^4\omega_3^2\omega_1^3\omega_2^2 - 12v_3^2\omega_3^2\omega_4\omega_1^3 + 54cs^2v_2^2\omega_3\omega_1\omega_2^3 -$$
$$18v_2^2\omega_3^2\omega_1\omega_2^3 + 12cs^2v_3^2\omega_3^2\omega_4\omega_1^3 + 24cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 90v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_2 - 126cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 6v_2^2\omega_3\omega_4\omega_1\omega_2^3 - 12cs^2v_2^2\omega_3^2\omega_4\omega_1^2\omega_2 +$$
$$9v_2^4\omega_3^2\omega_4\omega_1^3\omega_2 - 36cs^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 28cs^2\omega_3^2\omega_4\omega_2^3 - 90cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 216cs^2v_3^2\omega_3^2\omega_1\omega_2^3 - 48v_2^2\omega_3^2\omega_4\omega_1^3 - 9v_2^4\omega_3^2\omega_4\omega_1^2\omega_2^3 +$$
$$24cs^2v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 48cs^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 36v_2^4\omega_3^2\omega_4\omega_1^3\omega_2 + 32cs^2\omega_3^2\omega_4\omega_1^2\omega_2 + 4\omega_3^2\omega_4\omega_1^2\omega_2 + 132cs^2v_2^2\omega_3^2\omega_4\omega_1^3 - 28cs^4\omega_3^2\omega_4\omega_1^2\omega_2 +$$
$$66v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + 9v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 + 12v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 - 3cs^4\omega_3^2\omega_4\omega_1^3\omega_2^3 - 18v_2^4\omega_3^2\omega_1^2\omega_2^3 - 174cs^2v_2^2\omega_3^2\omega_4\omega_1^3\omega_2 + 16cs^4\omega_3^2\omega_4\omega_1^3 - 84cs^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 -$$
$$30cs^2v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 2cs^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 18v_2^4\omega_3^2\omega_4\omega_1^2\omega_2^2 - 36v_2^2v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 + 18v_2^2\omega_3\omega_1^3\omega_2^2 - 48v_2^4\omega_3^2\omega_4\omega_2^3 - 8cs^2\omega_3\omega_4\omega_1\omega_2^3 +$$
$$54cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 - 18v_2^4\omega_3^2\omega_4\omega_1^2\omega_2^2 + 72cs^2\omega_3^2\omega_1^2\omega_2^3 + 12v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 - 42v_2^2\omega_3^2\omega_4\omega_1^2\omega_2^2 - 54cs^2v_2^2\omega_3\omega_1^3\omega_2^2 + 2cs^4\omega_3^2\omega_4\omega_1^3\omega_2^2 + 8cs^4\omega_3\omega_4\omega_1\omega_2^3 +$$
$$72v_2^2v_3^2\omega_3^2\omega_4\omega_1^3 - 18v_2^4\omega_4\omega_1^3\omega_2^2 + 150cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 66cs^2v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^2 + 12v_2^4\omega_3^2\omega_4\omega_1\omega_2^2 - v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 12v_3^2\omega_3^2\omega_4\omega_2^3 - 18v_2^2\omega_4\omega_1^2\omega_2^3 +$$
$$36cs^2\omega_3\omega_4\omega_1^2\omega_2^3 + 90cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 - 8cs^2\omega_3\omega_4\omega_1^3\omega_2 + 18v_2^4\omega_3\omega_1^2\omega_2^3 + 12v_2^2\omega_3^2\omega_4\omega_1\omega_2 - 72cs^2\omega_3^2\omega_1\omega_2^3 + 36v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 + v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 +$$
$$8cs^4\omega_3\omega_4\omega_1^3\omega_2 - 36cs^4\omega_3\omega_4\omega_1^2\omega_2^3 - 96cs^2v_3^2\omega_3^2\omega_4\omega_2^3 + 54cs^2v_2^2\omega_4\omega_1^2\omega_2^3 - 18v_2^2\omega_3^2\omega_1^3\omega_2^2 + 18cs^4\omega_3^2\omega_1^3\omega_2^2 - 56cs^2\omega_3\omega_4\omega_1^2\omega_2^2 + 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 -$$
$$6cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 54v_2^4\omega_3^2\omega_4\omega_1\omega_2^3 - 6cs^2v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 - 12cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_2^2 - 216cs^2v_3^2\omega_3^2\omega_1^2\omega_2^3 - 36v_2^2\omega_3\omega_4\omega_1^3\omega_2^2 + 56cs^4\omega_3\omega_4\omega_1^2\omega_2^2 -$$
$$24v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 - 24v_2^2\omega_3\omega_4\omega_1\omega_2^3 + 18v_2^4\omega_3^2\omega_1\omega_2^3 + 54cs^2v_2^2\omega_3^2\omega_1^3\omega_2^2 + 12v_2^2\omega_3\omega_4\omega_1^3\omega_2 + 24v_2^4\omega_3^2\omega_4\omega_1^3 + 18cs^4\omega_3\omega_4\omega_1^3\omega_2^3 + 36v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 -$$
$$4\omega_3^2\omega_4\omega_1\omega_2^2 + 12v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 - 68cs^4\omega_3^2\omega_4\omega_2^3 - 54cs^2v_2^2\omega_3^2\omega_1^2\omega_2^3 - 28cs^4\omega_3^2\omega_4\omega_1\omega_2^2 - 90v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 108v_2^2v_3^2\omega_3^2\omega_4\omega_2^3 + 54cs^2v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 +$$
$$60cs^2v_3^2\omega_3\omega_4\omega_1\omega_2^3 - 36v_2^4\omega_3\omega_4\omega_1^2\omega_2^3 - 18cs^2\omega_3\omega_4\omega_1^3\omega_2^3 + 18v_2^2\omega_3^2\omega_1^3\omega_2^3 - 12v_2^4\omega_3\omega_4\omega_1^3\omega_2 + 32cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + 6cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^3 +$$
$$76cs^4\omega_3^2\omega_4\omega_1\omega_2^3 + 4\omega_3^2\omega_4\omega_1^3 - 54cs^2v_2^2\omega_3^2\omega_1^2\omega_2^2 - 18v_2^2\omega_3\omega_1^3\omega_2^2 + 12v_2^2\omega_3^2\omega_4\omega_2^3 - 36cs^4\omega_3\omega_4\omega_1^3\omega_2^2 - 6v_2^2\omega_3\omega_4\omega_1^2\omega_2^2 - 54cs^2v_2^2\omega_4\omega_1^3\omega_2^2 -$$
$$4\omega_3^2\omega_4\omega_1\omega_2^3 - 20cs^2\omega_3^2\omega_4\omega_1^3 - 48cs^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 18v_2^2\omega_4\omega_1^3\omega_2^2 + 54cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^3 - 18cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + v_3^4\omega_3^2\omega_4\omega_1^3\omega_2^2 - 36cs^2v_2^2\omega_3\omega_4\omega_1^3\omega_2 -$$
$$108cs^2v_2^2\omega_3^2\omega_4\omega_2^3 - 72cs^4\omega_3^2\omega_1^2\omega_2^3 + 18v_2^2\omega_3^2\omega_1^2\omega_2^3 - 144v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 6v_2^4\omega_3\omega_4\omega_1^2\omega_2^2 + 36cs^2\omega_3\omega_4\omega_1^3\omega_2^2 - 90cs^2v_2^2\omega_3\omega_4\omega_1^2\omega_2^3)\frac{\rho}{36\omega_3^2\omega_4\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\text{D}_x\text{D}_z^3\rho}$ at $\frac{\partial^4\rho}{\partial x_1\partial x_3^3}$:

$$C^{(3),\text{SRT}}_{\text{D}_x\text{D}_z^3\rho} = 0$$

$$C^{(3),\text{MRT1}}_{\text{D}_x\text{D}_z^3\rho} = (-8\omega_{18}\omega_6 cs^2\omega_{11}^3 - 24\omega_6^2v_3^2cs^2\omega_{11}^2 + 20\omega_{18}\omega_6v_3^4\omega_{11}^3 - 36\omega_{18}^2\omega_6^2v_3^4\omega_{11} + 12\omega_{18}^2\omega_6^2cs^2\omega_{11} + 20\omega_{18}^2\omega_6v_3^2\omega_{11}^2 - 8\omega_{18}^2\omega_6 cs^4\omega_{11}^2 +$$
$$8\omega_{18}^2v_3^4\omega_{11}^2 - 4\omega_{18}^2cs^2\omega_{11}^2 + 120\omega_{18}\omega_6^2v_3^2cs^2\omega_{11}^2 + 24\omega_6^2v_3^2cs^2\omega_{11}^3 + 4\omega_6v_3^2\omega_{11}^3 - 4\omega_6 cs^4\omega_{11}^3 - 16\omega_{18}\omega_6v_3^4\omega_{11}^2 + 24\omega_{18}^2\omega_6v_3^4 + 51\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11}^2 -$$
$$51\omega_{18}\omega_6^2v_3^2cs^2\omega_{11}^3 - 4\omega_{18}\omega_6^2cs^4\omega_{11} + 20\omega_{18}\omega_6^2v_3^2\omega_{11} - 4\omega_6^2cs^2\omega_{11}^3 - 32\omega_{18}\omega_6^2v_3^2\omega_{11}^2 + 8\omega_{18}\omega_6^2cs^4\omega_{11}^2 + 4\omega_6^2v_3^4\omega_{11}^3 - 36\omega_{18}v_3^2cs^2\omega_{11}^3 -$$
$$4\omega_{18}cs^4\omega_{11}^3 + 8\omega_{18}v_3^2\omega_{11}^3 - 144\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11} + 4\omega_{18}^2\omega_6 cs^4\omega_{11} - 20\omega_{18}^2\omega_6v_3^2\omega_{11} + 13\omega_{18}\omega_6^2v_3^2\omega_{11}^3 + 4\omega_6^2cs^2\omega_{11}^2 - 4\omega_6^2v_3^4\omega_{11}^2 - 4\omega_{18}\omega_6^2cs^4\omega_{11}^3 -$$
$$72\omega_{18}\omega_6^2v_3^2cs^2\omega_{11} + 8\omega_{18}^2\omega_6^2cs^4 - 4\omega_{18}^2\omega_6^2cs^2\omega_{11}^2 + 13\omega_{18}^2\omega_6v_3^4\omega_{11}^2 + 96\omega_{18}^2\omega_6^2v_3^2cs^2 - 48\omega_{18}\omega_6v_3^2cs^2\omega_{11}^2 + 4\omega_6 cs^2\omega_{11}^3 + 16\omega_{18}\omega_6v_3^2\omega_{11}^2 -$$
$$4\omega_6v_3^4\omega_{11}^2 - 20\omega_{18}\omega_6^2v_3^4\omega_{11} + 4\omega_{18}\omega_6^2cs^2\omega_{11} - 20\omega_{18}\omega_6v_3^2\omega_{11} + 8\omega_{18}\omega_6 cs^4\omega_{11}^2 - 8\omega_{18}^2\omega_6^2cs^2 + 84\omega_{18}\omega_6v_3^2cs^2\omega_{11}^2 - 12\omega_{18}^2\omega_6^2cs^4\omega_{11} +$$
$$36\omega_{18}^2\omega_6^2v_3^2\omega_{11} - 24\omega_6v_3^2cs^2\omega_{11}^2 + 8\omega_{18}^2\omega_6 cs^2\omega_{11}^2 - 20\omega_{18}^2\omega_6v_3^4\omega_{11}^2 - 84\omega_{18}^2\omega_6v_3^2cs^2\omega_{11}^2 + 4\omega_{18}^2cs^4\omega_{11}^2 - 8\omega_{18}^2v_3^4\omega_{11}^2 + 20\omega_{18}^2\omega_6v_3^4\omega_{11} -$$
$$4\omega_{18}^2\omega_6 cs^2\omega_{11} + 72\omega_{18}^2\omega_6v_3^2cs^2\omega_{11} + 4\omega_6^2v_3^2\omega_{11}^2 + 4\omega_{18}\omega_6^2cs^2\omega_{11}^3 - 13\omega_{18}\omega_6^2v_3^4\omega_{11}^3 - 4\omega_6^2cs^4\omega_{11}^2 - 13\omega_{18}^2\omega_6v_3^2\omega_{11}^2 + 4\omega_{18}^2\omega_6^2cs^4\omega_{11}^2 +$$
$$36\omega_{18}^2v_3^2cs^2\omega_{11}^2 - 8\omega_{18}\omega_6^2cs^2\omega_{11}^2 - 4\omega_6^2v_3^4\omega_{11}^3 + 4\omega_6^2cs^4\omega_{11}^3 + 32\omega_{18}\omega_6^2v_3^4\omega_{11}^2 - 8\omega_{18}v_3^4\omega_{11}^3 - 24\omega_{18}^2\omega_6^2v_3^4 + 4\omega_{18}cs^2\omega_{11}^3)\frac{v_1}{4\omega_{18}^2\omega_6^2\omega_{11}^3}$$

$$C^{(3),\text{MRT2}}_{\text{D}_x\text{D}_z^3\rho} = (20\omega_{18}\omega_6v_3^4\omega_{11}^3 - 24\omega_6^2v_3^2\omega_{11}^2cs^2 - 36\omega_{18}^2\omega_6^2v_3^4\omega_{11} + 4\omega_{18}\omega_6^2\omega_{11}cs^2 + 20\omega_{18}^2\omega_6v_3^2\omega_{11}^2 + 120\omega_{18}\omega_6^2v_3^2\omega_{11}^2cs^2 - 4\omega_{18}^2\omega_{11}^2cs^2 +$$
$$8\omega_{18}^2v_3^4\omega_{11}^2 + 51\omega_{18}^2\omega_6^2v_3^2\omega_{11}^2cs^2 - 4\omega_6\omega_{11}^3cs^4 + 4\omega_6v_3^2\omega_{11}^3 - 16\omega_{18}\omega_6v_3^4\omega_{11}^2 + 24\omega_{18}^2\omega_6^2v_3^4 - 36\omega_{18}v_3^2\omega_{11}^3cs^2 + 20\omega_{18}\omega_6^2v_3^2\omega_{11} + 8\omega_{18}\omega_6^2\omega_{11}cs^4 -$$
$$4\omega_6^2\omega_{11}^3cs^2 - 32\omega_{18}\omega_6^2v_3^2\omega_{11}^2 - 8\omega_{18}^2\omega_6^2cs^2 + 4\omega_6^2v_3^4\omega_{11}^3 - 12\omega_{18}^2\omega_6^2\omega_{11}cs^4 - 51\omega_{18}\omega_6^2v_3^2\omega_{11}^3cs^2 - 4\omega_{18}\omega_{11}^3cs^4 + 24\omega_6^2v_3^2\omega_{11}^3cs^2 + 8\omega_{18}v_3^2\omega_{11}^3 -$$
$$4\omega_{18}^2\omega_6\omega_{11}cs^2 + 72\omega_{18}^2\omega_6v_3^2\omega_{11}cs^2 - 4\omega_{18}\omega_6^2\omega_{11}^3cs^4 - 20\omega_{18}^2\omega_6v_3^2\omega_{11} + 4\omega_6^2\omega_{11}^2cs^2 + 13\omega_{18}\omega_6^2v_3^2\omega_{11}^3 - 4\omega_6v_3^4\omega_{11}^2 + 96\omega_{18}^2\omega_6^2v_3^2cs^2 -$$
$$8\omega_{18}\omega_6\omega_{11}^2cs^4 - 4\omega_{18}^2\omega_6^2\omega_{11}cs^2 - 8\omega_{18}\omega_6\omega_{11}^3cs^2 + 13\omega_{18}^2\omega_6v_3^4\omega_{11}^2 + 4\omega_{18}\omega_{11}^3cs^2 + 16\omega_{18}\omega_6v_3^2\omega_{11}^2 + 4\omega_{18}^2\omega_6\omega_{11}cs^4 - 4\omega_6v_3^4\omega_{11}^3 -$$
$$48\omega_{18}\omega_6v_3^2\omega_{11}^2cs^2 - 20\omega_{18}\omega_6^2v_3^4\omega_{11} + 8\omega_{18}^2\omega_6^2cs^4 + 12\omega_{18}^2\omega_6^2\omega_{11}cs^2 + 4\omega_{18}^2\omega_6^2\omega_{11}cs^4 - 20\omega_{18}\omega_6v_3^2\omega_{11} + 36\omega_{18}^2\omega_6^2v_3^2\omega_{11} + 8\omega_{18}\omega_6^2\omega_{11}cs^4 +$$
$$4\omega_{18}\omega_6^2\omega_{11}cs^2 - 20\omega_{18}\omega_6v_3^4\omega_{11} - 4\omega_6^2v_3^4\omega_{11}^3 - 84\omega_{18}^2\omega_6v_3^2\omega_{11}cs^2 - 8\omega_{18}^2v_3^4\omega_{11} + 8\omega_{18}\omega_6\omega_{11}^2cs^2 + 20\omega_{18}\omega_6v_3^4\omega_{11} - 144\omega_{18}^2\omega_6v_3^2\omega_{11}cs^2 +$$
$$4\omega_{18}^2\omega_{11}^2cs^4 + 4\omega_6^2v_3^2\omega_{11}^2 - 13\omega_{18}\omega_6^2v_3^4\omega_{11}^3 - 24\omega_6v_3^2\omega_{11}^3cs^2 + 84\omega_{18}\omega_6v_3^2\omega_{11}^3cs^2 - 13\omega_{18}^2\omega_6v_3^2\omega_{11} - 4\omega_{18}\omega_6^2\omega_{11}cs^4 - 4\omega_6^2v_3^4\omega_{11}^3 +$$
$$32\omega_{18}\omega_6^2v_3^4\omega_{11} - 8\omega_{18}\omega_6^2\omega_{11}cs^2 + 4\omega_6^2\omega_{11}cs^4 + 36\omega_{18}^2v_3^2\omega_{11}cs^2 + 4\omega_6\omega_{11}^3cs^2 - 72\omega_{18}\omega_6^2v_3^2\omega_{11}cs^2 - 8\omega_{18}v_3^4\omega_{11}^3 - 24\omega_{18}^2\omega_6^2v_3^4)\frac{v_1}{4\omega_{18}^2\omega_6^2\omega_{11}^3}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_x\text{D}_z^3\rho} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_x\text{D}_z^3\rho} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_x\text{D}_z^3\rho} = 0$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_x\text{D}_z^3\rho} = (-8v_1^2\omega_3^2\omega_1\omega_2^2 - 5cs^2\omega_3^2\omega_1^3\omega_2^2 + \omega_3^2\omega_1^3\omega_2^2 + 24v_1^2v_3^2\omega_3^2\omega_1^3 + 24v_1^2v_3^2\omega_3^2\omega_1\omega_2^2 + 24v_3^2\omega_3^2\omega_2^3 + 72v_3^4\omega_3^2\omega_1^2\omega_2^2 - 2v_1^2cs^2\omega_3^2\omega_1^3\omega_2^3 +$$
$$72cs^4\omega_3^2\omega_1^3 - 12cs^4\omega_3\omega_1^2\omega_2^2 + 12cs^2\omega_1^3\omega_2^2 + 42cs^4\omega_3^2\omega_1\omega_2^3 - 20v_1^2cs^2\omega_3^2\omega_1^3\omega_2 - 4\omega_3^2\omega_1^2\omega_2 + 8v_1^2\omega_3^2\omega_2^3 - 8v_1^2\omega_3^2\omega_1\omega_2^3 + 40cs^2\omega_3^2\omega_1^2\omega_2 +$$
$$36cs^4\omega_1^2\omega_2^3 - 12cs^4\omega_3\omega_1^3\omega_2 + 8v_1^2cs^2\omega_3\omega_1\omega_2^2 - 2v_1^2cs^2\omega_3^2\omega_1^2\omega_2^2 - 54cs^4\omega_3\omega_1^2\omega_2^3 + 96v_1^2v_3^2\omega_3^2\omega_1\omega_2^3 - 36v_3^4\omega_3^2\omega_1^3\omega_2 + 54cs^4\omega_3\omega_1^2\omega_2^2 -$$
$$20v_1^2cs^2\omega_3^2\omega_2^2 - 4v_1^2cs^2\omega_3^2\omega_1^2\omega_2 + 108cs^2v_3^2\omega_3^2\omega_1\omega_2^3 - 4\omega_3^2\omega_1^2\omega_2^2 - 60v_3^2\omega_3^2\omega_1\omega_2^3 + 48v_3^4\omega_3^2\omega_2^3 - 36cs^4\omega_1^3\omega_2^2 - 8cs^2\omega_3\omega_1\omega_2^3 - 34cs^2\omega_3^2\omega_1^2\omega_2^2 -$$
$$52cs^2\omega_3^2\omega_1^3 - 216cs^2v_3^2\omega_3^2\omega_1\omega_2 - 12cs^2\omega_1^2\omega_2^3 + 2v_1^2cs^2\omega_3^2\omega_1^3\omega_2^2 + 5cs^2\omega_3^2\omega_1^2\omega_2^3 + 56cs^2\omega_3^2\omega_1^3\omega_2 - 8\omega_3^2\omega_2^3 + 48v_3^2\omega_3^2\omega_1\omega_2^2 - 4\omega_3^2\omega_1^3\omega_2 - \omega_3^2\omega_1^2\omega_2^3 -$$
$$4v_1^2\omega_3^2\omega_1^3 + 216cs^2v_3^2\omega_3^2\omega_1\omega_2^2 + 24v_1^2v_3^2\omega_3^2\omega_1^2\omega_2 + 6cs^4\omega_3^2\omega_1^3\omega_2 + 4cs^2\omega_3\omega_1^2\omega_2 + 4v_1^2\omega_3^2\omega_1^2\omega_2 - 22cs^2\omega_3^2\omega_1\omega_2^3 + 8\omega_3^2\omega_1\omega_2^3 - 24v_3^2\omega_3^2\omega_2^2 +$$
$$18v_1^2cs^2\omega_3\omega_1^3\omega_2^2 - 72v_1^2v_3^2\omega_3^2\omega_2^3 - 36cs^4\omega_3^2\omega_1^2\omega_2 - 12v_1^2cs^2\omega_3^2\omega_1^3\omega_2 - 324cs^2v_3^2\omega_3^2\omega_1\omega_2 + 24v_1^2v_3^2\omega_3^2\omega_1\omega_2^3 - 72cs^2v_3^2\omega_3^2\omega_1\omega_2^2 + 216cs^2v_3^2\omega_3^2\omega_1^3 +$$
$$24v_3^2\omega_3^2\omega_1^2\omega_2^3 - 36cs^4\omega_3^2\omega_2^3 + 8\omega_3^2\omega_1\omega_2^3 + 84v_3^2\omega_3^2\omega_1\omega_2^3 + 4cs^2\omega_3\omega_1^3\omega_2 - 8cs^2\omega_3^2\omega_1\omega_2^3 - v_1^2\omega_3^2\omega_1\omega_2^3 + 18cs^2\omega_3\omega_1^2\omega_2^3 - 48v_3^2\omega_3^2\omega_1^3 - 24v_3^2\omega_3^2\omega_1\omega_2^2 -$$

$$18cs^2\omega_3\omega_1^3\omega_2^2 + v_1^2\omega_3^2\omega_1^2\omega_2^3 + 4v_1^2\omega_3^3\omega_1^3\omega_2 + 24cs^4\omega_3\omega_1\omega_2^2 - 4v_1^2cs^2\omega_3\omega_1^3\omega_2 + 8v_1^2cs^2\omega_3^2\omega_1\omega_2^2 - 18v_1^2cs^2\omega_3\omega_1^2\omega_2^3 + 42cs^4\omega_3^2\omega_1^2\omega_2^2 + 4\omega_3^2\omega_1^3 +$$
$$72cs^2v_3^2\omega_3^3\omega_1^3\omega_2 - 24v_1^2v_3^2\omega_3^3\omega_1^2\omega_2^3 - 48v_1^2v_3^2\omega_3^3\omega_1^3\omega_2 - 36v_3^4\omega_3^3\omega_1\omega_2^2 + 12v_1^2cs^2\omega_1^3\omega_2^3 + 4v_1^2\omega_3^2\omega_1^2\omega_2^2 + 16v_1^2cs^2\omega_3^2\omega_1^3 - 24v_3^2\omega_3^3\omega_1^2\omega_2 +$$
$$20cs^2\omega_3^3\omega_2^2 - 72v_3^4\omega_3^2\omega_1\omega_2^2 - 48v_1^2v_3^2\omega_3^3\omega_1^2\omega_2^2 - 4v_1^2cs^2\omega_3\omega_1^2\omega_2^2 - 6cs^4\omega_3^3\omega_1^2\omega_2^3 + 24v_3^4\omega_3^3\omega_1^3 - 84cs^4\omega_3^3\omega_1^3\omega_2 + 22v_1^2cs^2\omega_3^2\omega_1\omega_2)\frac{v_1}{36\omega_3^3\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{D_xD_z^3v_1}$ **at** $\frac{\partial^4 v_1}{\partial x_1\partial x_3^3}$:

$C^{(3),\text{SRT}}_{D_xD_z^3v_1} = (-12cs^2\omega^2 + 54v_3^2cs^2\omega - 36v_3^4 + 54v_3^4\omega - 24cs^2 - 26v_3^4\omega^2 + 12v_3^2cs^2\omega^3 - 42v_3^2cs^2\omega^2 + 4v_3^4\omega^3 + 36cs^2\omega - cs^4\omega^3 - 54v_3^2\omega +$
$20cs^4\omega^2 - 4v_3^4\omega^3 + 36v_3^2 - 36v_3^2cs^2 - 54cs^4\omega + 26v_3^2\omega^2 + 36cs^4)\frac{\rho}{12\omega^3}$

$C^{(3),\text{MRT1}}_{D_xD_z^3v_1} = (-81\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11}^3 - 36\omega_{18}\omega_6^3v_3^2cs^2\omega_{11} - 12\omega_{18}\omega_6cs^2\omega_{11}^3 - 24\omega_{18}\omega_6v_3^4\omega_{11}^3 + 12\omega_{18}^2\omega_6^2cs^2\omega_{11} + 90\omega_{18}^2\omega_6^3v_3^2\omega_{11} - 12\omega_{18}^2\omega_6^3cs^4\omega_{11} -$
$12\omega_{18}\omega_6^2v_3^2cs^2\omega_{11}^2 + 12\omega_{18}^2\omega_6^3cs^4 - 36\omega_{18}\omega_6^3v_3^4\omega_{11} - 12\omega_6^2v_3^2cs^2\omega_{11}^3 + 162\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11}^2 + 30\omega_{18}\omega_6^2v_3^2cs^2\omega_{11}^3 - 306\omega_{18}^2\omega_6^3v_3^2cs^2\omega_{11} +$
$252\omega_{18}^2\omega_6^3v_3^2cs^2 - 12\omega_{18}^2\omega_6v_3^2\omega_{11}^3 - 24\omega_{18}\omega_6cs^4\omega_{11}^3 + 60\omega_{18}^2\omega_6^3v_3^2cs^2\omega_{11}^2 - \omega_{18}^2\omega_6^3cs^4\omega_{11}^4 + 24\omega_{18}\omega_6^2v_3^2\omega_{11}^2 + 12\omega_6^3v_3^2cs^2\omega_{11}^3 + 12\omega_{18}\omega_6^2cs^4\omega_{11}^3 -$
$12\omega_6^2v_3^4\omega_{11}^3 - 4\omega_{18}^2\omega_6^3v_3^2\omega_{11}^3 - 5\omega_{18}^2\omega_6^2cs^2\omega_{11}^3 + 60\omega_{18}\omega_6^3v_3^4\omega_{11}^2 + 6\omega_{18}\omega_6^3cs^2\omega_{11}^2 - 12\omega_6^3v_3^2\omega_{11}^3 - 18\omega_{18}^2\omega_6v_3^4\omega_{11}^3 - 108\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11} -$
$21\omega_{18}\omega_6^3v_3^2cs^2\omega_{11}^3 - 12\omega_6^3v_3^2cs^2\omega_{11}^2 - 48\omega_{18}\omega_6^2v_3^2\omega_{11}^3 + \omega_{18}^2\omega_6^3cs^4\omega_{11}^2 - 19\omega_{18}^2\omega_6^3v_3^2\omega_{11}^2 - 18\omega_{18}\omega_6^2cs^4\omega_{11}^3 + 12\omega_{18}^2\omega_6^3v_3^2cs^2\omega_{11}^3 + 72\omega_{18}^2\omega_6^3v_3^4 +$
$54\omega_{18}\omega_6^3v_3^2cs^2\omega_{11}^2 - 27\omega_{18}\omega_6^3v_3^4\omega_{11}^3 - 6\omega_6^2\omega_6^2cs^2\omega_{11}^2 + 12\omega_6^3v_3^2\omega_{11}^3 + 12\omega_{18}^2\omega_6^2v_3^4\omega_{11}^3 - 6\omega_{18}\omega_6^3cs^2\omega_{11}^3 + 36\omega_{18}\omega_6^3v_3^2\omega_{11} + 12\omega_{18}^2cs^4\omega_{11}^3 +$
$102\omega_{18}^2\omega_6v_3^2cs^2\omega_{11}^3 + 6\omega_{18}^2\omega_6cs^2\omega_{11}^3 + 12\omega_{18}^2\omega_6v_3^4\omega_{11}^3 - 72\omega_{18}^2\omega_6^3v_3^4 + 24\omega_{18}\omega_6v_3^2\omega_{11}^3 + 12\omega_{18}\omega_6cs^4\omega_{11}^3 - 12\omega_{18}\omega_6v_3^2cs^2\omega_{11}^3 -$
$12\omega_{18}^2\omega_6cs^4\omega_{11} - 48\omega_{18}^2\omega_6v_3^2cs^2\omega_{11}^2 + 12\omega_{18}^2\omega_6cs^2\omega_{11} - 90\omega_{18}^2\omega_6^3v_3^4\omega_{11} + 19\omega_{18}^2\omega_6^3v_3^2\omega_{11} + 18\omega_{18}\omega_6^2cs^2\omega_{11} + 48\omega_{18}^2\omega_6v_3^4\omega_{11} - \omega_{18}^2\omega_6^3cs^2\omega_{11}^2 -$
$48\omega_{18}^2v_3^2cs^2\omega_{11} - 12\omega_{18}^2\omega_6^2v_3^2\omega_{11}^2 - 12\omega_6^3v_3^4\omega_{11}^2 + 6\omega_{18}\omega_6^3cs^4\omega_{11}^3 + 27\omega_{18}\omega_6^3v_3^2\omega_{11}^3 + 6\omega_{18}^2\omega_6^2cs^4\omega_{11} - 12\omega_{18}\omega_6^2cs^2\omega_{11}^2 + 4\omega_{18}^2\omega_6^3v_3^4\omega_{11}^3 +$
$12\omega_6^3v_3^2\omega_{11}^3 - 24\omega_{18}\omega_6^2v_3^4\omega_{11} - 6\omega_{18}\omega_6^3cs^4\omega_{11}^3 - 12\omega_{18}^2\omega_6^3cs^2 + 18\omega_{18}^2\omega_6^2v_3^2\omega_{11}^3 + 12\omega_6^3v_3^4\omega_{11}^3 + 13\omega_{18}^2\omega_6^2cs^4\omega_{11}^3 - 60\omega_{18}\omega_6^3v_3^2\omega_{11}^3)\frac{\rho}{12\omega_{18}^2\omega_6^3\omega_{11}^3}$

$C^{(3),\text{MRT2}}_{D_xD_z^3v_1} = (-6\omega_{18}\omega_6^3\omega_{11}^3cs^2 - 24\omega_{18}\omega_6v_3^4\omega_{11}^3 - 12\omega_{18}\omega_6^2v_3^2\omega_{11}^3cs^2 + 12\omega_{18}^2\omega_6^3v_3^2\omega_{11}^3cs^2 + \omega_{18}^2\omega_6^3\omega_{11}^2cs^4 + 90\omega_{18}^2\omega_6^3v_3^2\omega_{11} - 12\omega_{18}^2\omega_6^3cs^2 +$
$162\omega_{18}^2\omega_6^3v_3^2\omega_{11}^2cs^2 + 12\omega_{18}^2\omega_6^3\omega_{11}cs^2 - 36\omega_{18}\omega_6^3v_3^4\omega_{11} - 21\omega_{18}^2\omega_6^3v_3^2\omega_{11}^3cs^2 - 5\omega_{18}^2\omega_6^2\omega_{11}^3cs^2 - 24\omega_{18}\omega_6v_3^2\omega_{11}^3cs^4 + 12\omega_{18}\omega_6^2\omega_{11}^2cs^4 -$
$12\omega_{18}\omega_6v_3^2\omega_{11}^3 + 12\omega_6^3v_3^2\omega_{11}^3cs^2 + 24\omega_{18}\omega_6^2v_3^2\omega_{11}^2 - 12\omega_6^2v_3^4\omega_{11}^3 - 12\omega_{18}^2\omega_6^2\omega_{11}^3cs^4 - 4\omega_{18}^2\omega_6^3v_3^2\omega_{11}^3 + 30\omega_{18}\omega_6^2v_3^2\omega_{11}^3cs^2 - \omega_{18}^2\omega_6^3\omega_{11}^3cs^4 +$
$60\omega_{18}^2\omega_6^3v_3^2\omega_{11}^2cs^2 + 60\omega_{18}\omega_6^3v_3^4\omega_{11}^2 - 12\omega_6^3v_3^2\omega_{11}^3 - 18\omega_{18}^2\omega_6v_3^4\omega_{11}^3 - 12\omega_6^2v_3^2\omega_{11}^3cs^2 + 6\omega_{18}\omega_6^3\omega_{11}^2cs^2 - 18\omega_{18}^2\omega_6\omega_{11}^3cs^4 - 12\omega_6^3v_3^2\omega_{11}^2cs^2 -$
$48\omega_{18}\omega_6^2v_3^2\omega_{11}^3 - 19\omega_{18}^2\omega_6^3v_3^2\omega_{11}^2 - 6\omega_{18}^2\omega_6^2\omega_{11}^2cs^2 + 72\omega_{18}^2\omega_6^3v_3^4 - 81\omega_{18}^2\omega_6^2v_3^2\omega_{11}^3cs^2 - 27\omega_{18}\omega_6^3v_3^4\omega_{11}^3 + 12\omega_6^3v_3^2\omega_{11}^3 - 12\omega_{18}\omega_6\omega_{11}^3cs^2 -$
$12\omega_{18}^2\omega_6^3v_3^4\omega_{11}^3 + 54\omega_{18}\omega_6^3v_3^2\omega_{11}^2cs^2 + 36\omega_{18}\omega_6^3v_3^2\omega_{11} - 6\omega_{18}\omega_6^3\omega_{11}^3cs^4 + 12\omega_{18}^2\omega_6^3\omega_{11}^3cs^2 - 36\omega_{18}\omega_6^3v_3^2\omega_{11}^3cs^2 + 12\omega_{18}^2\omega_{11}^3cs^4 + 12\omega_{18}^2\omega_6v_3^4\omega_{11} +$
$6\omega_{18}^2\omega_6^2\omega_{11}^3cs^4 - 72\omega_{18}^2\omega_6^3v_3^4 + 24\omega_{18}\omega_6v_3^2\omega_{11}^3 - 306\omega_{18}^2\omega_6^3v_3^2\omega_{11}^3cs^2 + 12\omega_{18}\omega_6v_3^2\omega_{11}^3cs^4 + 18\omega_{18}^2\omega_6^2\omega_{11}^3cs^2 - 48\omega_{18}^2v_3^2\omega_{11}^3cs^2 - 48\omega_{18}\omega_6v_3^2\omega_{11}^3cs^2 -$
$90\omega_{18}^2\omega_6^3v_3^4\omega_{11} - 108\omega_{18}^2\omega_6^2v_3^2\omega_{11}^3cs^2 - \omega_{18}^2\omega_6^3\omega_{11}^3cs^2 + 19\omega_{18}^2\omega_6^3v_3^4\omega_{11}^2 + 48\omega_{18}^2\omega_6^2v_3^4\omega_{11}^3 + 12\omega_{18}^2\omega_6^3cs^4 - 12\omega_{18}\omega_6v_3^2\omega_{11}^3cs^2 + 6\omega_{18}\omega_6^3\omega_{11}^3cs^4 +$
$252\omega_{18}^2\omega_6^3v_3^2cs^2 - 12\omega_{18}^2\omega_6^2v_3^2\omega_{11}^3 - 12\omega_6^3v_3^4\omega_{11}^3 + 27\omega_{18}\omega_6^3v_3^2\omega_{11}^3 + 102\omega_{18}^2\omega_6v_3^2\omega_{11}^3cs^2 + 4\omega_{18}^2\omega_6^3v_3^4\omega_{11}^3 + 12\omega_6^3v_3^2\omega_{11}^3 - 24\omega_{18}\omega_6^2v_3^4\omega_{11}^3 +$
$6\omega_{18}^2\omega_6\omega_{11}^3cs^2 - 12\omega_{18}\omega_6^2\omega_{11}^3cs^2 + 18\omega_{18}^2\omega_6^2v_3^2\omega_{11}^3 - 12\omega_{18}^2\omega_6\omega_{11}^3cs^4 + 12\omega_6^3v_3^4\omega_{11}^3 - 60\omega_{18}\omega_6^3v_3^2\omega_{11}^2 + 13\omega_{18}^2\omega_6^2\omega_{11}^3cs^4)\frac{\rho}{12\omega_{18}^2\omega_6^3\omega_{11}^3}$

$C^{(3),\text{CLBM1}}_{D_xD_z^3v_1} = (6\omega_{18}^2\omega_6cs^2\omega_{11}^3 + 12\omega_{18}^2cs^4\omega_{11}^3 + 90\omega_{18}^2\omega_6^3v_3^2\omega_{11} - 36\omega_{18}\omega_6^3v_3^4\omega_{11} + 12\omega_{18}^2\omega_6^2cs^2\omega_{11} - 12\omega_{18}^2\omega_6cs^4\omega_{11} + 12\omega_{18}\omega_6cs^2\omega_{11}^3 +$
$6\omega_{18}^2\omega_6^2cs^4\omega_{11} + 6\omega_{18}\omega_6^3cs^4\omega_{11} - 36\omega_6^2v_3^4\omega_{11}^3 - 4\omega_{18}^2\omega_6^3v_3^2\omega_{11} - 18\omega_{18}^2\omega_6cs^2v_3^2\omega_{11} - \omega_{18}^2\omega_6^3cs^2\omega_{11}^2 + 72\omega_{18}\omega_6^3v_3^4\omega_{11} + 18\omega_{18}\omega_6^2cs^2\omega_{11}^3 -$
$36\omega_6^3v_3^2\omega_{11}^3 - 6\omega_{18}^2\omega_6v_3^4\omega_{11} + 252\omega_{18}^2\omega_6^3cs^2v_3^2 - 36\omega_{18}\omega_6^2v_3^2\omega_{11}^3 + 13\omega_{18}^2\omega_6^2cs^4\omega_{11}^3 - 19\omega_{18}^2\omega_6^3v_3^2\omega_{11}^2 - 6\omega_{18}\omega_6^3cs^4\omega_{11}^3 + 12\omega_{18}^2\omega_6^3cs^4 +$
$72\omega_{18}^2\omega_6^3v_3^4 - 39\omega_{18}\omega_6^3v_3^4\omega_{11}^3 + 36\omega_{18}\omega_6cs^2v_3^2\omega_{11}^3 + 36\omega_6^3v_3^2\omega_{11}^3 - 12\omega_{18}\omega_6^2cs^2\omega_{11}^3 + 36\omega_{18}\omega_6^3v_3^2\omega_{11} - 12\omega_{18}^2\omega_6cs^4\omega_{11} - 99\omega_{18}\omega_6^3cs^2v_3^2\omega_{11}^3 -$
$36\omega_{18}^2\omega_6^2cs^2v_3^2\omega_{11} + 108\omega_6^3cs^2v_3^2\omega_{11}^3 + 12\omega_{18}^2\omega_6^2cs^2\omega_{11} + 60\omega_{18}^2\omega_6^3cs^2v_3^2\omega_{11} - 12\omega_{18}\omega_6cs^2\omega_{11}^3 - 72\omega_{18}^2\omega_6^3v_3^2 - 24\omega_{18}^2\omega_6cs^4\omega_{11}^3 +$
$198\omega_{18}^2\omega_6^3cs^2v_3^2\omega_{11}^2 + 12\omega_{18}^2\omega_6cs^2v_3^2\omega_{11}^3 - 90\omega_{18}^2\omega_6^3v_3^4\omega_{11} + 19\omega_{18}^2\omega_6^3v_3^2\omega_{11} + 6\omega_{18}\omega_6^3cs^2\omega_{11}^2 +$
$36\omega_{18}\omega_6^2v_3^4\omega_{11} + 36\omega_{18}\omega_6^2cs^2v_3^2\omega_{11}^2 - 5\omega_{18}^2\omega_6^2cs^2\omega_{11}^3 - 108\omega_{18}\omega_6^3cs^2v_3^2\omega_{11} - 3\omega_{18}^2\omega_6^2cs^2v_3^2\omega_{11}^3 - 36\omega_6^3v_3^4\omega_{11}^3 + 12\omega_{18}\omega_6^2cs^4\omega_{11}^3 +$
$39\omega_{18}\omega_6^3v_3^2\omega_{11}^3 - \omega_{18}^2\omega_6^3cs^4\omega_{11}^3 - 6\omega_{18}\omega_6^3cs^2\omega_{11}^3 + 4\omega_{18}^2\omega_6^3v_3^4\omega_{11}^3 + 36\omega_6^3v_3^2\omega_{11}^3 - 6\omega_{18}^2\omega_6^2cs^2\omega_{11}^2 - 306\omega_{18}^2\omega_6^3cs^2v_3^2\omega_{11} + 54\omega_{18}\omega_6^2cs^2v_3^2\omega_{11}^3 -$
$18\omega_{18}\omega_6^3cs^4\omega_{11}^3 + 6\omega_{18}^2\omega_6^2v_3^2\omega_{11}^3 + 36\omega_6^3v_3^4\omega_{11}^3 + \omega_{18}^2\omega_6^3cs^4\omega_{11}^2 - 72\omega_{18}\omega_6^3v_3^2\omega_{11}^3 + 18\omega_{18}^2\omega_6^2cs^2v_3^2\omega_{11}^2 - 108\omega_6^3cs^2v_3^2\omega_{11}^3)\frac{\rho}{12\omega_{18}^2\omega_6^3\omega_{11}^3}$

$C^{(3),\text{CLBM2}}_{D_xD_z^3v_1} = (6\omega_{18}\omega_6^3cs^2\omega_{11}^2 - 5\omega_{18}^2\omega_6^2cs^2\omega_{11}^3 - 36\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11} - 99\omega_{18}\omega_6^3v_3^2cs^2\omega_{11}^3 + 12\omega_{18}^2\omega_6^3cs^4 + 12\omega_{18}\omega_6^2cs^4\omega_{11}^3 - \omega_{18}^2\omega_6^3cs^4\omega_{11}^3 +$
$108\omega_6^3v_3^2cs^2\omega_{11}^3 + 60\omega_{18}^2\omega_6^3v_3^2cs^2\omega_{11} + 90\omega_{18}^2\omega_6^3v_3^2\omega_{11} + 252\omega_{18}^2\omega_6^3v_3^2cs^2 - 36\omega_{18}\omega_6^3v_3^4\omega_{11} + 198\omega_{18}^2\omega_6^3v_3^2cs^2\omega_{11}^2 - 6\omega_{18}\omega_6^3cs^2\omega_{11}^3 -$
$6\omega_{18}^2\omega_6^2cs^2\omega_{11}^2 + 12\omega_{18}^2\omega_6^3v_3^2cs^2\omega_{11}^3 - 18\omega_{18}\omega_6^2cs^4\omega_{11}^3 - 108\omega_6^3v_3^2cs^2\omega_{11}^3 + \omega_{18}^2\omega_6^3cs^4\omega_{11}^2 - 36\omega_6^2v_3^4\omega_{11}^3 - 4\omega_{18}^2\omega_6^3v_3^2\omega_{11}^3 + 36\omega_{18}\omega_6^2v_3^2cs^2\omega_{11}^2 -$
$12\omega_{18}^2\omega_6cs^4\omega_{11} + 72\omega_{18}\omega_6^3v_3^4\omega_{11}^2 - 36\omega_6^3v_3^2\omega_{11}^3 - 6\omega_{18}^2\omega_6v_3^4\omega_{11}^3 - 12\omega_{18}\omega_6cs^2\omega_{11}^3 - 3\omega_{18}^2\omega_6^2v_3^2cs^2\omega_{11}^3 - 108\omega_{18}\omega_6^3v_3^2cs^2\omega_{11} +$
$12\omega_{18}^2\omega_6^2cs^2\omega_{11} + 54\omega_{18}\omega_6^2v_3^2cs^2\omega_{11}^3 - 306\omega_{18}^2\omega_6^3v_3^2cs^2\omega_{11} - 24\omega_{18}^2\omega_6cs^4\omega_{11}^3 - 36\omega_{18}\omega_6^2v_3^2\omega_{11}^3 - 19\omega_{18}^2\omega_6^3v_3^2\omega_{11}^2 + 72\omega_{18}^2\omega_6^3v_3^4 +$
$18\omega_{18}^2\omega_6v_3^2cs^2\omega_{11}^2 - 39\omega_{18}\omega_6^3v_3^4\omega_{11}^3 + 36\omega_6^3v_3^2\omega_{11}^3 - 108\omega_6^2v_3^2cs^2\omega_{11}^3 + 36\omega_{18}\omega_6^3v_3^2\omega_{11} + 6\omega_{18}^2\omega_6cs^4\omega_{11}^3 + 6\omega_{18}\omega_6^3cs^4\omega_{11}^3 - \omega_{18}^2\omega_6^3cs^2\omega_{11}^2 +$
$18\omega_{18}\omega_6^2cs^2\omega_{11}^3 - 72\omega_{18}^2\omega_6^3v_3^2 + 13\omega_{18}^2\omega_6^2cs^4\omega_{11}^3 - 6\omega_{18}\omega_6^3cs^4\omega_{11}^3 - 12\omega_{18}\omega_6^2cs^2\omega_{11}^3 - 90\omega_{18}^2\omega_6^3v_3^4\omega_{11} + 12\omega_{18}^2cs^4\omega_{11}^3 + 19\omega_{18}^2\omega_6^3v_3^4\omega_{11}^3 +$
$36\omega_{18}\omega_6^2v_3^4\omega_{11} + 6\omega_{18}^2\omega_6cs^2\omega_{11}^3 - 18\omega_{18}\omega_6v_3^2cs^2\omega_{11}^3 - 12\omega_{18}^2\omega_6cs^2 - 36\omega_6^3v_3^4\omega_{11}^3 + 39\omega_{18}\omega_6^3v_3^2\omega_{11}^3 + 4\omega_{18}^2\omega_6^3v_3^4\omega_{11}^3 + 36\omega_6^2v_3^2\omega_{11}^3 +$
$12\omega_{18}^2\omega_6^3cs^2\omega_{11} + 12\omega_{18}\omega_6cs^4\omega_{11}^3 + 6\omega_{18}^2\omega_6^2v_3^2\omega_{11}^3 + 36\omega_6^3v_3^4\omega_{11}^3 - 72\omega_{18}\omega_6^3v_3^2\omega_{11}^3 - 12\omega_{18}^2\omega_6cs^4\omega_{11} + 36\omega_{18}\omega_6v_3^2cs^2\omega_{11}^3)\frac{\rho}{12\omega_{18}^2\omega_6^3\omega_{11}^3}$

$C^{(3),\text{CuLBM1}}_{D_xD_z^3v_1} = (-12\omega_6\omega_8^2cs^4\omega_2^3 + 36\omega_6^2v_3^2\omega_8cs^2\omega_2^2 + 252v_3^2\omega_8^2cs^2\omega_2^3 + 6\omega_6^3\omega_8^2cs^2\omega_2 - 90\omega_6v_3^4\omega_8^2\omega_2^3 - 3\omega_6^3v_3^2\omega_8^2cs^2\omega_2^2 - 18\omega_6^3\omega_8cs^4\omega_2^2 -$
$6\omega_6^2\omega_8^2cs^2\omega_2^2 - 108\omega_6v_3^2\omega_8cs^2\omega_2^3 - 39\omega_6^3v_3^4\omega_8\omega_2^3 - 72v_3^2\omega_8^2\omega_2^3 - 12\omega_6\omega_8^2cs^4\omega_2^2 + 198\omega_6^2v_3^2\omega_8cs^2\omega_2^3 + 36\omega_6v_3^4\omega_8\omega_2^2 - 72\omega_6^2v_3^2\omega_8\omega_2^3 +$
$6\omega_6^3\omega_8cs^4\omega_2^3 + 12\omega_6^3v_3^2\omega_8^2cs^2\omega_2^3 - \omega_6^2\omega_8^2cs^2\omega_2^3 + 90\omega_6v_3^2\omega_8^2\omega_2^3 - 36\omega_6^3v_3^4\omega_2^2 - 6\omega_6^2\omega_8cs^4\omega_2^3 + 39\omega_6^3v_3^2\omega_8\omega_2^3 + 36\omega_6^3v_3^4\omega_2^3 + 12\omega_8^3\omega_8cs^4\omega_2 -$
$18\omega_6^3v_3^2\omega_8^2cs^2\omega_2 + 72v_3^4\omega_8^2\omega_2^3 + 12\omega_8^2cs^4\omega_2^3 + 72\omega_6^2v_3^2\omega_8\omega_2^3 + 36\omega_6^2v_3^2\omega_2^3 - 36\omega_6^3v_3^2\omega_8\omega_2^2 + 12\omega_6^2\omega_8cs^4\omega_2 - 5\omega_6^2\omega_8^2cs^2\omega_2^2 + 12\omega_6\omega_8^2cs^2\omega_2^2 +$
$6\omega_6^3v_3^2\omega_8^2\omega_2^2 + 19\omega_6^2v_3^4\omega_8^2\omega_2^3 + \omega_6^2\omega_8^2cs^4\omega_2^3 - 6\omega_6^3\omega_8cs^2\omega_2^2 + 12\omega_6\omega_8^2cs^2\omega_2^3 - 24\omega_6^3\omega_8cs^4\omega_2 - 108\omega_6^2v_3^2cs^2\omega_2^3 + 36\omega_6^3v_3^2\omega_8cs^2\omega_2 + 36\omega_6v_3^2\omega_8\omega_2^2 +$
$12\omega_6^3\omega_8^2cs^4 + 6\omega_6^2\omega_8^2cs^4\omega_2^2 + 18\omega_6^3\omega_8cs^2\omega_2^2 - 4\omega_6^3v_3^2\omega_8\omega_2^3 - 36\omega_6^3v_3^2\omega_2^3 - 12\omega_6\omega_8cs^2\omega_2 + 108\omega_6^3v_3^2cs^2\omega_2^3 - 12\omega_8^2cs^2\omega_2^3 + 18\omega_6^2v_3^2\omega_8^2cs^2\omega_2^2 -$
$306\omega_6v_3^2\omega_8^2cs^2\omega_2^3 - 19\omega_6^2v_3^2\omega_8^2\omega_2^3 - 6\omega_6^3v_3^4\omega_8\omega_2^3 - 36\omega_6^2v_3^4\omega_2^3 + 54\omega_6^3v_3^2\omega_8cs^2\omega_2^2 + 13\omega_6^3\omega_8cs^4\omega_2^2 - 12\omega_6^3\omega_8cs^2\omega_2^2 + 60\omega_6^2v_3^2\omega_8^2cs^2\omega_2^3 -$

$$108\omega_6^3 v_3^2 cs^2\omega_2^2 - 36\omega_6 v_3^4\omega_8\omega_2^3 + 36\omega_6^3 v_3^2\omega_2^2 - \omega_6^2\omega_8 cs^4\omega_2^3 - 99\omega_6^3 v_3^2\omega_8 cs^2\omega_2^2 + 6\omega_6^2\omega_8 cs^2\omega_2^3 + 4\omega_6^3 v_3^4\omega_8\omega_2^2 - 36\omega_6 v_3^3\omega_8 cs^2\omega_2^2)\frac{\rho}{12\omega_6^3\omega_8^2\omega_2^3}$$

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_1}^{(3),\mathrm{CuLBM2}} = (-24v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 16cs^4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 144v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 72cs^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3 - 40cs^2\omega_3^2\omega_4^2\omega_1^3 + 18cs^4\omega_3\omega_4^2\omega_1^3\omega_2^3 - 12v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 16\omega_3^2\omega_4^2\omega_1\omega_2^2 + 12v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 432v_1^2v_3^2\omega_3^2\omega_4^2\omega_2^3 + 180v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 72cs^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 96v_3^4\omega_3^2\omega_4^2\omega_1\omega_2 - 32cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 168cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 180v_3^4\omega_3\omega_4\omega_1^2\omega_2^3 + 48v_1^2\omega_3^2\omega_4^2\omega_2^3 + 72cs^2v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 - 18cs^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 24v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 36cs^4\omega_3\omega_4^2\omega_1^3\omega_2^2 + 24v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1\omega_2^3 + 72v_3^2\omega_4^2\omega_1^2\omega_2^3 + 80cs^4\omega_3^2\omega_4^2\omega_2^3 - 86v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 172cs^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 24v_3^4\omega_3\omega_4^2\omega_1\omega_2^3 + 36cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 540cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 216cs^2v_3^2\omega_4^2\omega_1^2\omega_2^3 - 108v_3^4\omega_3^2\omega_1^2\omega_2^3 + 72cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^3 + 48cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + 38v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 264cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 48v_3^4\omega_3^2\omega_4\omega_1^3 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 16cs^2\omega_3\omega_4^2\omega_1^3\omega_2 - 108cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2^2 + 108v_3^4\omega_3\omega_4\omega_1^3\omega_2^3 + 36cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 108v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 18cs^2\omega_3^2\omega_4\omega_1^3\omega_2^3 - 492cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 40v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 48v_1^2\omega_3^2\omega_4\omega_1\omega_2^3 - 96v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 36cs^4\omega_3\omega_4^2\omega_1^2\omega_2^3 - 108v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 + 16cs^4\omega_3\omega_4^2\omega_1^3\omega_2 + 8v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 18cs^4\omega_3^2\omega_4\omega_1^3\omega_2^3 + 36v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 204v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 144v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 174cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 24v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3 + 54v_3^4\omega_3^2\omega_3^2\omega_3^3 - 48v_1^2\omega_3^2\omega_4^2\omega_1\omega_2 - 48v_3^2\omega_3^2\omega_4^2\omega_2^3 - 492cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 72v_3^4\omega_3^2\omega_4\omega_1\omega_2^3 - 40cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 576v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 162cs^2v_3^2\omega_4^2\omega_1^3\omega_2^3 - 36v_3^4\omega_3\omega_4\omega_1^3\omega_2^2 + 324cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 - 54v_3^2\omega_4^2\omega_1^3\omega_2^3 + 72v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 - 96v_1^2cs^2\omega_3\omega_4^2\omega_1\omega_2^2 + 240v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 36v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 + 432cs^2v_3^2\omega_3^2\omega_4^2\omega_2^3 - 12v_1^2cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 40cs^4\omega_3\omega_4^2\omega_1^2\omega_2^2 - 108cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 + 288v_3^2\omega_3^2\omega_4\omega_1^2\omega_2^3 + 32cs^4\omega_3^2\omega_4^2\omega_1^3 + 64cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 24v_1^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 96v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 852cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 288cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 288v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 117v_3^4\omega_3\omega_4^2\omega_1^3\omega_2^3 - 144v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 6cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 48v_1^2cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 56cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 72v_1^2cs^2\omega_3\omega_4\omega_1^2\omega_2^2 - 288v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 117v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2 - 72v_3^4\omega_4^2\omega_1^2\omega_2^3 + 108v_3^4\omega_3\omega_4^2\omega_1^3\omega_2^2 - 16cs^2\omega_3\omega_4^2\omega_1\omega_2^3 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^3 - 297cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^3 + 8cs^2\omega_3^2\omega_4^2\omega_2^3 - 288v_1^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 6v_1^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 16\omega_3^2\omega_4^2\omega_2^3 + 336cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 - 288v_3^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 36v_3^4\omega_3^2\omega_4\omega_1^2\omega_2^2 + 648cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 24v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 324cs^2v_3^2\omega_3^2\omega_1^2\omega_2^3 + 108v_3^2\omega_3^2\omega_1^2\omega_2^3 - 24v_1^2\omega_3^2\omega_4^2\omega_1^3 + 16cs^4\omega_3\omega_4^2\omega_1\omega_2^3 - 108v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 + 48v_1^2cs^2\omega_3\omega_4^2\omega_1^2\omega_2^2 + 36v_3^2\omega_3\omega_4\omega_1^2\omega_2^2 + 96v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 2cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 216v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^3\omega_2 + 48v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 24v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 - 96v_3^2\omega_3^2\omega_4^2\omega_1 + 86cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 117v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 28cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 24v_1^2cs^2\omega_3^2\omega_4^2\omega_2^3 - 24v_3^4\omega_3\omega_4^2\omega_1^2\omega_2 + 216v_3^4\omega_3\omega_4^2\omega_1^2\omega_2^3 + 144v_1^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 108cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 36v_3^4\omega_4^2\omega_1^3\omega_2^2 + 264cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3 + 36cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 117v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 108cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^2 - 36cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 6v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2^2 - 36v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 + 72cs^4\omega_3^2\omega_4\omega_1\omega_2^3 - 72v_1^2cs^2\omega_3\omega_4^2\omega_1^3\omega_2^2 + 20cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 54v_3^2\omega_3^2\omega_3^1\omega_2^3 - 12v_1^2cs^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2^2 + 192v_3^4\omega_3^2\omega_4^2\omega_2^3 + 60v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 12cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 + 162cs^2v_3^2\omega_3\omega_3^1\omega_2^3 + 24v_1^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 297cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2^3 - 72cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + 36v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^3 + 468cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 60v_3^4\omega_3\omega_4^2\omega_1^2\omega_2^3 + 54v_3^2\omega_4^2\omega_1^3\omega_2^3 + 144v_1^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2^3 - 72cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$

coefficient $C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3)}$ **at** $\frac{\partial^4 v_3}{\partial x_1\partial x_3^3}$:

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3),\mathrm{SRT}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3),\mathrm{MRT1}} =$
$(44\omega_{18}\omega_6 cs^2\omega_{11}^3 + 12_{18}\omega_{11}^3 - 72\omega_{18}^2\omega_6^2 cs^2\omega_{11} - 68\omega_{18}^2\omega_6 v_3^2\omega_{11}^2 + 28\omega_{18}^2\omega_6\omega_{11}^3 + 17\omega_{18}\omega_6^2\omega_{11}^3 + 20\omega_{18}^2 cs^2\omega_{11}^2 - 16\omega_{18}\omega_6 cs^2\omega_{11}^2 - 16\omega_6 v_3^2\omega_{11}^3 - 64\omega_{18}\omega_6^2 v_3^2\omega_{11} - 40\omega_{18}\omega_6^2\omega_{11}^2 + 16\omega_6^2 cs^2\omega_{11}^3 + 104\omega_{18}\omega_6^2 v_3^2\omega_{11}^2 + 24\omega_{18}\omega_6^2\omega_{11} - 8\omega_6^2\omega_{11}^3 - 28\omega_{18}v_3^2\omega_{11}^3 - 24\omega_{18}^2\omega_6\omega_{11} + 64\omega_{18}^2\omega_6 v_3^2\omega_{11} - 43\omega_{18}\omega_6^2 v_3^2\omega_{11}^3 - 16\omega_6^2 cs^2\omega_{11}^2 + 25\omega_{18}^2\omega_6 cs^2\omega_{11}^2 + 8\omega_6^2\omega_{11}^2 + 48\omega_{18}^2\omega_6^2\omega_{11} - 16\omega_6 cs^2\omega_{11}^3 - 48\omega_{18}\omega_6 v_3^2\omega_{11}^2 - 32\omega_{18}\omega_6^2 cs^2\omega_{11} + 68\omega_{18}\omega_6 v_3^2\omega_{11}^3 + 48\omega_{18}^2\omega_6^2 cs^2 - 120\omega_{18}^2\omega_6 v_3^2\omega_{11} - 44\omega_{18}^2\omega_6 cs^2\omega_{11}^2 + 8\omega_6\omega_{11}^3 + 28\omega_{18}^2 v_3^2\omega_{11}^2 + 32\omega_{18}^2\omega_6 cs^2\omega_{11} - 12\omega_{18}^2\omega_{11}^3 - 16\omega_6^2 v_3^2\omega_{11}^2 - 25\omega_{18}\omega_6^2 cs^2\omega_{11}^2 + 43\omega_{18}^2\omega_6^2 v_3^2\omega_{11}^2 + 16\omega_{18}\omega_6\omega_{11}^2 + 56\omega_{18}\omega_6^2 cs^2\omega_{11}^2 + 16\omega_6^2 v_3^2\omega_{11}^3 - 32\omega_{18}^2\omega_6^2 - 28\omega_{18}\omega_6\omega_{11}^3 - 17\omega_{18}^2\omega_6^2\omega_{11}^2 + 80\omega_{18}^2\omega_6^2 v_3^2 - 20\omega_{18}cs^2\omega_{11}^3)\frac{\rho v_1 v_3}{4\omega_{18}^2\omega_6^2\omega_{11}^3}$

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3),\mathrm{MRT2}} =$
$(12\omega_{18}\omega_{11}^3 - 32\omega_{18}\omega_6^2\omega_{11}cs^2 - 68\omega_{18}^2\omega_6 v_3^2\omega_{11}^2 + 28\omega_{18}^2\omega_6\omega_{11}^3 + 17\omega_{18}\omega_6^2\omega_{11}^3 + 20\omega_{18}^2\omega_{11}^2 cs^2 - 16\omega_{18}\omega_6\omega_{11}^2 cs^2 - 16\omega_6 v_3^2\omega_{11}^3 - 64\omega_{18}\omega_6^2 v_3^2\omega_{11} - 40\omega_{18}\omega_6^2\omega_{11}^2 + 16\omega_6^2\omega_{11}^3 cs^2 + 104\omega_{18}\omega_6^2 v_3^2\omega_{11}^2 + 48\omega_{18}^2\omega_6^2 cs^2 + 24\omega_{18}\omega_6^2\omega_{11} - 8\omega_6^2\omega_{11}^3 - 28\omega_{18}v_3^2\omega_{11}^3 + 32\omega_{18}^2\omega_6\omega_{11}cs^2 - 24\omega_{18}^2\omega_6\omega_{11} + 64\omega_{18}^2\omega_6 v_3^2\omega_{11} - 16\omega_6^2\omega_{11}^2 cs^2 - 43\omega_{18}\omega_6^2 v_3^2\omega_{11}^3 + 25\omega_{18}^2\omega_6\omega_{11}^2 cs^2 + 8\omega_6^2\omega_{11}^2 + 44\omega_{18}\omega_6\omega_{11}^3 cs^2 - 20\omega_{18}\omega_{11}^3 cs^2 + 48\omega_{18}^2\omega_6^2\omega_{11} - 48\omega_{18}\omega_6 v_3^2\omega_{11}^2 - 72\omega_{18}^2\omega_6^2\omega_{11}cs^2 + 68\omega_{18}\omega_6 v_3^2\omega_{11}^3 - 120\omega_{18}^2\omega_6 v_3^2\omega_{11} - 25\omega_{18}\omega_6^2\omega_{11}cs^2 + 8\omega_6\omega_{11}^3 + 28\omega_{18}^2 v_3^2\omega_{11}^2 - 44\omega_{18}\omega_6\omega_{11}^2 cs^2 - 12\omega_{18}^2\omega_{11}^3 - 16\omega_6^2 v_3^2\omega_{11}^2 + 43\omega_{18}^2\omega_6^2 v_3^2\omega_{11}^2 + 16\omega_{18}\omega_6\omega_{11}^2 + 16\omega_6^2 v_3^2\omega_{11}^3 + 56\omega_{18}\omega_6^2\omega_{11}^2 cs^2 - 32\omega_{18}^2\omega_6^2 - 28\omega_{18}\omega_6\omega_{11}^3 - 16\omega_6\omega_{11}^3 cs^2 - 17\omega_{18}^2\omega_6^2\omega_{11}^2 + 80\omega_{18}^2\omega_6^2 v_3^2)\frac{\rho v_1 v_3}{4\omega_{18}^2\omega_6^2\omega_{11}^3}$

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3),\mathrm{CLBM1}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3),\mathrm{CLBM2}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3),\mathrm{CuLBM1}} = 0$

$C_{\mathrm{D}_x\mathrm{D}_2^3 v_3}^{(3),\mathrm{CuLBM2}} = (-18v_1^2\omega_3\omega_1^3\omega_2 - 5v_1^2\omega_3\omega_1^2\omega_2^3 - 12\omega_1\omega_2^3 - 12cs^2\omega_3\omega_2^3 + 27cs^2\omega_1^3\omega_2^2 - 12v_3^2\omega_3\omega_1^2\omega_2 - 9v_1^2\omega_3\omega_1^2\omega_2^2 - 36\omega_3\omega_1^3 - 18cs^2\omega_1^2\omega_2^2 + 12v_1^2\omega_1\omega_2^3 + 132v_3^2\omega_3\omega_1^2\omega_2^2 + 3\omega_3\omega_1\omega_2^3 + 48v_3^2\omega_3\omega_1^3 + 6v_1^2\omega_3\omega_1^2\omega_2 + 27cs^2\omega_3\omega_1\omega_2^3 + 12v_1^2\omega_1\omega_2^3 - 27cs^2\omega_1^2\omega_2^3 - 18cs^2\omega_1^3\omega_2 + 5v_1^2\omega_3\omega_1^3\omega_2^2 - 54cs^2\omega_3\omega_1\omega_2^2 + 42\omega_3\omega_1\omega_2^2 - 66v_3^2\omega_3\omega_1^3\omega_2 + 36cs^2\omega_1^3\omega_2^2 - 12\omega_3\omega_2^3 + 81cs^2\omega_3\omega_1^2\omega_2^2 - 66v_3^2\omega_3\omega_1\omega_2^3 - 6v_1^2\omega_1^2\omega_2^2 - 9\omega_1^3\omega_2^2 - 51\omega_3\omega_1^2\omega_2^2 - 6v_1^2\omega_1^3\omega_2 + 5\omega_3\omega_1^2\omega_2^3 - 120v_3^2\omega_3\omega_1\omega_2^2 - 9v_1^2\omega_1^2\omega_2^2 + 48\omega_3\omega_1^3\omega_2 - 108cs^2\omega_3\omega_1^3\omega_2 + 84cs^2\omega_3\omega_1^3 - 15cs^2\omega_3\omega_1^2\omega_2^3 + 6v_1^2\omega_2^3 + 9v_1^2\omega_1^3\omega_2^2 - 5\omega_3\omega_1^3\omega_2 + 15cs^2\omega_3\omega_1^3\omega_2^2 - 24v_1^2\omega_3\omega_2^3 + 6v_1^2\omega_3\omega_1\omega_2^2 + 27v_1^2\omega_3\omega_1\omega_2^3 - 18cs^2\omega_3\omega_1^2\omega_2 + 6\omega_1^3\omega_2 + 6\omega_3\omega_1^2\omega_2 + 9\omega_1^2\omega_2^3 + 84v_3^2\omega_3\omega_2^3)\frac{\rho v_1 v_3}{18\omega_3\omega_1^3\omega_2^3}$

coefficient $C_{\mathrm{D}_y\mathrm{D}_2^3\rho}^{(3)}$ **at** $\frac{\partial^4\rho}{\partial x_2\partial x_3^3}$:

$$C^{(3),\text{SRT}}_{\text{D}_y\text{D}_2^3\rho} = 0$$

$$C^{(3),\text{MRT1}}_{\text{D}_y\text{D}_2^3\rho} = (24v_3^2\omega_7^2cs^2\omega_{11}^3 + 84v_3^2\omega_{19}\omega_7cs^2\omega_{11}^3 + 4\omega_7cs^2\omega_{11}^3 + 4\omega_{19}\omega_7^2cs^2\omega_{11} - 144v_3^2\omega_{19}^2\omega_7^2cs^2\omega_{11} - 36v_3^4\omega_{19}^2\omega_7^2\omega_{11} + 20v_3^2\omega_{19}^2\omega_7\omega_{11}^2 +$$
$$13v_3^2\omega_{19}\omega_7^2\omega_{11}^3 - 4v_3^2\omega_7^2\omega_{11}^2 + 24v_3^4\omega_{19}^2\omega_7 - 48v_3^2\omega_{19}\omega_7cs^2\omega_{11}^2 - 24v_3^2\omega_7^2cs^2\omega_{11}^2 + 8\omega_{19}^2\omega_7cs^2\omega_{11} + 8v_3^2\omega_{19}\omega_{11}^3 - 12\omega_{19}^2\omega_7cs^4\omega_{11} +$$
$$4\omega_{19}^2cs^4\omega_{11}^2 + 4v_3^4\omega_7^2\omega_{11}^3 + 8\omega_{19}\omega_7cs^4\omega_{11}^3 - 32v_3^2\omega_{19}\omega_7^2\omega_{11}^2 + 4\omega_{19}^2\omega_7cs^4\omega_{11}^2 - 4\omega_7^2cs^4\omega_{11}^2 + 20v_3^2\omega_{19}\omega_7^2\omega_{11} + 4\omega_{19}\omega_7^2cs^2\omega_{11}^3 - 16v_3^4\omega_{19}\omega_7\omega_{11}^2 +$$
$$36v_3^2\omega_{19}^2cs^2\omega_{11}^2 + 4v_3^2\omega_7^2\omega_{11}^2 - 4\omega_{19}\omega_7cs^2\omega_{11} - 20v_3^2\omega_{19}\omega_7\omega_{11} - 8\omega_{19}^2\omega_7^2cs^2 - 8v_3^2\omega_{19}\omega_{11}^3 + 4\omega_7^2cs^4\omega_{11}^3 - 24v_3^2\omega_{19}^2\omega_7 + 4\omega_{19}cs^2\omega_{11}^3 -$$
$$4v_3^2\omega_7^2\omega_{11} + 51v_3^2\omega_{19}\omega_7^2cs^2\omega_{11}^2 + 20v_3^4\omega_{19}\omega_7\omega_{11}^2 - 8\omega_{19}\omega_7^2cs^2\omega_{11}^2 + 13v_3^4\omega_{19}\omega_7^2\omega_{11}^2 + 36v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 8\omega_{19}\omega_7cs^4\omega_{11}^2 + 12\omega_{19}^2\omega_7cs^2\omega_{11} -$$
$$4\omega_{19}^2cs^2\omega_{11}^2 - 72v_3^2\omega_{19}\omega_7^2cs^2\omega_{11} + 4v_3^2\omega_7\omega_{11}^3 - 8\omega_{19}\omega_7cs^2\omega_{11}^3 - 20v_3^4\omega_{19}\omega_7\omega_{11} - 13v_3^4\omega_{19}\omega_7^2\omega_{11} + 8v_3^4\omega_{19}^2\omega_{11} - 4\omega_7cs^4\omega_{11}^3 +$$
$$96v_3^2\omega_{19}^2\omega_7cs^2 - 4\omega_{19}\omega_7cs^4\omega_{11} + 32v_3^4\omega_{19}\omega_7^2\omega_{11} + 8\omega_{19}^2\omega_7cs^4 - 84v_3^2\omega_{19}^2\omega_7cs^2\omega_{11}^2 - 36v_3^2\omega_{19}^2cs^2\omega_{11}^3 - 20v_3^4\omega_{19}\omega_7\omega_{11} + 72v_3^2\omega_{19}^2\omega_7cs^2\omega_{11} -$$
$$24v_3^2\omega_7cs^2\omega_{11}^3 - 51v_3^2\omega_{19}\omega_7^2cs^2\omega_{11}^3 - 4\omega_7^2cs^2\omega_{11}^3 - 4\omega_{19}cs^4\omega_{11}^3 - 4v_3^2\omega_7\omega_{11}^3 + 8\omega_{19}\omega_7cs^4\omega_{11}^2 + 16v_3^2\omega_{19}\omega_7\omega_{11}^2 + 120v_3^2\omega_{19}\omega_7^2cs^2\omega_{11}^2 +$$
$$4\omega_7^2cs^2\omega_{11}^2 - 4\omega_{19}^2\omega_7^2cs^2\omega_{11}^2 - 8v_3^2\omega_{19}^2\omega_{11}^3 + 20v_3^4\omega_{19}^2\omega_7\omega_{11} - 20v_3^2\omega_{19}\omega_7\omega_{11}^3 - 4\omega_{19}\omega_7^2cs^4\omega_{11}^3 - 13v_3^2\omega_{19}\omega_7^2\omega_{11}^2 + 4\omega_{19}\omega_7cs^4\omega_{11})\dfrac{v_2}{4\omega_{19}^2\omega_7^2\omega_{11}^3}$$

$$C^{(3),\text{MRT2}}_{\text{D}_y\text{D}_2^3\rho} = (12\omega_{19}^2\omega_7^2\omega_{11}cs^2 + 4\omega_{19}\omega_{11}^3cs^2 - 72v_3^2\omega_{19}\omega_7^2\omega_{11}cs^2 - 36v_3^4\omega_{19}^2\omega_7^2\omega_{11} + 20v_3^2\omega_{19}^2\omega_7\omega_{11}^2 + 4\omega_{19}\omega_7\omega_{11}cs^4 + 13v_3^2\omega_{19}\omega_7^2\omega_{11}^3 -$$
$$4v_3^4\omega_7^2\omega_{11}^2 - 24v_3^2\omega_7^2\omega_{11}^2cs^2 - 48v_3^2\omega_{19}\omega_7\omega_{11}^2cs^2 + 8\omega_{19}^2\omega_7\omega_{11}^2cs^2 + 24v_3^4\omega_{19}^2\omega_7 + 4\omega_{19}\omega_7^2\omega_{11}^3cs^2 + 8v_3^2\omega_{19}\omega_{11}^3 + 8\omega_{19}\omega_7\omega_{11}cs^4 + 4v_3^4\omega_7^2\omega_{11}^3 -$$
$$32v_3^2\omega_{19}\omega_7^2\omega_{11} - 4\omega_7^2\omega_{11}cs^4 + 4\omega_{19}^2\omega_7^2\omega_{11}cs^4 - 4\omega_{19}\omega_7^2\omega_{11}cs^4 + 96v_3^2\omega_{19}^2\omega_7cs^2 + 20v_3^2\omega_{19}\omega_7^2\omega_{11} + 4\omega_{19}\omega_{11}^2cs^4 + 36v_3^2\omega_{19}\omega_{11}^2cs^2 -$$
$$16v_3^4\omega_{19}\omega_7\omega_{11}^2 + 8\omega_{19}^2\omega_7cs^4 + 4v_3^2\omega_7^2\omega_{11}^2 + 72v_3^2\omega_{19}^2\omega_7\omega_{11}cs^2 - 20v_3^2\omega_{19}^2\omega_7\omega_{11} + 4\omega_7^2\omega_{11}^3cs^4 - 8v_3^4\omega_{19}\omega_{11}^3 - 24v_3^2\omega_{19}^2\omega_7 - 4v_3^2\omega_7^2\omega_{11}^3 +$$
$$51v_3^2\omega_{19}\omega_7^2\omega_{11}^2cs^2 - 8\omega_{19}\omega_7^2\omega_{11}^2cs^2 + 20v_3^4\omega_{19}\omega_7\omega_{11}^3 + 4\omega_7\omega_{11}^3cs^2 + 84v_3^2\omega_{19}\omega_7\omega_{11}^3cs^2 + 24v_3^2\omega_7^2\omega_{11}^3cs^2 + 13v_3^4\omega_{19}\omega_7^2\omega_{11}^2 + 36v_3^2\omega_{19}^2\omega_7^2\omega_{11} -$$
$$8v_3^2\omega_{19}\omega_7^2cs^2 + 4\omega_{19}\omega_7^2\omega_{11}cs^2 - 144v_3^2\omega_{19}^2\omega_7^2\omega_{11}cs^2 + 4v_3^2\omega_7\omega_{11}^3 - 20v_3^4\omega_{19}\omega_7\omega_{11} - 13v_3^4\omega_{19}\omega_7^2\omega_{11}^3 - 4\omega_{19}\omega_7^2\omega_{11}cs^2 + 8v_3^4\omega_{19}^2\omega_{11} + 8\omega_{19}\omega_7^2\omega_{11}cs^4 -$$
$$4\omega_7\omega_{11}cs^4 + 32v_3^4\omega_{19}\omega_7^2\omega_{11} - 4\omega_7^2\omega_{11}^3cs^2 - 51v_3^2\omega_{19}\omega_7^2\omega_{11}^3cs^2 - 24v_3^2\omega_7\omega_{11}^3cs^2 - 84v_3^2\omega_{19}\omega_7\omega_{11}^2cs^2 - 20v_3^4\omega_{19}\omega_7\omega_{11} - 4\omega_{19}\omega_7\omega_{11}cs^2 -$$
$$36v_3^2\omega_{19}\omega_{11}^3cs^2 - 4v_3^4\omega_7\omega_{11}^3 - 12\omega_{19}^2\omega_7\omega_{11}cs^4 - 4\omega_{19}\omega_{11}^3cs^4 + 16v_3^2\omega_{19}\omega_7\omega_{11}^2 - 8\omega_{19}\omega_7\omega_{11}^3cs^2 - 8v_3^2\omega_{19}^2\omega_{11}^3 + 20v_3^4\omega_{19}^2\omega_7\omega_{11} +$$
$$120v_3^2\omega_{19}\omega_7^2\omega_{11}^2cs^2 + 4\omega_7^2\omega_{11}^2cs^2 - 4\omega_{19}^2\omega_7^2\omega_{11}^2cs^2 - 20v_3^2\omega_{19}\omega_7\omega_{11}^3 - 8\omega_{19}\omega_7\omega_{11}^2cs^4 - 13v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 4\omega_{19}\omega_7^2\omega_{11}^3cs^4)\dfrac{v_2}{4\omega_{19}^2\omega_7^2\omega_{11}^3}$$

$$C^{(3),\text{CLBM1}}_{\text{D}_y\text{D}_2^3\rho} = 0$$

$$C^{(3),\text{CLBM2}}_{\text{D}_y\text{D}_2^3\rho} = 0$$

$$C^{(3),\text{CuLBM1}}_{\text{D}_y\text{D}_2^3\rho} = 0$$

$$C^{(3),\text{CuLBM2}}_{\text{D}_y\text{D}_2^3\rho} = (8cs^2v_2^2\omega_3^2\omega_1\omega_2^2 + 16cs^2v_2^2\omega_3^2\omega_1^3 - 4cs^2v_2^2\omega_3\omega_1^3\omega_2 + 96v_2^2v_3^2\omega_3^2\omega_1\omega_3^3 - 5cs^2\omega_3^2\omega_1^3\omega_2 - 18cs^2v_2^2\omega_3\omega_1^2\omega_2^3 + \omega_3^2\omega_1^3\omega_2 - 4v_2^2\omega_3^2\omega_1^3 +$$
$$24v_3^2\omega_3^2\omega_2^3 + 72v_3^4\omega_3^2\omega_1^2\omega_2^2 + 24v_2^2v_3^2\omega_3^2\omega_1^3 + 72cs^4\omega_3^2\omega_1^3 - 12cs^4\omega_3\omega_1^2\omega_2^2 + 12cs^2\omega_1^3\omega_2^2 + 42cs^4\omega_3\omega_1\omega_2^3 - 8v_2^2\omega_3^2\omega_1\omega_2^3 - 4\omega_3^2\omega_1^2\omega_2 + 24v_2^2v_3^2\omega_3^2\omega_1\omega_2^2 -$$
$$4cs^2v_2^2\omega_3\omega_1^2\omega_2^2 + 22cs^2v_2^2\omega_3^2\omega_1\omega_2^3 + 40cs^2\omega_3^2\omega_1^2\omega_2 + 36cs^4\omega_1^2\omega_2^3 - 8v_2^2\omega_3^2\omega_1\omega_2^3 - 12cs^4\omega_3\omega_1^3\omega_2 + 12cs^2v_2^2\omega_3^2\omega_1^2\omega_2^3 - 54cs^4\omega_3\omega_1^2\omega_2^3 -$$
$$36v_3^4\omega_3^2\omega_1^3\omega_2 + 54cs^4\omega_3\omega_1^3\omega_2^2 - 12cs^2v_2^2\omega_3^2\omega_1^3 + 108cs^2v_3^2\omega_3^2\omega_1\omega_3^3 - 4\omega_3^2\omega_1^2\omega_2^2 - 60v_3^2\omega_3^2\omega_1\omega_2^3 + 48v_3^4\omega_3^2\omega_2^3 - 36cs^4\omega_1^3\omega_2^2 - 8cs^2\omega_3\omega_1\omega_2^3 -$$
$$34cs^2\omega_3^2\omega_1^2\omega_2 - 52cs^2\omega_3^2\omega_1^3 - 216cs^2v_3^2\omega_3^2\omega_1\omega_2 - 12cs^2\omega_1^2\omega_2^3 + 5cs^2\omega_3^2\omega_1^2\omega_2^3 + 18cs^2v_2^2\omega_3\omega_1^3\omega_2^2 + 56cs^2\omega_3^2\omega_1^3\omega_2 - 8\omega_3^2\omega_2^3 + 48v_3^2\omega_3^2\omega_1\omega_2^2 -$$
$$4\omega_3^2\omega_1^3\omega_2 - \omega_3^2\omega_1^2\omega_2^3 + 216cs^2v_3^2\omega_3^2\omega_1^2\omega_2^3 + 4v_2^2\omega_3^2\omega_1^2\omega_2 + 6cs^4\omega_3^2\omega_1^3\omega_2^2 + 4cs^2\omega_3\omega_1^2\omega_2^2 - 4cs^2v_2^2\omega_3^2\omega_1^2\omega_2 + 24v_2^2v_3^2\omega_3^2\omega_1^3\omega_2^2 - 22cs^2\omega_3^2\omega_1\omega_2^3 +$$
$$8\omega_3^2\omega_1\omega_2^3 - 24v_3^2\omega_3^2\omega_1^2\omega_2^3 - v_2^2\omega_3^2\omega_1^3\omega_2^2 + 8v_2^2\omega_3^2\omega_2^3 - 36cs^4\omega_3^2\omega_1^2\omega_2 - 324cs^2v_3^2\omega_3^2\omega_1^3\omega_2 - 20cs^2v_2^2\omega_2^2\omega_2^3 - 72cs^2v_3^2\omega_3^2\omega_1^2\omega_2^3 + 216cs^2v_3^2\omega_3^2\omega_1^3 +$$
$$24v_3^2\omega_3^2\omega_2^3 - 36cs^4\omega_3^2\omega_2^3 + 8\omega_3^2\omega_1\omega_2^2 + 84v_3^2\omega_3^2\omega_1\omega_2 - 72v_2^2v_3^2\omega_3\omega_2^3 + 4cs^2\omega_3\omega_1^3\omega_2 - 8cs^2\omega_3^2\omega_1\omega_2^2 + 18cs^2\omega_3\omega_1^3\omega_2^2 + 2cs^2v_2^2\omega_3\omega_1^3\omega_2^2 +$$
$$24v_2^2v_3^2\omega_3^2\omega_1^2\omega_2 - 48v_2^2\omega_3^2\omega_2^3 - 24v_3^2\omega_3^2\omega_1^3\omega_2 - 18cs^2\omega_3\omega_1^3\omega_2^2 - 2cs^2v_2^2\omega_3\omega_1^2\omega_2^3 - 20cs^2v_2^2\omega_3\omega_1\omega_2^3 - 48v_2^2v_3^2\omega_3^2\omega_1^2\omega_2 + 24cs^4\omega_3\omega_1\omega_2^3 +$$
$$4v_2^2\omega_3^2\omega_1^3\omega_2 + v_2^2\omega_3^2\omega_1^2\omega_2^3 + 42cs^4\omega_3^2\omega_1^2\omega_2 + 4\omega_3^2\omega_1^3 + 72cs^2v_3^2\omega_3^2\omega_1\omega_2 - 36v_3^4\omega_3^2\omega_1\omega_2^3 + 8cs^2v_2^2\omega_3\omega_1\omega_2^3 - 24v_2^2v_3^2\omega_3^2\omega_1^2\omega_2 - 2cs^2v_2^2\omega_3\omega_1^2\omega_2^2 -$$
$$48v_2^2v_3^2\omega_3^2\omega_1^3\omega_2 - 24v_3^2\omega_3^2\omega_1^2\omega_2 + 20cs^2\omega_3^2\omega_2^3 - 72v_3^4\omega_3^2\omega_1\omega_2^2 - 6cs^4\omega_3^2\omega_1^2\omega_2^3 + 4v_2^2\omega_3^2\omega_1^2\omega_2^2 + 24v_3^2\omega_3^2\omega_1^3 - 84cs^4\omega_3^2\omega_1^3\omega_2)\dfrac{v_2}{36\omega_3^2\omega_1^3\omega_2^2}$$

coefficient $C^{(3)}_{\text{D}_y\text{D}_2^3v_2}$ **at** $\dfrac{\partial^4 v_2}{\partial x_2\partial x_3^3}$:

$$C^{(3),\text{SRT}}_{\text{D}_y\text{D}_2^3v_2} = (-12cs^2\omega^2 + 54v_3^2cs^2\omega - 36v_3^4 + 54v_3^4\omega - 24cs^2 - 26v_3^4\omega^2 + 12v_3^2cs^2\omega^3 - 42v_3^2cs^2\omega^2 + 4v_3^4\omega^3 + 36cs^2\omega - cs^4\omega^3 - 54v_3^2\omega +$$
$$20cs^4\omega^2 - 4v_3^2\omega^3 + 36v_3^2 - 36v_3^2cs^2 - 54cs^4\omega + 26v_3^2\omega^2 + 36cs^4)\dfrac{\rho}{12\omega^3}$$

$$C^{(3),\text{MRT1}}_{\text{D}_y\text{D}_2^3v_2} = (-12v_3^2\omega_7^2cs^2\omega_{11}^3 - 12v_3^2\omega_{19}\omega_7cs^2\omega_{11}^3 + 6\omega_{19}\omega_7cs^2\omega_{11}^3 + 12v_3^2\omega_7^2\omega_{11}^2 + 72v_3^4\omega_{19}^2\omega_7^3 - 108v_3^2\omega_{19}^2\omega_7^2cs^2\omega_{11} + 4v_3^4\omega_{19}\omega_7^3\omega_{11}^3 +$$
$$36v_3^2\omega_{19}\omega_7^3\omega_{11} - 48v_3^2\omega_{19}\omega_7^2\omega_{11}^3 + 12\omega_{19}^2cs^4\omega_{11}^3 - 36v_3^2\omega_{19}\omega_7cs^2\omega_{11} + 19v_3^4\omega_{19}^2\omega_7^2\omega_{11}^2 + 12\omega_{19}^2\omega_7cs^2\omega_{11} - 12v_3^2\omega_7^3\omega_{11} - 12\omega_{19}^2\omega_7cs^4\omega_{11} -$$
$$12v_3^4\omega_7^2\omega_{11}^3 + 12\omega_{19}\omega_7cs^4\omega_{11}^3 + 24v_3^2\omega_{19}\omega_7^2\omega_{11}^2 - 12v_3^2\omega_{19}^2\omega_7\omega_{11}^3 - 12\omega_{19}^2\omega_7cs^2 + 6\omega_{19}\omega_7^2cs^4\omega_{11}^2 + 6\omega_{19}\omega_7cs^4\omega_{11}^3 - 72v_3^2\omega_{19}^2\omega_7 - 12v_3^4\omega_7^3\omega_{11}^3 +$$
$$27v_3^2\omega_{19}\omega_7^3\omega_{11}^3 - 18v_3^4\omega_{19}^2\omega_7^3\omega_{11} - \omega_{19}\omega_7cs^2\omega_{11}^3 - 81v_3^2\omega_{19}^2\omega_7cs^2\omega_{11}^3 - 90v_3^4\omega_{19}^2\omega_7^3\omega_{11} + 18\omega_{19}\omega_7^2cs^2\omega_{11}^3 + 54v_3^2\omega_{19}\omega_7cs^2\omega_{11}^2 - 60v_3^2\omega_{19}\omega_7^2\omega_{11}^2 +$$
$$13v_3^4\omega_{19}^2\omega_7cs^4\omega_{11}^3 + 12v_3^4\omega_{19}\omega_7^3\omega_{11} - 6\omega_{19}\omega_7^2\omega_7cs^4\omega_{11}^2 - 48v_3^2\omega_{19}cs^4\omega_{11}^3 + 12v_3^2\omega_7^2\omega_{11}^2 + 162v_3^2\omega_{19}\omega_7^2cs^2\omega_{11}^2 - 24v_3^2\omega_{19}\omega_7\omega_{11}^3 - 21v_3^2\omega_{19}\omega_7cs^2\omega_{11}^3 -$$
$$12\omega_{19}^2\omega_7cs^2\omega_{11}^3 + 12v_3^4\omega_{19}^2\omega_7\omega_{11}^2 - 4v_3^2\omega_{19}^2\omega_7\omega_{11}^3 - 12\omega_{19}^2\omega_7cs^4\omega_{11} + 12v_3^2\omega_7cs^2\omega_{11} + 102v_3^2\omega_{19}\omega_7^2cs^2\omega_{11} - 36v_3^4\omega_{19}\omega_7\omega_{11}^2 -$$
$$12\omega_{19}\omega_7cs^2\omega_{11}^3 - 12v_3^2\omega_7^2cs^2\omega_{11}^2 + 48v_3^4\omega_{19}\omega_7^2\omega_{11}^3 - 24\omega_{19}^2\omega_7cs^4\omega_{11}^3 - 19v_3^2\omega_{19}\omega_7^2\omega_{11}^2 - 24v_3^4\omega_{19}\omega_7^2\omega_{11}^3 - 48v_3^2\omega_{19}\omega_7cs^2\omega_{11}^2 + 12v_3^4\omega_{19}\omega_7\omega_{11}^3 +$$
$$12v_3^2\omega_7^3cs^2\omega_{11}^3 - 306v_3^2\omega_{19}^2\omega_7^3cs^2\omega_{11} - 27v_3^4\omega_{19}^2\omega_7^3\omega_{11} + 6\omega_{19}\omega_7cs^2\omega_{11}^3 + 30v_3^2\omega_{19}\omega_7^2cs^2\omega_{11}^3 - 5\omega_{19}^2\omega_7cs^2\omega_{11}^3 + 60v_3^2\omega_{19}\omega_7^3cs^2\omega_{11}^2 +$$
$$12\omega_{19}\omega_7^2cs^4\omega_{11}^2 - \omega_{19}\omega_7cs^4\omega_{11}^3 + 18v_3^2\omega_{19}^2\omega_7^2\omega_{11} + 90v_3^2\omega_{19}\omega_7^3\omega_{11} - 12v_3^2\omega_{19}\omega_7^2cs^2\omega_{11}^2 - 6\omega_{19}\omega_7cs^2\omega_{11}^3 + 12v_3^2\omega_{19}\omega_7^3cs^2\omega_{11}^3 - 6\omega_{19}\omega_7^2cs^2\omega_{11}^3 +$$
$$60v_3^4\omega_{19}\omega_7^3\omega_{11}^2 + 12\omega_{19}^2\omega_7^3cs^4 + 24v_3^2\omega_{19}\omega_7\omega_{11}^3 + 252v_3^2\omega_{19}^2\omega_7^3cs^2 - 18\omega_{19}\omega_7^2cs^4\omega_{11}^3 - 12v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 + \omega_{19}^2\omega_7^3cs^4\omega_{11}^3)\dfrac{\rho}{12\omega_{19}^2\omega_7^3\omega_{11}^3}$$

$$C^{(3),\text{MRT2}}_{\text{D}_y\text{D}_2^3v_2} = (12\omega_{19}^2\omega_7^3cs^4 - 21v_3^2\omega_{19}\omega_7^3\omega_{11}^3cs^2 + 12v_3^2\omega_7^3\omega_{11}^2 + 72v_3^4\omega_{19}^2\omega_7^3 + 12\omega_{19}^2\omega_7^2\omega_{11}cs^2 - 48v_3^2\omega_{19}^2\omega_{11}cs^2 + 4v_3^4\omega_{19}^2\omega_7\omega_{11}^3 -$$

$$
6\omega_{19}\omega_7^3\omega_{11}^2 cs^4 + 36v_3^2\omega_{19}\omega_7^3\omega_{11} + 12\omega_{19}^2\omega_{11}^3 cs^4 - 48v_3^2\omega_{19}\omega_7^2\omega_{11}^3 + 252v_3^2\omega_{19}^2\omega_7^3 cs^2 - 306v_3^2\omega_{19}^2\omega_7^3\omega_{11}cs^2 + 19v_3^4\omega_{19}^2\omega_7\omega_{11}^2 - 12v_3^2\omega_7^3\omega_{11}^3 +
$$
$$
18\omega_{19}\omega_7^2\omega_{11}^3 cs^2 - 81v_3^2\omega_{19}^2\omega_7^2\omega_{11}cs^2 - 12v_3^4\omega_{19}\omega_7\omega_{11}^2 cs^2 + 12\omega_{19}\omega_7\omega_{11}^3 cs^4 - 12v_3^4\omega_7^2\omega_{11}^3 + 24v_3^2\omega_{19}\omega_7^2\omega_{11}^2 - 12v_3^2\omega_{19}^2\omega_7\omega_{11}^3 + 6\omega_{19}^2\omega_7^2\omega_{11}^2 cs^4 - 72v_3^2\omega_{19}^2\omega_7^3 -
$$
$$
12v_3^4\omega_7^3\omega_{11}^2 + 6\omega_{19}\omega_7^3\omega_{11}^3 cs^4 + 27v_3^2\omega_{19}\omega_7^3\omega_{11}^3 - 18v_3^4\omega_{19}^2\omega_7^2\omega_{11}^3 - 90v_3^4\omega_{19}^2\omega_7^3\omega_{11} - \omega_{19}^2\omega_7^2\omega_{11}^2 cs^2 + 54v_3^2\omega_{19}^3\omega_7^2\omega_{11}^2 cs^2 - 60v_3^2\omega_{19}\omega_7^3\omega_{11}^2 +
$$
$$
13\omega_{19}^2\omega_7^3\omega_{11}^2 cs^4 - 12\omega_{19}^2\omega_7\omega_{11}^2 cs^4 + 12v_3^4\omega_7^3\omega_{11}^2 + 12v_3^2\omega_7^3\omega_{11}^2 + 162v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 cs^2 - 12\omega_{19}\omega_7^2\omega_{11}^2 cs^2 + 6\omega_{19}^2\omega_7\omega_{11}^3 cs^2 - 24v_3^4\omega_{19}\omega_7\omega_{11}^3 -
$$
$$
12v_3^2\omega_{19}\omega_7\omega_{11}^3 cs^2 - 12v_3^2\omega_7^2\omega_{11}^3 cs^2 + 12v_3^4\omega_{19}\omega_7^2\omega_{11}^2 - 4v_3^2\omega_{19}^2\omega_7^3\omega_{11} + \omega_{19}\omega_7^3\omega_{11}^2 cs^4 - 108v_3^2\omega_{19}^2\omega_7^2\omega_{11}cs^2 - 12v_3^2\omega_7^3\omega_{11}^2 + 12v_3^2\omega_{19}^2\omega_7^3\omega_{11}cs^2 -
$$
$$
36v_3^4\omega_{19}^2\omega_7^3\omega_{11} - 6\omega_{19}\omega_7^3\omega_{11}^3 cs^2 + 48v_3^4\omega_{19}\omega_7^2\omega_{11} + 12\omega_{19}\omega_7^2\omega_{11}^2 cs^4 - 24\omega_{19}\omega_7\omega_{11}^3 cs^4 - 19v_3^2\omega_{19}^2\omega_7^2\omega_{11} - 24v_3^4\omega_{19}\omega_7^2\omega_{11} - 5\omega_{19}^2\omega_7\omega_{11}^3 cs^2 +
$$
$$
30v_3^2\omega_{19}\omega_7^3\omega_{11}^2 cs^2 + 12v_3^4\omega_{19}\omega_7\omega_{11} - 48v_3^2\omega_{19}^2\omega_7\omega_{11}^2 cs^2 - 36v_3^2\omega_{19}\omega_7^3\omega_{11}cs^2 + 12\omega_{19}^2\omega_7^3\omega_{11}cs^2 + 6\omega_{19}\omega_7^3\omega_{11}^2 cs^2 + 60v_3^2\omega_{19}^2\omega_7^3\omega_{11}^2 cs^2 -
$$
$$
27v_3^4\omega_{19}\omega_7^3\omega_{11} + 12v_3^2\omega_7^3\omega_{11}cs^2 - 12\omega_{19}^2\omega_7^3 cs^2 - \omega_{19}^2\omega_7^3\omega_{11}cs^4 - 12\omega_{19}^2\omega_7\omega_{11}cs^4 + 18v_3^2\omega_{19}^2\omega_7^2\omega_{11}^3 + 90v_3^2\omega_{19}^2\omega_7^3\omega_{11} - 12\omega_{19}\omega_7\omega_{11}^3 cs^2 +
$$
$$
102v_3^2\omega_{19}^2\omega_7\omega_{11}^2 cs^2 + 60v_3^4\omega_{19}\omega_7^3\omega_{11}^2 - 12v_3^2\omega_{19}\omega_7^2\omega_{11}^2 cs^2 - 6\omega_{19}^2\omega_7^2\omega_{11}^2 cs^2 + 24v_3^2\omega_{19}\omega_7^3\omega_{11}^3 - 12v_3^2\omega_{19}^2\omega_7^2\omega_{11}^2 - 18\omega_{19}\omega_7^2\omega_{11}^3 cs^4)\frac{\rho}{12\omega_{19}^2\omega_7^3\omega_{11}^3}
$$

$$
C_{D_yD_2^3v_2}^{(3),\mathrm{CLBM1}} = (-6cs^4\omega_{19}\omega_7^3\omega_{11}^2 + 36v_3^2\omega_7^3\omega_{11}^2 - 99cs^2v_3^2\omega_{19}\omega_7^3\omega_{11} + 72v_3^4\omega_{19}^2\omega_7 + 4v_3^4\omega_{19}^2\omega_7^3\omega_{11} + 108cs^2v_3^2\omega_7^3\omega_{11} + 36v_3^2\omega_{19}\omega_7^3\omega_{11} -
$$
$$
36v_3^2\omega_{19}\omega_7^2\omega_{11}^3 - 12cs^2\omega_{19}\omega_7\omega_{11} - 6cs^2\omega_{19}^2\omega_7^2\omega_{11}^2 - 108cs^2v_3^2\omega_7^3\omega_{11} + 19v_3^4\omega_{19}^2\omega_7\omega_{11}^2 + 198cs^2v_3^2\omega_{19}\omega_7^3\omega_{11} - 36v_3^2\omega_7^3\omega_{11} + 6cs^4\omega_{19}\omega_7^3\omega_{11} -
$$
$$
5cs^2\omega_{19}^2\omega_7^3\omega_{11} - 36v_3^4\omega_7^3\omega_{11} - 12cs^2\omega_{19}^2\omega_7^3 + 12cs^2\omega_{19}^2\omega_7\omega_{11} - 72v_3^2\omega_{19}^2\omega_7^3 - 36v_3^4\omega_7^3\omega_{11} - cs^2\omega_{19}^2\omega_7^3\omega_{11} + 39v_3^2\omega_{19}\omega_7^3\omega_{11} - 6v_3^4\omega_{19}^2\omega_7^2\omega_{11} -
$$
$$
108cs^2v_3^2\omega_{19}^2\omega_7^3 - 90v_3^4\omega_{19}^2\omega_7^3\omega_{11} - 108cs^2v_3^2\omega_{19}\omega_7^3\omega_{11} + 12cs^4\omega_{19}\omega_7^2\omega_{11}^2 + 54cs^2v_3^2\omega_{19}\omega_7^2\omega_{11}^2 - 24cs^4\omega_{19}^2\omega_7^3\omega_{11} - 72v_3^2\omega_{19}\omega_7^3\omega_{11} +
$$
$$
252cs^2v_3^2\omega_{19}^2\omega_7 + 12cs^2\omega_{19}^2\omega_7\omega_{11} + 36v_3^4\omega_7^3\omega_{11} + 36cs^2v_3^2\omega_{19}\omega_7^2\omega_{11} + 36v_3^2\omega_7^2\omega_{11} + 12cs^4\omega_{19}^2\omega_7 - 18cs^4\omega_{19}\omega_7^2\omega_{11} - 18cs^2v_3^2\omega_{19}\omega_7\omega_{11} -
$$
$$
4v_3^2\omega_{19}^2\omega_7^3\omega_{11} + 6cs^2\omega_{19}\omega_7^3\omega_{11}^2 - 3cs^2v_3^2\omega_{19}^2\omega_7^3\omega_{11} + 12cs^4\omega_{19}\omega_7^3\omega_{11} + 6cs^4\omega_{19}^2\omega_7^2\omega_{11} - 306cs^2v_3^2\omega_{19}^2\omega_7\omega_{11} - 36v_3^2\omega_{19}^2\omega_7^3\omega_{11} +
$$
$$
36v_3^4\omega_{19}^2\omega_7^3\omega_{11} - 6cs^2\omega_{19}\omega_7^3\omega_{11} - 19v_3^2\omega_{19}\omega_7^3\omega_{11} + 13cs^4\omega_{19}^2\omega_7^3\omega_{11} + 36cs^2v_3^2\omega_{19}\omega_7^3\omega_{11} - 12cs^4\omega_{19}^2\omega_7\omega_{11} + 18cs^2v_3^2\omega_{19}^2\omega_7^2\omega_{11} -
$$
$$
39v_3^4\omega_{19}\omega_7^3\omega_{11} + 12cs^2v_3^2\omega_{19}\omega_7^3\omega_{11} + cs^4\omega_{19}^2\omega_7^3\omega_{11} - 36cs^2v_3^2\omega_{19}\omega_7^2\omega_{11} - 12cs^2\omega_{19}\omega_7^2\omega_{11} + 6cs^2\omega_{19}^2\omega_7^3\omega_{11} + 6v_3^2\omega_{19}^2\omega_7^3\omega_{11} +
$$
$$
90v_3^2\omega_{19}^2\omega_7\omega_{11} - cs^4\omega_{19}^2\omega_7^3\omega_{11} - 12cs^4\omega_{19}^2\omega_7\omega_{11} + 60cs^2v_3^2\omega_{19}^2\omega_7^3\omega_{11} + 72v_3^4\omega_{19}\omega_7^3\omega_{11} + 12cs^4\omega_{19}^2\omega_{11} + 18cs^2\omega_{19}\omega_7^2\omega_{11}^3)\frac{\rho}{12\omega_{19}^2\omega_7^3\omega_{11}^3}
$$

$$
C_{D_yD_2^3v_2}^{(3),\mathrm{CLBM2}} = (198v_3^2\omega_{19}\omega_7^3 cs^2\omega_{11}^2 + 18\omega_{19}\omega_7^2 cs^2\omega_{11}^3 - 3v_3^2\omega_{19}^2\omega_7^2 cs^2\omega_{11}^3 - \omega_{19}^2\omega_7^3 cs^2\omega_{11}^2 + 36v_3^2\omega_7^3\omega_{11}^2 + 72v_3^4\omega_{19}^2\omega_7^3 + 4v_3^4\omega_{19}^2\omega_7^3\omega_{11}^3 +
$$
$$
36v_3^2\omega_{19}\omega_7^3\omega_{11} + 6\omega_{19}\omega_7^3 cs^4\omega_{11}^3 - 12\omega_{19}\omega_7^3 cs^2 + 6\omega_{19}^2\omega_7^2 cs^4\omega_{11}^2 - 36v_3^2\omega_{19}\omega_7^2\omega_{11}^3 + 19v_3^4\omega_{19}^2\omega_7\omega_{11}^2 - 36v_3^2\omega_7^3\omega_{11} - 12\omega_{19}\omega_7^2 cs^2\omega_{11}^2 -
$$
$$
99v_3^2\omega_{19}\omega_7^3 cs^2\omega_{11}^2 + 18v_3^2\omega_{19}^2\omega_7^2 cs^2\omega_{11} - 36v_3^4\omega_7^2\omega_{11} - 6\omega_{19}\omega_7^3 cs^4\omega_{11}^2 + 13\omega_{19}^2\omega_7^2 cs^4\omega_{11} - 72v_3^2\omega_{19}^2\omega_7^3 - 36v_3^4\omega_7^3\omega_{11} + 12\omega_{19}^2 cs^4\omega_{11}^3 +
$$
$$
39v_3^2\omega_{19}\omega_7^3\omega_{11} - 6v_3^4\omega_{19}^2\omega_7^2\omega_{11} + 6\omega_{19}^2\omega_7 cs^2\omega_{11}^3 - 90v_3^4\omega_{19}^2\omega_7^3\omega_{11} - 108v_3^2\omega_7^2 cs^2\omega_{11}^3 + 36v_3^2\omega_{19}\omega_7 cs^2\omega_{11}^3 - 36v_3^2\omega_{19}^2\omega_7^2 cs^2\omega_{11} -
$$
$$
72v_3^2\omega_{19}\omega_7^3\omega_{11}^2 - 12\omega_{19}\omega_7^2 cs^4\omega_{11} + 12\omega_{19}\omega_7 cs^4\omega_{11}^3 + 36v_3^4\omega_7^3\omega_{11} + 36v_3^2\omega_7^2\omega_{11} + 12\omega_{19}\omega_7^3 cs^2\omega_{11} - 108v_3^2\omega_{19}\omega_7^3 cs^2\omega_{11} - 4v_3^2\omega_{19}^2\omega_7^3\omega_{11} -
$$
$$
\omega_{19}^2\omega_7 cs^4\omega_{11}^3 + 12\omega_{19}^2\omega_7 cs^4\omega_{11}^3 + 60v_3^2\omega_{19}^2\omega_7 cs^2\omega_{11}^2 - 5\omega_{19}^2\omega_7 cs^2\omega_{11}^3 - 36v_3^2\omega_{19}\omega_7^3\omega_{11} + 54v_3^2\omega_{19}\omega_7 cs^2\omega_{11}^2 + 6\omega_{19}\omega_7^3 cs^2\omega_{11}^2 + 36v_3^4\omega_{19}\omega_7^2\omega_{11}^2 +
$$
$$
\omega_{19}^2\omega_7 cs^4\omega_{11}^3 - 18\omega_{19}\omega_7 cs^4\omega_{11}^3 - 19v_3^2\omega_{19}\omega_7^3\omega_{11} - 6\omega_{19}^2\omega_7 cs^2\omega_{11}^2 + 12v_3^2\omega_{19}^2\omega_7^3 cs^2\omega_{11} - 6\omega_{19}\omega_7^3 cs^2\omega_{11} + 36v_3^2\omega_{19}\omega_7 cs^2\omega_{11} + 12\omega_{19}^2\omega_7^3 cs^4 +
$$
$$
12\omega_{19}^2\omega_7^3 cs^2\omega_{11} - 39v_3^4\omega_{19}\omega_7^3\omega_{11} - 12\omega_{19}\omega_7 cs^2\omega_{11} - 108v_3^2\omega_7^3 cs^2\omega_{11} - 18v_3^2\omega_{19}^2\omega_7 cs^2\omega_{11} - 12\omega_{19}^2\omega_7 cs^4\omega_{11} + 252v_3^2\omega_{19}^2\omega_7^3 cs^2 +
$$
$$
6v_3^2\omega_{19}^2\omega_7^3\omega_{11} + 90v_3^2\omega_{19}^2\omega_7\omega_{11} + 108v_3^2\omega_7^3 cs^2\omega_{11}^3 - 306v_3^2\omega_{19}^2\omega_7 cs^2\omega_{11} + 72v_3^4\omega_{19}\omega_7^3\omega_{11}^2 - 24\omega_{19}\omega_7 cs^4\omega_{11}^3)\frac{\rho}{12\omega_{19}^2\omega_7^3\omega_{11}^3}
$$

$$
C_{D_yD_2^3v_2}^{(3),\mathrm{CuLBM1}} = (36\omega_6^3v_3^4\omega_3^3 - 36\omega_6v_3^4\omega_3^3\omega_{10} - 18\omega_6^3v_3^2\omega_3\omega_{10}cs^2 + 36\omega_6^2v_3^3\omega_3^3 + 6\omega_6^2\omega_3^3\omega_{10}^2 cs^4 + 72v_3^4\omega_3^3\omega_{10} + 18\omega_6^2v_3^2\omega_3^3\omega_{10}^2 cs^2 - 12\omega_6^2\omega_3^3\omega_{10}cs^2 +
$$
$$
54\omega_6^3v_3^2\omega_3^2\omega_{10}cs^2 + 6\omega_6^3\omega_3^3\omega_{10}cs^4 - 36\omega_6v_3^2\omega_3^2\omega_{10}^2 cs^2 - 36\omega_6^3v_3^4\omega_3^3 + 90\omega_6v_3^2\omega_3^3\omega_{10} - 12\omega_6\omega_3^3\omega_{10}^2 cs^4 + 12\omega_6^3\omega_{10}^2 cs^4 + 36\omega_6v_3^2\omega_3^3\omega_{10} - 6\omega_6^2\omega_3^3\omega_{10}cs^4 +
$$
$$
18\omega_6^3\omega_3^2\omega_{10}cs^2 + 198\omega_6^2v_3^2\omega_3^3\omega_{10}cs^2 + 252v_3^2\omega_3^3\omega_{10}^2 cs^2 + 12\omega_6^3\omega_3\omega_{10}cs^4 + 12\omega_3^3\omega_{10}^2 cs^4 - 72v_3^2\omega_3^3\omega_{10} + 12\omega_6v_3^2\omega_3^2\omega_{10}cs^2 + 6\omega_3^3\omega_{10}^2 cs^2 -
$$
$$
\omega_6^2\omega_3^3\omega_{10}^2 cs^2 + 12\omega_6^3v_3^2\omega_3^3\omega_{10}^2 cs^2 - 90\omega_6v_3^4\omega_3^3\omega_{10}^2 + 13\omega_3^3\omega_{10}^2 cs^4 - 108\omega_6v_3^2\omega_3^3\omega_{10}cs^2 - 12\omega_6\omega_3^3\omega_{10}cs^2 - 12\omega_3^3\omega_{10}^2 cs^2 + 4\omega_6^3v_3^4\omega_3^3\omega_{10} + 36\omega_6^2v_3^2\omega_3^3 -
$$
$$
12\omega_6v_3^2\omega_{10}^2 cs^4 - 99\omega_6^2v_3^2\omega_3\omega_3\omega_{10}cs^2 + 6\omega_6^2\omega_3^3\omega_{10}cs^2 - 306\omega_6v_3^2\omega_3^3\omega_{10}^2 cs^2 - 18\omega_6^3\omega_3^3\omega_{10}cs^4 + 72\omega_6^2v_3^4\omega_3^3\omega_{10} + 6\omega_6^3v_3^2\omega_3^3\omega_{10}^2 + \omega_6^2\omega_3^3\omega_{10}^2 cs^4 -
$$
$$
36\omega_6^3v_3^2\omega_3^3 + 60\omega_6^2v_3^2\omega_3^3\omega_{10}^2 cs^2 - 5\omega_6^2\omega_3^3\omega_{10}^2 cs^2 + 36\omega_6^3v_3^4\omega_3^3\omega_{10} - 19\omega_6^2v_3^2\omega_3^3\omega_{10} - 36\omega_6^2v_3^4\omega_3^3 + 39\omega_6^3v_3^2\omega_3^3\omega_{10} - 24\omega_6^3\omega_3\omega_{10}cs^4 + 108\omega_6^3v_3^2\omega_3^3 cs^2 -
$$
$$
3\omega_6^3v_3^2\omega_3^3\omega_{10}^2 cs^2 - 4\omega_6^3v_3^2\omega_3^3\omega_{10} - 6\omega_6^2\omega_3^3\omega_{10}^2 cs^2 - \omega_6^3\omega_3^3\omega_{10}cs^4 - 108v_3^2\omega_3^3 cs^2 - 72\omega_6^2v_3^2\omega_3^3\omega_{10} - 6\omega_6^3v_3^4\omega_3^3\omega_{10} - 108v_3^2\omega_3^3 cs^2 + 12\omega_6v_3^2\omega_3^3\omega_{10}^2 cs^2 -
$$
$$
36\omega_6^3v_3^2\omega_3^3\omega_{10} + 19\omega_6^2v_3^4\omega_3^3\omega_{10} + 36\omega_6^3v_3^2\omega_3\omega_{10}cs^2 - 39\omega_6^3v_3^4\omega_3^3\omega_{10} + 12\omega_6^2\omega_3^3\omega_{10}cs^4 + 36\omega_6^2v_3^2\omega_3^3\omega_{10}cs^2 - 6\omega_6^3\omega_3^3\omega_{10}cs^2)\frac{\rho}{12\omega_6^3\omega_3^3\omega_{10}^2}
$$

$$
C_{D_yD_2^3v_2}^{(3),\mathrm{CuLBM2}} = (-24v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2^3 + 16cs^4\omega_3^3\omega_4^2\omega_1\omega_2^2 + 48v_3^2\omega_3^3\omega_4^2\omega_2^3 - 144v_3^2\omega_3^3\omega_4^2\omega_1^2\omega_2 - 72cs^4\omega_3^2\omega_4\omega_1^2\omega_2^3 + 8\omega_3^2\omega_4^2\omega_1^3 - 40cs^2\omega_3^3\omega_4^2\omega_1^3 +
$$
$$
18cs^4\omega_3\omega_4^2\omega_1^3\omega_2^3 + 16\omega_3^3\omega_4^2\omega_1\omega_2^3 + 180v_3^3\omega_3\omega_4\omega_1^2\omega_2^3 + 72cs^2\omega_3^3\omega_4\omega_1^2\omega_2^3 + 96v_3^4\omega_3^3\omega_4^2\omega_1\omega_2 - 32cs^2\omega_3^3\omega_4\omega_1\omega_2^2 + 24v_3^3\omega_3^3\omega_4^2\omega_1\omega_2^3 +
$$
$$
168cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 180v_3^4\omega_3\omega_4\omega_1^2\omega_2^3 + 24cs^2v_2^2\omega_3^2\omega_4^2\omega_2^3 + 576v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 72cs^2\omega_3^3\omega_4\omega_1\omega_2^3 + 48cs^2v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 -
$$
$$
18cs^2\omega_3^3\omega_4^2\omega_1^3\omega_2 - 36cs^4\omega_3\omega_4^2\omega_1^3\omega_2^2 + 24v_3^2\omega_3\omega_4^2\omega_1\omega_2^3 + 16\omega_3^2\omega_4^2\omega_1\omega_2^3 + 72cs^2\omega_3^3\omega_4^2 + 80cs^4\omega_3^3\omega_4\omega_2^3 - 86v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 172cs^4\omega_3^3\omega_4\omega_1\omega_2^3 +
$$
$$
144v_2^2v_3^3\omega_3^3\omega_4^2\omega_1\omega_2 - 24v_3^4\omega_3\omega_4\omega_1\omega_2^3 + 36cs^2\omega_3^3\omega_4\omega_1^3\omega_2 + 72cs^2v_2^2\omega_3\omega_4\omega_1^2\omega_2^3 - 432v_2^2v_3^2\omega_3^2\omega_4\omega_2^3 - 540cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 + 48cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2 -
$$
$$
216cs^2v_3^2\omega_4^2\omega_1^2\omega_2^3 - 108v_3^2\omega_3^2\omega_1^2\omega_2^3 + 72cs^2v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2 + 48cs^2\omega_3^3\omega_4\omega_1\omega_2^3 + 38v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 264cs^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 108cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 +
$$
$$
48v_3^4\omega_3^3\omega_4^2\omega_1^3 - 16cs^2\omega_3\omega_4\omega_1^3\omega_2 - 108cs^2v_3^3\omega_3\omega_4\omega_1^2\omega_2^3 + 108v_3^4\omega_3\omega_4\omega_4^3\omega_2^3 + 36cs^2\omega_3\omega_4^2\omega_1^2\omega_2^3 - 72cs^2v_3^2\omega_3\omega_4\omega_1^2\omega_2^3 - 108v_3^4\omega_3^3\omega_4^3\omega_2 -
$$
$$
18cs^2\omega_3^3\omega_4\omega_1^2\omega_2 - 492cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 12cs^2v_2^2\omega_3^2\omega_4\omega_1\omega_2^3 + 40v_3^4\omega_3^2\omega_4^2\omega_1\omega_2^3 - 36cs^4\omega_3\omega_4^2\omega_1^2\omega_2 - 108v_3^2\omega_3\omega_4\omega_4^3\omega_2^3 + 16cs^4\omega_3\omega_4\omega_4^3\omega_2 +
$$
$$
8v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 48v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 + 18cs^4\omega_3\omega_4\omega_1\omega_2^3 + 36v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 + 204v_3^2\omega_3^3\omega_4^2\omega_1^3\omega_2 - 144v_3^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 48cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2 +
$$
$$
174cs^2v_3^2\omega_3^3\omega_4^2\omega_1^2\omega_2 + 54v_3^4\omega_3^3\omega_1^3\omega_2 - 48v_3^2\omega_3^2\omega_4^2\omega_2^3 - 492cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 72v_3^4\omega_3^2\omega_4\omega_1\omega_2^3 - 40cs^2\omega_3\omega_4^2\omega_1^2\omega_2 + 162cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 -
$$
$$
36v_3^4\omega_3\omega_4\omega_4\omega_1^3\omega_2 + 324cs^2v_3^2\omega_3\omega_4\omega_4\omega_1^3\omega_2 - 54v_3^2\omega_3^2\omega_4^2\omega_2^3 + 72v_3^2\omega_3^3\omega_4\omega_1\omega_2^3 - 48v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 + 240v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 36v_3^2\omega_3\omega_4\omega_4\omega_1^3\omega_2 +
$$
$$
432cs^2v_3^2\omega_3^2\omega_4\omega_1^2\omega_2 + 40cs^4\omega_3\omega_4^2\omega_1^2\omega_2 - 108cs^2v_3^2\omega_3^3\omega_4\omega_1^2\omega_2 + 288v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 32cs^4\omega_3^3\omega_4^2\omega_1 + 64cs^2\omega_3^3\omega_4^2\omega_1 + 96v_3^4\omega_3^2\omega_4^2\omega_1\omega_2 -
$$
$$
852cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 + 24cs^2v_2^2\omega_3^2\omega_4^2\omega_1\omega_2^2 + 144v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 288cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 117v_3^4\omega_3\omega_4^2\omega_1\omega_3 - 144v_3^2\omega_3^2\omega_4\omega_1\omega_2^3 + 6v_3^2\omega_3^2\omega_4^2\omega_2^3 -
$$
$$
6cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 56cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 + 24v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 288v_3^2\omega_3^3\omega_4\omega_1^2\omega_2 + 117v_3^2\omega_3\omega_4\omega_4^3\omega_2^3 + 144v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 - 8v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 72v_3^4\omega_3^2\omega_4\omega_1\omega_2^3 +
$$
$$
108v_3^4\omega_3\omega_4\omega_4\omega_1^3\omega_2 - 16cs^2\omega_3\omega_4\omega_1\omega_2 - 297cs^2v_3^2\omega_3\omega_4\omega_4\omega_1^3\omega_2 + 144v_3^2\omega_3^2\omega_3^2\omega_4^2\omega_1\omega_2 + 8cs^2\omega_3^2\omega_4^2\omega_2^3 - 16\omega_3^2\omega_4^2\omega_2^3 + 12cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^3 +
$$
$$
336cs^2v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 288v_3^4\omega_3^2\omega_4^2\omega_1\omega_2 - 36v_3^4\omega_3^3\omega_4\omega_1^2\omega_2 + 648cs^2v_3^2\omega_3^3\omega_4\omega_1^2\omega_3 - 324cs^2v_3^2\omega_3^3\omega_1^2\omega_3 - 12cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 24v_3^2\omega_3^2\omega_4^2\omega_2^3 +
$$
$$
24cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3 + 108v_3^2\omega_3^2\omega_1^2\omega_2^3 + 16cs^4\omega_3\omega_4^2\omega_1\omega_2^2 - 108v_3^3\omega_3\omega_4^2\omega_1\omega_2^3 + 2\omega_3^2\omega_4^2\omega_1^3\omega_2 + 36v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 24v_3^2\omega_3^2\omega_4^2\omega_1\omega_2^2 +
$$
$$
96v_3^2\omega_3^2\omega_4\omega_1\omega_2 - 2cs^4\omega_3^2\omega_4^2\omega_1\omega_2^2 - 2\omega_3^2\omega_4^2\omega_1^2\omega_2 - 216v_3^3\omega_3\omega_4\omega_1^2\omega_2^3 - 8\omega_3^2\omega_4^2\omega_1\omega_2 + 24v_3^3\omega_3\omega_4\omega_4\omega_1\omega_2 - 96v_3^2\omega_3^2\omega_4\omega_1^3 + 86cs^4\omega_3^2\omega_4^2\omega_1\omega_2 +
$$
$$
117v_3^2\omega_3^2\omega_4\omega_1^3\omega_2 + 24v_3^2\omega_3^2\omega_4^2\omega_1\omega_2 - 28cs^4\omega_3^2\omega_4^2\omega_1^3\omega_2 - 24v_3^4\omega_3^2\omega_4^2\omega_1^3\omega_2 + 216v_3^2\omega_3^4\omega_4^2\omega_1\omega_3 - 108cs^2v_3^2\omega_3\omega_4\omega_4\omega_1^2\omega_3 - 96cs^2v_2^2\omega_3\omega_4\omega_1\omega_2^3 -
$$
$$
36v_3^4\omega_3\omega_4^2\omega_1^3\omega_2 - 288v_2^2v_3^2\omega_3^2\omega_4\omega_1\omega_2^2 + 264cs^2v_3^2\omega_3^2\omega_4^2\omega_1^3 + 36cs^2\omega_3^2\omega_4^2\omega_1\omega_2 - 117v_3^4\omega_3^3\omega_4\omega_1^2\omega_2 + 108cs^2v_3^2\omega_3\omega_4\omega_1^3\omega_2 - 12cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 -
$$
$$
36cs^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 36v_3^2\omega_3^3\omega_4\omega_1^3\omega_2 + 72cs^4\omega_3^3\omega_4\omega_1\omega_2^3 + 20cs^4\omega_3^2\omega_4^2\omega_1^2\omega_2 - 6v_2^2\omega_3^2\omega_4^2\omega_1^3\omega_2 - 54v_3^2\omega_3^3\omega_1^3\omega_2 - 8\omega_3^2\omega_4^2\omega_1^2\omega_2 + 192v_3^4\omega_3^2\omega_4^2\omega_2^3 +
$$

$$60v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 12cs^2\omega_3^2\omega_4^2\omega_1^2\omega_2^2 - 96cs^2v_2^2\omega_3^2\omega_4^2\omega_1^2\omega_2 + 162cs^2v_3^2\omega_3^2\omega_3^3\omega_1^3\omega_2^3 - 297cs^2v_3^2\omega_3^2\omega_4\omega_1^3\omega_2^2 - 72cs^2\omega_3^2\omega_4\omega_1\omega_2^3 + 36v_3^4\omega_3^2\omega_4\omega_1^3\omega_2^2 +$$
$$468cs^2v_3^2\omega_3\omega_4^2\omega_1^2\omega_2^2 - 60v_3^4\omega_3\omega_4^2\omega_1^2\omega_2^2 + 54v_3^4\omega_4^2\omega_1^3\omega_2^3 - 144v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^2\omega_2^3 - 72cs^2v_3^2\omega_3\omega_4^2\omega_1^3\omega_2 - 288v_2^2v_3^2\omega_3^2\omega_4^2\omega_1^3\omega_2)\frac{\rho}{72\omega_3^2\omega_4^2\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\mathrm{D}_y\mathrm{D}_z^3 v_3}$ **at** $\frac{\partial^4 v_3}{\partial x_2 \partial x_3^3}$**:**

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_y\mathrm{D}_z^3 v_3} = 0$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_y\mathrm{D}_z^3 v_3} = (-16\omega_7 cs^2\omega_{11}^3 - 32\omega_{19}\omega_7^2 cs^2\omega_{11} - 32\omega_{19}^2\omega_7 - 68v_3^2\omega_{19}^2\omega_7\omega_{11} + 16\omega_{19}\omega_7\omega_{11}^2 - 8\omega_7^2\omega_{11}^3 - 43v_3^2\omega_{19}\omega_7^2\omega_{11} - 44\omega_{19}^2\omega_7 cs^2\omega_{11}^2 -$
$28v_3^2\omega_{19}\omega_{11}^3 + 104v_3^2\omega_{19}\omega_7^2\omega_{11}^2 + 8\omega_7^2\omega_{11}^2 - 17\omega_{19}^2\omega_7^2\omega_{11} - 28\omega_{19}\omega_7\omega_{11}^3 + 48\omega_{19}^2\omega_7^2\omega_{11} + 12\omega_{19}\omega_{11}^3 - 64v_3^2\omega_{19}\omega_7^2\omega_{11} - 25\omega_{19}\omega_7 cs^2\omega_{11}^3 - 16v_3^2\omega_7^2\omega_{11}^2 +$
$32\omega_{19}^2\omega_7 cs^2\omega_{11} + 64v_3^2\omega_{19}^2\omega_7\omega_{11} + 48\omega_{19}^2\omega_7^2 cs^2 + 80v_3^2\omega_{19}^2\omega_7 - 20\omega_{19}cs^2\omega_{11}^3 + 16v_3^2\omega_7^2\omega_{11}^3 + 56\omega_{19}\omega_7^2 cs^2\omega_{11}^2 - 12\omega_{19}^2\omega_{11}^2 + 24\omega_{19}\omega_7^2\omega_{11} -$
$120v_3^2\omega_{19}^2\omega_7\omega_{11} - 72\omega_{19}^2\omega_7^2 cs^2\omega_{11} + 20\omega_{19}^2 cs^2\omega_{11}^2 - 16v_3^2\omega_7\omega_{11}^3 + 44\omega_{19}\omega_7 cs^2\omega_{11}^3 - 24\omega_{19}^2\omega_7\omega_{11} - 16\omega_{19}\omega_7 cs^2\omega_{11}^2 + 16\omega_7^2 cs^2\omega_{11}^3 + 17\omega_{19}\omega_7^2\omega_{11}^3 -$
$48v_3^2\omega_{19}\omega_7\omega_{11}^2 + 28\omega_{19}\omega_7\omega_{11}^2 - 16\omega_7^2 cs^2\omega_{11}^2 + 25\omega_{19}^2\omega_7 cs^2\omega_{11}^2 + 28v_3^2\omega_{19}^2\omega_{11}^2 + 8\omega_7\omega_{11}^3 + 68v_3^2\omega_{19}\omega_7\omega_{11}^3 + 43v_3^2\omega_{19}^2\omega_7\omega_{11}^2 - 40\omega_{19}\omega_7^2\omega_{11})\frac{\rho v_2 v_3}{4\omega_{19}^2\omega_7^2\omega_{11}^3}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_y\mathrm{D}_z^3 v_3} =$
$(-32\omega_{19}^2\omega_7^2 - 72\omega_{19}^2\omega_7^2\omega_{11}cs^2 - 20\omega_{19}\omega_{11}^3 cs^2 - 68v_3^2\omega_{19}^2\omega_7\omega_{11} + 16\omega_{19}\omega_7\omega_{11}^2 - 8\omega_7^2\omega_{11}^3 - 43v_3^2\omega_{19}\omega_7^2\omega_{11}^3 - 44\omega_{19}^2\omega_7\omega_{11}^2 cs^2 - 25\omega_{19}\omega_7^2\omega_{11}^3 cs^2 -$
$28v_3^2\omega_{19}\omega_{11}^3 + 104v_3^2\omega_{19}\omega_7^2\omega_{11}^2 + 8\omega_7^2\omega_{11}^2 - 17\omega_{19}^2\omega_7^2\omega_{11} - 28\omega_{19}\omega_7\omega_{11}^3 + 48\omega_{19}^2\omega_7^2\omega_{11} + 12\omega_{19}\omega_{11}^3 - 64v_3^2\omega_{19}\omega_7^2\omega_{11} - 16v_3^2\omega_7^2\omega_{11}^2 + 64v_3^2\omega_{19}^2\omega_7\omega_{11} +$
$80v_3^2\omega_{19}^2\omega_7^2 + 16v_3^2\omega_7^2\omega_{11}^3 + 56\omega_{19}\omega_7^2\omega_{11}^2 cs^2 - 16\omega_7\omega_{11}^3 cs^2 - 12\omega_{19}^2\omega_{11}^2 + 24\omega_{19}\omega_7^2\omega_{11} - 120v_3^2\omega_{19}^2\omega_7\omega_{11} + 48\omega_{19}^2\omega_7^2 cs^2 - 32\omega_{19}\omega_7^2\omega_{11}cs^2 -$
$16v_3^2\omega_7\omega_{11}^3 + 20\omega_{19}^2\omega_{11}^2 cs^2 - 24\omega_{19}^2\omega_7\omega_{11} + 16\omega_7^2\omega_{11}^3 cs^2 - 16\omega_{19}\omega_7\omega_{11}^2 cs^2 + 32\omega_{19}^2\omega_7\omega_{11}cs^2 + 17\omega_{19}\omega_7^2\omega_{11}^3 - 48v_3^2\omega_{19}\omega_7\omega_{11}^2 + 28\omega_{19}\omega_7\omega_{11}^2 +$
$44\omega_{19}\omega_7\omega_{11}^3 cs^2 + 28v_3^2\omega_{19}^2\omega_{11}^2 - 16\omega_7^2\omega_{11}^2 cs^2 + 25\omega_{19}^2\omega_7\omega_{11}^2 cs^2 + 8\omega_7\omega_{11}^3 + 68v_3^2\omega_{19}\omega_7\omega_{11}^3 + 43v_3^2\omega_{19}^2\omega_7\omega_{11}^2 - 40\omega_{19}\omega_7^2\omega_{11})\frac{\rho v_2 v_3}{4\omega_{19}^2\omega_7^2\omega_{11}^3}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_y\mathrm{D}_z^3 v_3} = 0$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_y\mathrm{D}_z^3 v_3} = 0$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_y\mathrm{D}_z^3 v_3} = 0$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_y\mathrm{D}_z^3 v_3} = (-12\omega_1\omega_2^3 - 6v_2^2\omega_1^2\omega_2^2 - 12cs^2\omega_3\omega_2^3 - 5v_2^2\omega_3\omega_1^2\omega_2^3 + 27cs^2\omega_1^3\omega_2^2 - 18v_2^2\omega_3\omega_1^3\omega_2 - 12v_3^2\omega_3\omega_1^2\omega_2 - 9v_2^2\omega_3\omega_1^2\omega_2^2 - 9v_2^2\omega_1^2\omega_2^3 -$
$6v_2^2\omega_1^3\omega_2 - 36\omega_3\omega_1^3 - 24v_3^2\omega_3\omega_2^3 + 6v_2^2\omega_3\omega_1^2\omega_2 - 18cs^2\omega_1^2\omega_2^2 + 9v_2^2\omega_1^3\omega_2^2 + 132v_3^2\omega_3\omega_1^2\omega_2^2 + 3\omega_3\omega_1\omega_2^3 + 48v_3^2\omega_3\omega_1^3 + 27cs^2\omega_3\omega_1\omega_2^3 -$
$27cs^2\omega_1^2\omega_2^3 + 5v_2^2\omega_3\omega_1^3\omega_2^2 - 18cs^2\omega_1^3\omega_2 - 54cs^2\omega_3\omega_1\omega_2^2 + 42\omega_3\omega_1\omega_2^3 - 66v_3^2\omega_3\omega_1\omega_2^3 + 36cs^2\omega_1\omega_2^3 - 12\omega_3\omega_2^3 + 81cs^2\omega_3\omega_1^2\omega_2^2 - 66v_3^2\omega_3\omega_1\omega_2^3 -$
$9\omega_1^3\omega_2^2 - 51\omega_3\omega_1^2\omega_2^2 + 5\omega_3\omega_1^2\omega_2^3 - 120v_3^2\omega_3\omega_1\omega_2^2 + 48\omega_3\omega_1^3\omega_2 - 108cs^2\omega_3\omega_1^3\omega_2 + 84cs^2\omega_3\omega_1^3 - 15cs^2\omega_3\omega_1^2\omega_2^3 + 6\omega_1^2\omega_2^2 - 5\omega_3\omega_1^3\omega_2^2 +$
$15cs^2\omega_3\omega_1^3\omega_2^2 + 6v_2^2\omega_3\omega_1\omega_2^2 + 12v_2^2\omega_1\omega_2^3 - 18cs^2\omega_3\omega_1^2\omega_2 + 6\omega_1^3\omega_2 + 12v_2^2\omega_3\omega_1 + 6\omega_3\omega_1^2\omega_2 + 9\omega_1^2\omega_2^3 + 84v_3^2\omega_3\omega_2^3 + 27v_2^2\omega_3\omega_1\omega_2^3)\frac{\rho v_2 v_3}{18\omega_3\omega_1^3\omega_2^3}$

coefficient $C^{(3)}_{\mathrm{D}_z^4 \rho}$ **at** $\frac{\partial^4 \rho}{\partial x_3^4}$**:**

$C^{(3),\mathrm{SRT}}_{\mathrm{D}_z^4 \rho} = (12 - 78cs^2\omega^2 - 1008v_3^2cs^2\omega^2 + 8\omega^2 + 144v_3^4 + 6cs^2\omega^3 - 216v_3^4\omega - 132cs^2 - \omega^3 + 90v_3^4\omega^2 - 34v_3^2cs^2\omega^3 + 404v_3^2cs^2\omega^2 - 9v_3^4\omega^3 +$
$198cs^2\omega - 5cs^4\omega^3 + 234v_3^2\omega + 82cs^4\omega^2 + 10v_3^2\omega^3 - 156v_3^2 + 672v_3^2cs^2 - 18\omega - 216cs^4\omega - 98v_3^2\omega^2 + 144cs^4)\frac{v_3}{12\omega^3}$

$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_z^4 \rho} = (12 + 10v_3^2\omega_{11}^3 + 144v_3^4 - 5cs^4\omega_{11}^3 - 98v_3^2\omega_{11}^2 + 82cs^4\omega_{11}^2 - 216cs^4\omega_{11} + 234v_3^2\omega_{11} + 144cs^4 + 672v_3^2cs^2 - 1008v_3^2cs^2\omega_{11} -$
$78cs^2\omega_{11}^2 + 90v_3^4\omega_{11}^2 - 132cs^2 - 18\omega_{11} + 6cs^2\omega_{11}^3 - 9v_3^4\omega_{11}^3 + 8\omega_{11}^2 - 156v_3^2 - 34v_3^2cs^2\omega_{11}^3 - 216v_3^4\omega_{11} + 198cs^2\omega_{11} - \omega_{11}^3 + 404v_3^2cs^2\omega_{11}^2)\frac{v_3}{12\omega_{11}^3}$

$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_z^4 \rho} = (12 - 5\omega_{11}^3 cs^4 + 10v_3^2\omega_{11}^3 - 1008v_3^2\omega_{11}cs^2 + 144v_3^4 - 98v_3^2\omega_{11}^2 + 234v_3^2\omega_{11} + 82\omega_{11}^2 cs^4 - 132cs^2 + 198\omega_{11}cs^2 + 672v_3^2cs^2 +$
$90v_3^4\omega_{11}^2 - 78\omega_{11}^2 cs^2 - 34v_3^2\omega_{11}^3 cs^2 + 144cs^4 - 216\omega_{11}cs^4 - 18\omega_{11} - 9v_3^4\omega_{11}^3 + 8\omega_{11}^2 + 6\omega_{11}^3 cs^2 - 156v_3^2 - 216v_3^4\omega_{11} - \omega_{11}^3 + 404v_3^2\omega_{11}^2 cs^2)\frac{v_3}{12\omega_{11}^3}$

$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_z^4 \rho} = (12 + 144cs^4 + 672cs^2v_3^2 - 78cs^2\omega_{11}^2 - 34cs^2v_3^2\omega_{11}^3 + 10v_3^2\omega_{11}^3 + 144v_3^4 + 404cs^2v_3^2\omega_{11}^2 + 6cs^2\omega_{11}^3 - 98v_3^2\omega_{11}^2 + 234v_3^2\omega_{11} -$
$1008cs^2v_3^2\omega_{11} + 198cs^2\omega_{11} - 5cs^4\omega_{11}^3 + 90v_3^4\omega_{11}^2 + 82cs^4\omega_{11}^2 - 18\omega_{11} - 9v_3^4\omega_{11}^3 + 8\omega_{11}^2 - 156v_3^2 - 132cs^2 - 216cs^4\omega_{11} - 216v_3^4\omega_{11} - \omega_{11}^3)\frac{v_3}{12\omega_{11}^3}$

$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_z^4 \rho} = (12 - 216cs^4\omega_{11} + 10v_3^2\omega_{11}^3 + 144v_3^4 - 98v_3^2\omega_{11}^2 + 234v_3^2\omega_{11} + 672v_3^2cs^2 - 5cs^4\omega_{11}^3 + 82cs^4\omega_{11}^2 + 144cs^4 - 34v_3^2cs^2\omega_{11}^3 +$
$90v_3^4\omega_{11}^2 + 404v_3^2cs^2\omega_{11}^2 + 198cs^2\omega_{11} - 132cs^2 - 18\omega_{11} - 9v_3^4\omega_{11}^3 + 8\omega_{11}^2 - 78cs^2\omega_{11}^2 - 156v_3^2 - 1008v_3^2cs^2\omega_{11} - 216v_3^4\omega_{11} + 6cs^2\omega_{11}^3 - \omega_{11}^3)\frac{v_3}{12\omega_{11}^3}$

$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_z^4 \rho} = (12 - 132cs^2 + 144v_3^4 + 404\omega_6^2v_3^2cs^2 - 5\omega_6^3cs^4 + 10\omega_6^3v_3^2 - 18\omega_6 - 216\omega_6v_3^4 + 198\omega_6cs^2 - 98\omega_6^2v_3^2 + 82\omega_6^2cs^4 + 234\omega_6v_3^2 -$
$216\omega_6cs^4 + 90\omega_6^2v_3^4 - 78\omega_6^2cs^2 - 34\omega_6^3v_3^2cs^2 + 144cs^4 - \omega_6^3 - 156v_3^2 - 1008\omega_6v_3^2cs^2 + 672v_3^2cs^2 + 8\omega_6^2 + 6\omega_6^3cs^2 - 9\omega_6^3v_3^4)\frac{v_3}{12\omega_6^3}$

$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_z^4 \rho} = (-48cs^4\omega_1^2\omega_2^2 - 98v_3^2\omega_3\omega_1^3\omega_2^2 - 300v_3^4\omega_3\omega_1\omega_2^3 + 404cs^2v_3^2\omega_3\omega_1^3\omega_2^2 - 184cs^2\omega_3\omega_2^3 - 120cs^4\omega_3\omega_1^2\omega_2^2 + 24v_3^4\omega_3\omega_1^3 -$

$$104v_3^2\omega_3\omega_1^2\omega_2 + 30v_3^2\omega_3\omega_1^3\omega_2^3 + 24cs^4\omega_1^3\omega_2 - 156cs^4\omega_3\omega_1^3\omega_2 + 164cs^4\omega_3\omega_1^2\omega_2^3 - 102cs^2v_3^2\omega_3\omega_1^3\omega_2^3 + 440cs^2v_3^2\omega_3\omega_1^2\omega_2 + 4\omega_3\omega_1^3 +$$
$$168v_3^4\omega_3\omega_1\omega_2^2 + 82cs^4\omega_3\omega_1^3\omega_2^2 + 16cs^2\omega_1^2\omega_2^2 - 1088cs^2v_3^2\omega_3\omega_1^2\omega_2^2 + 280v_3^2\omega_3\omega_1^3\omega_2^2 + 216cs^4\omega_3\omega_2^3 - 28\omega_3\omega_1\omega_2^3 + 160cs^2v_3^2\omega_3\omega_1^3 - 28v_3^2\omega_3\omega_1^3 +$$
$$320cs^2\omega_3\omega_1\omega_2^3 + 808cs^2v_3^2\omega_3\omega_1^2\omega_2^3 + 8cs^2v_3^2\omega_1\omega_2^3 - 464cs^2v_3^2\omega_3\omega_1^3\omega_2 + 72cs^4\omega_3\omega_1^2\omega_2 - 15cs^4\omega_3\omega_1^3\omega_2^3 - 8cs^2\omega_1^3\omega_2 - 80cs^2v_3^2\omega_3\omega_1\omega_2^2 + 8\omega_3\omega_1\omega_2^2 +$$
$$94v_3^2\omega_3\omega_1^3\omega_2 - 196v_3^2\omega_3\omega_1^2\omega_2^3 + 8cs^2v_3^2\omega_1^3\omega_2 + 90v_3^4\omega_3\omega_1^3\omega_2^2 - 1472cs^2v_3^2\omega_3\omega_1\omega_2^3 - 8cs^2\omega_1\omega_2^3 + 16\omega_3\omega_2^3 + 152cs^2\omega_3\omega_1^2\omega_2^2 + 328v_3^2\omega_3\omega_1\omega_2^3 -$$
$$16\omega_3\omega_1^2\omega_2^2 - 16cs^2v_3^2\omega_1^2\omega_2^2 + 656cs^2v_3^2\omega_3\omega_1\omega_2^2 + 96v_3^4\omega_3\omega_1^2\omega_2 - 27v_3^4\omega_3\omega_1^3\omega_2^3 + 16\omega_3\omega_1^2\omega_2^3 + 144v_3^4\omega_3\omega_2^3 - 176v_3^2\omega_3\omega_1\omega_2^2 - 10\omega_3\omega_1^3\omega_2 +$$
$$122cs^2\omega_3\omega_1^3\omega_2 - 52cs^2\omega_3\omega_1^3 - 156cs^2\omega_3\omega_1^2\omega_2^3 + 8\omega_3\omega_1^3\omega_2^2 + 24cs^4\omega_1\omega_2^3 - 78cs^2\omega_3\omega_1^3\omega_2^2 - 372cs^4\omega_3\omega_1\omega_2^3 - 264v_3^4\omega_3\omega_1^2\omega_2^2 - 80cs^2\omega_3\omega_1^2\omega_2 +$$
$$18cs^2\omega_3\omega_1^3\omega_2^3 - 3\omega_3\omega_1^3\omega_2^3 + 8\omega_3\omega_1^2\omega_2 - 84v_3^4\omega_3\omega_1^3\omega_2 + 180v_3^4\omega_3\omega_1^2\omega_2^3 - 160v_3^2\omega_3\omega_2^3 + 760cs^2v_3^2\omega_3\omega_2^3 + 72cs^4\omega_3\omega_1\omega_2^3 + 72cs^4\omega_3\omega_2^3)\frac{v_3}{36\omega_3\omega_1^3\omega_2^3}$$

coefficient $C^{(3)}_{\mathrm{D}_z^4 v_3}$ at $\frac{\partial^4 v_3}{\partial x_3^4}$:

$$C^{(3),\mathrm{SRT}}_{\mathrm{D}_z^4 v_3} = (12 - 22cs^2\omega^2 - 648v_3^2cs^2\omega + 8\omega^2 + 504v_3^4 + 2cs^2\omega^3 - 756v_3^4\omega - 36cs^2 - \omega^3 + 310v_3^4\omega^2 - 18v_3^2cs^2\omega^3 + 252v_3^2cs^2\omega^2 - 29v_3^4\omega^3 +$$
$$54cs^2\omega - cs^4\omega^3 + 378v_3^4\omega + 14cs^4\omega^2 + 14v_3^2\omega^3 - 252v_3^2 + 432v_3^2cs^2 - 18\omega - 36cs^4\omega - 154v_3^2\omega^2 + 24cs^4)\frac{\rho}{12\omega^3}$$

$$C^{(3),\mathrm{MRT1}}_{\mathrm{D}_z^4 v_3} = (12 + 14v_3^2\omega_{11}^3 + 504v_3^4 - cs^4\omega_{11}^3 - 154v_3^2\omega_{11}^2 + 14cs^4\omega_{11}^2 - 36cs^4\omega_{11} + 378v_3^2\omega_{11} + 24cs^4 + 432v_3^2cs^2 - 648v_3^2cs^2\omega_{11} -$$
$$22cs^2\omega_{11}^2 + 310v_3^4\omega_{11}^2 - 36cs^2 - 18\omega_{11} + 2cs^2\omega_{11}^3 - 29v_3^4\omega_{11}^3 + 8\omega_{11}^2 - 252v_3^2 - 18v_3^2cs^2\omega_{11}^3 - 756v_3^4\omega_{11} + 54cs^2\omega_{11} - \omega_{11}^3 + 252v_3^2cs^2\omega_{11}^2)\frac{\rho}{12\omega_{11}^3}$$

$$C^{(3),\mathrm{MRT2}}_{\mathrm{D}_z^4 v_3} = (12 - \omega_{11}^3cs^4 + 14v_3^2\omega_{11}^3 - 648v_3^2\omega_{11}cs^2 + 504v_3^4 - 154v_3^2\omega_{11}^2 + 378v_3^2\omega_{11} + 14\omega_{11}^2cs^4 - 36cs^2 + 54\omega_{11}cs^2 + 432v_3^2cs^2 +$$
$$310v_3^4\omega_{11}^2 - 22\omega_{11}^2cs^2 - 18v_3^2\omega_{11}^3cs^2 + 24cs^4 - 36\omega_{11}cs^4 - 18\omega_{11} - 29v_3^4\omega_{11}^3 + 8\omega_{11}^2 + 2\omega_{11}^3cs^2 - 252v_3^2 - 756v_3^4\omega_{11} - \omega_{11}^3 + 252v_3^2\omega_{11}^2cs^2)\frac{\rho}{12\omega_{11}^3}$$

$$C^{(3),\mathrm{CLBM1}}_{\mathrm{D}_z^4 v_3} = (12 + 24cs^4 + 432cs^2v_3^2 - 22cs^2\omega_{11}^2 - 18cs^2v_3^2\omega_{11}^3 + 14v_3^2\omega_{11}^3 + 504v_3^4 + 252cs^2v_3^2\omega_{11}^2 + 2cs^2\omega_{11}^3 - 154v_3^2\omega_{11}^2 + 378v_3^2\omega_{11} -$$
$$648cs^2v_3^2\omega_{11} + 54cs^2\omega_{11} - cs^4\omega_{11}^3 + 310v_3^4\omega_{11}^2 + 14cs^4\omega_{11}^2 - 18\omega_{11} - 29v_3^4\omega_{11}^3 + 8\omega_{11}^2 - 252v_3^2 - 36cs^2 - 36cs^4\omega_{11} - 756v_3^4\omega_{11} - \omega_{11}^3)\frac{\rho}{12\omega_{11}^3}$$

$$C^{(3),\mathrm{CLBM2}}_{\mathrm{D}_z^4 v_3} = (12 - 36cs^4\omega_{11} + 14v_3^2\omega_{11}^3 + 504v_3^4 - 154v_3^2\omega_{11}^2 + 378v_3^2\omega_{11} + 432v_3^2cs^2 - cs^4\omega_{11}^3 + 14cs^4\omega_{11}^2 + 24cs^4 - 18v_3^2cs^2\omega_{11}^3 +$$
$$310v_3^4\omega_{11}^2 + 252v_3^2cs^2\omega_{11}^2 + 54cs^2\omega_{11} - 36cs^2 - 18\omega_{11} - 29v_3^4\omega_{11}^3 + 8\omega_{11}^2 - 22cs^2\omega_{11}^2 - 252v_3^2 - 648v_3^2cs^2\omega_{11} - 756v_3^4\omega_{11} + 2cs^2\omega_{11}^3 - \omega_{11}^3)\frac{\rho}{12\omega_{11}^3}$$

$$C^{(3),\mathrm{CuLBM1}}_{\mathrm{D}_z^4 v_3} = (12 - 36cs^2 + 504v_3^4 + 252\omega_6^2v_3^2cs^2 - \omega_6^3cs^4 + 14\omega_6^3v_3^2 - 18\omega_6 - 756\omega_6v_3^4 + 54\omega_6cs^2 - 154\omega_6^2v_3^2 + 14\omega_6^2cs^4 + 378\omega_6v_3^2 -$$
$$36\omega_6cs^4 + 310\omega_6^2v_3^4 - 22\omega_6^2cs^2 - 18\omega_6^3v_3^2cs^2 + 24cs^4 - \omega_6^3 - 252v_3^2 - 648\omega_6v_3^2cs^2 + 432v_3^2cs^2 + 8\omega_6^2 + 2\omega_6^3cs^2 - 29\omega_6^3v_3^4)\frac{\rho}{12\omega_6^3}$$

$$C^{(3),\mathrm{CuLBM2}}_{\mathrm{D}_z^4 v_3} = (-16cs^4\omega_1^2\omega_2^2 - 154v_3^2\omega_3\omega_1^3\omega_2^2 - 1068v_3^4\omega_3\omega_1\omega_2^3 + 252cs^2v_3^2\omega_3\omega_1^3\omega_2^2 - 56cs^2\omega_3\omega_2^3 - 8cs^4\omega_3\omega_1^2\omega_2^2 + 96v_3^4\omega_3\omega_1^3 -$$
$$168v_3^2\omega_3\omega_1^2\omega_2^3 + 42v_3^2\omega_3\omega_1^3\omega_2^3 + 8cs^4\omega_1^3\omega_2 - 32cs^4\omega_3\omega_1^3\omega_2 + 28cs^4\omega_3\omega_1^2\omega_2^3 - 54cs^2v_3^2\omega_3\omega_1^3\omega_2^3 + 264cs^2v_3^2\omega_3\omega_1^2\omega_2 + 4\omega_3\omega_1^3 + 552v_3^4\omega_3\omega_1\omega_2^2 +$$
$$14cs^4\omega_3\omega_1^3\omega_2^2 + 16cs^2\omega_1^2\omega_2^2 - 576cs^2v_3^2\omega_3\omega_1^2\omega_2^2 + 408v_3^2\omega_3\omega_1^2\omega_2^2 + 40cs^4\omega_3\omega_2^3 - 28\omega_3\omega_1\omega_2^3 + 144cs^2v_3^2\omega_3\omega_1^3 - 60v_3^2\omega_3\omega_1^3 + 96cs^2\omega_3\omega_1\omega_2^3 +$$
$$504cs^2v_3^2\omega_3\omega_1^2\omega_2^3 + 24cs^2v_3^2\omega_1\omega_2^3 - 360cs^2v_3^2\omega_3\omega_1^3\omega_2 + 8cs^4\omega_3\omega_1^2\omega_2 - 3cs^4\omega_3\omega_1^3\omega_2^3 - 8cs^2\omega_1^3\omega_2 - 16cs^2\omega_3\omega_1\omega_2^2 + 8\omega_3\omega_1\omega_2^2 +$$
$$174v_3^2\omega_3\omega_1^3\omega_2 - 308v_3^2\omega_3\omega_1^2\omega_2^3 + 24cs^2v_3^2\omega_1^3\omega_2 + 310v_3^4\omega_3\omega_1^3\omega_2^2 - 1008cs^2v_3^2\omega_3\omega_1\omega_2^3 - 8cs^2\omega_1\omega_2^3 + 16\omega_3\omega_2^3 + 24cs^2\omega_3\omega_1^2\omega_2^2 + 552v_3^2\omega_3\omega_1\omega_2^3 -$$
$$16\omega_3\omega_1^2\omega_2^2 - 48cs^2v_3^2\omega_1^2\omega_2^2 + 336cs^2v_3^2\omega_3\omega_1\omega_2^2 + 336v_3^4\omega_3\omega_1^2\omega_2 - 87v_3^4\omega_3\omega_1^3\omega_2^3 + 16\omega_3\omega_1^2\omega_2^3 + 528v_3^4\omega_3\omega_2^3 - 240v_3^2\omega_3\omega_1\omega_2^2 - 10\omega_3\omega_1^3\omega_2 +$$
$$42cs^2\omega_3\omega_1^3\omega_2 - 20cs^2\omega_3\omega_1^3 - 44cs^2\omega_3\omega_1^2\omega_2^3 + 8\omega_3\omega_1^3\omega_2^2 + 8cs^4\omega_1\omega_2^3 - 22cs^2\omega_3\omega_1^3\omega_2^2 - 68cs^4\omega_3\omega_1\omega_2^3 - 888v_3^4\omega_3\omega_1^2\omega_2^2 - 16cs^2\omega_3\omega_1^2\omega_2 +$$
$$6cs^2\omega_3\omega_1^3\omega_2^3 - 3\omega_3\omega_1^3\omega_2^3 + 8\omega_3\omega_1^2\omega_2 - 312v_3^4\omega_3\omega_1^3\omega_2 + 620v_3^4\omega_3\omega_1^2\omega_2^3 - 288v_3^2\omega_3\omega_2^3 + 552cs^2v_3^2\omega_3\omega_2^3 + 8cs^4\omega_3\omega_1\omega_2^3 + 16cs^4\omega_3\omega_2^3)\frac{\rho}{36\omega_3\omega_1^3\omega_2^3}$$

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